

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Matt Blunt, Governor • Doyle Childers, Director

www.dnr.mo.gov

MAR - 5 2007

Mr. Michael Gromacki, Manufacturing Director
Cook Composites and Polymers Co.
920 East 14th Avenue
North Kansas City, MO 64116

Re: Cook Composites and Polymers Co., 047-0012
Permit Number: **OP2007-009**

Dear Mr. Gromacki:

Enclosed with this letter is your intermediate operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations, cited in this document, is necessary for continued compliance. It is very important you read and understand the requirements contained in your permit.

If you have any questions or need additional information regarding this permit, please contact me at (573) 751-4817, or write the Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM


Michael J. Stansfield, P.E.
Operating Permit Unit Chief

MJS: ack

Enclosures

c: Ms. Tamara Freeman, US EPA Region VII
Kansas City Regional Office
PAMS File: 2005-05-099



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: OP2007-009
Expiration Date: MAR - 4 2012
Installation ID: 047-0012
Project Number: 2005-05-099

Installation Name and Address

Cook Composites and Polymers Co.
920 East 14th Avenue
North Kansas City, MO 64116
Clay County

Parent Company's Name and Address

Cook Composites and Polymers Co.
PO Box 419389
Kansas City, MO 64141-6389

Installation Description:

Cook Composites and Polymers Company produces resins, gel coats, and powder coatings using a batch production process. The installation has taken a voluntary limit on HAPs in order to stay below the major source threshold.

MAR - 5 2007

Effective Date

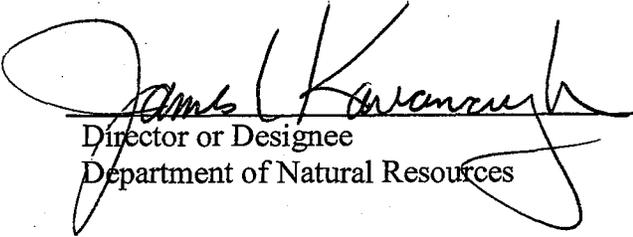

Director or Designee
Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

Cook Composites and Polymers Company produces resins, gel coats, and powder coatings using a batch production process. The installation has taken a voluntary limit on HAPs in order to stay below the major source threshold.

There are three major classifications of resins that may be produced at the installation: saturated and unsaturated polyester, alkyds and epoxy. In general, the resins are formed by the combination of organic acids and alcohols in the presence of heat. The resin may be thinned, and additional chemicals added to obtain the desired physical properties. Gel coat uses resin as a base material with pigments, fillers and additives introduced to obtain the desired physical properties. Reaction water is generated as a by-product of the resin production process and is managed off-site. The finished products are filtered and then distributed in 55-gallon drums, totes, or tanker trucks.

The typical powder coating production process begins by introducing dibasic acid and polyfunctional alcohol into the reactor. Materials are then reacted under heat and agitation to form the desired resin. After the resin has reached the desired specifications, it is filtered, solidified, and converted to flakes or powder. The final product is packaged in 50-pound bags or super sacks for shipping.

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO _x)	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
2005	6.45	0.0498	9.09	16.1	6.97	--	14.45
2004	6.05	0.0500	8.26	17.2	5.79	--	14.45
2003	5.48	0.0426	8.22	17.0	5.42	--	14.41
2002	5.98	0.0400	7.99	17.6	5.26	--	14.86
2001	5.92	0.0200	8.23	16.5	2.06	--	5.02

EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation that emits air pollutants and is identified as having unit-specific emission limitations.

Emission Unit #	Description of Emission Unit	Capacity
EU0010	Natural Gas Fired Boiler (#1)	21.9 MMBtu/hr
EU0020	Natural Gas Fired Boiler (#2)	21.9 MMBtu/hr
EU0030	Kettle Furnace – 84	4 MMBtu/hr
EU0040	Kettle Furnace – 86	4 MMBtu/hr
EU0050	Resin Reactor	4,000 Gal
EU0060	Resin Reactor	4,000 Gal
EU0070	Resin Thin Tank	8,000 Gal
EU0080	Resin Thin Tank	8,000 Gal
EU0090	Resin/Gel Coat Base Storage Tank	6,000 Gal
EU0100	Resin/Gel Coat Base Storage Tank	6,000 Gal

EU0110	Resin/Gel Coat Base Storage Tank	6,000 Gal
EU0120	Resin/Gel Coat Base Storage Tank	6,000 Gal
EU0130	Resin/Gel Coat Base Storage Tank	6,000 Gal
EU0140	Resin/Gel Coat Base Storage Tank	9,458 Gal
EU0150	Resin/Gel Coat Base Storage Tank	6,322 Gal
EU0160	Resin/Gel Coat Base Storage Tank	6,322 Gal
EU0170	Resin/Gel Coat Base Storage Tank	2,500 Gal
EU0180	Resin/Gel Coat Base Storage Tank	2,500 Gal
EU0190	Resin/Gel Coat Base Storage Tank	9,458 Gal
EU0200	Methyl Methacrylate Storage Tank	9,000 Gal
EU0210	Methyl Methacrylate Storage Tank	9,000 Gal
EU0220	Methyl Methacrylate Storage Tank	9,000 Gal
EU0230	Xylene Storage Tank	21,000 Gal
EU0240	Propylene Glycol Storage Tank	8,000 Gal
EU0250	Propylene Glycol Storage Tank	8,000 Gal
EU0260	Propylene Glycol Storage Tank	8,200 Gal
EU0270	Diethylene Glycol Storage Tank	8,500 Gal
EU0280	Diethylene Glycol Storage Tank	8,500 Gal
EU0290	Diethylene Glycol Storage Tank	8,500 Gal
EU0300	Dipropylene Glycol Storage Tank	8,500 Gal
EU0310	Propylene Glycol Storage Tank	8,500 Gal
EU0320	Propylene Glycol Storage Tank	8,500 Gal
EU0330	Propylene Glycol Storage Tank	8,500 Gal
EU0340	Maleic Anhydride Storage Tank	14,000 Gal
EU0350	Dibasic Ester Storage Tank	5,200 Gal
EU0360	BYK A-500 Small Storage Tote	350 Gal
EU0370	DMPS Copolymer Small Storage Tote	350 Gal
EU0380	Intermediate Small Storage Tote	350 Gal
EU0390	Sorbitan Monoleate Small Storage Tote	350 Gal
EU0400	Intermediate Small Storage Tote	350 Gal
EU0410	Silicon Resin Solution Small Storage Tote	350 Gal
EU0420	Intermediate Small Storage Tote	350 Gal
EU0430	Quartenary Ammonium Small Storage Tote	350 Gal
EU0440	Intermediate Small Storage Tote	350 Gal
EU0450	ColbaltDrier (12%) Small Storage Tote	350 Gal
EU0460	Ethylene Glycol Small Storage Tote	350 Gal
EU0470	DMMA Small Storage Tote	350 Gal
EU0480	Glycol Storage Tank	8,179 Gal
EU0490	Glycol Storage Tank	8,179 Gal
EU0500	Glycol Storage Tank	8,179 Gal
EU0510	Glycol Storage Tank	8,179 Gal
EU0520	Glycol Storage Tank	8,179 Gal
EU0530	Glycol Storage Tank	8,221 Gal
EU0540	Glycol Storage Tank	8,221 Gal
EU0550	Glycol Storage Tank	8,221 Gal
EU0560	Glycol Storage Tank	8,221 Gal
EU0570	Glycol Storage Tank	8,221 Gal

EU0580	Glycol Storage Tank	8,179 Gal
EU0590	Glycol Storage Tank	3,948 Gal
EU0600	Glycol Storage Tank	3,948 Gal
EU0610	Glycol Storage Tank	1,765 Gal
EU0620	Glycol Storage Tank	692 Gal
EU0630	Glycol Storage Tank	692 Gal
EU0640	Styrene Storage Tank	35,000 Gal
EU0650	Methyl Methacrylate Storage Tank	13,000 Gal
EU0660	Neopentyl Glycol (90%) Storage Tank	15,000 Gal
EU0670	Neopentyl Glycol (90%) Storage Tank	15,000 Gal
EU0680	Gel Coat Colorant Dispersion Tank	1,100 Gal
EU0690	Gel Coat Colorant Dispersion Tank	1,100 Gal
EU0700	Gel Coat Portable Tank Dispersion	250 Gal
EU0710	Gel Coat Portable Tank Dispersion	250 Gal
EU0720	Gel Coat Portable Tank Dispersion	250 Gal
EU0730	Gel Coat Portable Tank Dispersion	250 Gal
EU0740	Gel Coat Portable Tank Dispersion	250 Gal
EU0750	Gel Coat Portable Tank Dispersion	250 Gal
EU0760	Gel Coat Drum Dispersion	55 Gal
EU0770	Gel Coat Drum Dispersion	55 Gal
EU0780	Gel Coat Drum Dispersion	55 Gal
EU0790	Gel Coat Air Mixer – Pails	5 Gal
EU0800	Gel Coat Air Mixer – Pails	5 Gal
EU0810	Gel Coat Air Mixer – Pails	5 Gal
EU0820	Gel Coat Air Mixer – Pails	5 Gal
EU0830	Gel Coat Air Mixer – Pails	5 Gal
EU0840	Gel Coat Air Mixer – Pails	5 Gal
EU0850	Gel Coat Dispersion Tank	660 Gal
EU0860	Neutral Gel Coat Dispersion Tank	660 Gal
EU0870	Gel Coat Dispersion Tank	2,000 Gal
EU0880	Gel Coat Drum Dispersion	55 Gal
EU0890	Gel Coat Drum Dispersion	55-250 Gal
EU0900	Neutral Gel Coat Dispersion Tank	1,100 Gal
EU0910	Neutral Gel Coat Dispersion Tank	1,100 Gal
EU0920	Gel Coat Dispersion Tank	440 Gal
EU0930	Gel Coat Dispersion Tank	440 Gal
EU0940	Gel Coat Dispersion Tank	550 Gal
EU0950	Gel Coat Dispersion Tank	550 Gal
EU0960	Gel Coat Dispersion Tank	550 Gal
EU0970	Gel Coat Dispersion Tank	550 Gal
EU0980	Gel Coat Dispersion Tank	550 Gal
EU0990	Gel Coat Dispersion Tank	550 Gal
EU1000	Gel Coat Dispersion Tank	2,400 Gal
EU1010	Gel Coat Dispersion Tank	2,400 Gal
EU1020	Gel Coat Dispersion Tank	2,150 Gal
EU1030	Gel Coat Dispersion Tank	2,150 Gal
EU1040	Gel Coat Storage Tank	4,400 Gal

EU1050	Gel Coat Storage Tank	4,400 Gal
EU1060	Gel Coat Storage Tank	4,400 Gal
EU1070	Gel Coat Storage Tank	4,400 Gal
EU1080	Gel Coat Dispersion Tank (60)	3,300 Gal
EU1090	Gel Coat Dispersion Tank (90)	5,000 Gal
EU1100	Gel Coat Dispersion Tank (60)	3,300 Gal
EU1110	Gel Coat Dispersion Tank (90)	5,000 Gal
EU1120	Gel Coat Dispersion Tank	550 Gal
EU1130	Gel Coat Dispersion Tank	715 Gal
EU1140	Gel Coat Dispersion Tank	550 Gal
EU1150	Gel Coat Dispersion Tank	715 Gal
EU1160	Gel Coat Dispersion Tank	1,100 Gal
EU1170	Gel Coat Dispersion Tank	1,100 Gal
EU1180	Gel Coat Dispersion Tank	1,100 Gal
EU1190	Gel Coat Dispersion Tank	1,100 Gal
EU1200	Gel Coat Dispersion Tank	440 Gal
EU1210	Gel Coat Dispersion Tank	550 Gal
EU1220	Gel Coat Dispersion Tank	550 Gal
EU1230	Gel Coat Dispersion Tank	550 Gal
EU1240	Gel Coat Dispersion Tank	550 Gal
EU1250	Gel Coat Dispersion Tank	550 Gal
EU1260	Gel Coat Dispersion Tank	550 Gal
EU1270	Gel Coat Dispersion Tank	550 Gal
EU1280	Gel Coat Dispersion Tank	550 Gal
EU1290	Gel Coat Dispersion Tank	715 Gal
EU1300	Gel Coat Dispersion Tank	550 Gal
EU1310	Gel Coat Dispersion Tank	715 Gal
EU1320	Powder Coatings Reactor	4,500 Gal
EU1330	Powder Coatings Reactor	8,400 Gal
EU1340	Crusher #1	9,912 Lbs/hr
EU1350	Finished Product Silo	10,000 Gal
EU1360	Finished Product Silo	10,000 Gal
EU1370	Packing Machine Bags	700 Bags/hr
EU1380	Super Sack Filling Machine	45,000 Lbs/hr
EU1390	Reaction Water Storage Tank	19,000 Gal
EU1400	Hot Oil Heater	12 MMBtu/hr
EU1410	Small Batch Packaging Area	
EU1420	Big Batch Packaging Area	
EU1430	Tanker Truck Loading	
EU1440	Port Washer	
EU1450	Resin Reactor	60 Gal
EU1460	Resin Reactor	10 Gal
EU1470	Resin Thin Tank	120 Gal
EU1480	Resin Thin Tank	120 Gal
EU1490	Resin Thin Tank	20 Gal
EU1500	Monomer Feed Tank	48 Gal
EU1510	Monomer Feed Tank	48 Gal

EU1520	Monomer Feed Tank	8 Gal
EU1530	Monomer Feed Tank	8 Gal
EU1540	Catalyst Feed Tank	6 Gal
EU1550	Catalyst Feed Tank	1 Gal
EU1560	Emergency Generator	587 Hp

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.

<u>Description of Emission Source</u>	<u>Capacity</u>
Thermaclean™ Reactor	1,500 Gal
Thermaclean™ Reactor	2,500 Gal
Thermaclean™ Blending Tank	1,084 Gal
Thermaclean™ Blending Tank	585 Gal
Thermaclean™ Blending Tank	55 Gal
Sanitary Waste Water Storage Tank	201,000 Gal
Sanitary Waste Water Storage Tank	201,000 Gal
Powder Coatings Cooling/Flaking Belt	9,912 Lb/hr
Quality Assurance Laboratory	

DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

- 1) Construction Permit #052000-007
- 2) Construction Permit #082001-020
- 3) Construction Permit Amendment #052000-007A

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

Operating Permits

Voluntary Permit Condition and Construction Permit #052000-007A

Emission Limitations:

- 1) The installation shall emit less than 10 tons of any individual Hazardous Air Pollutant (HAP) in any consecutive 12-month period.
- 2) The installation shall emit less than 25 tons of combined HAPs in any consecutive 12-month period.

Monitoring/Recordkeeping:

- 1) The permittee shall calculate and record facility-wide emissions of the following HAPs on a rolling 12-month basis:
 - a) Styrene
 - b) Methyl Methacrylate
- 2) The permittee shall maintain calculations demonstrating that facility-wide emissions are below 25 tons of combined HAPs (see Attachment I).
- 3) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Permit Condition PW002

10 CSR 10-6.060

Construction Permits Required (#052000-007A)

Odor Limitation:

If a continuing situation of demonstrated nuisance of odors exists in violation of 10 CSR 10-2.070, the Director may require the permittee to submit a corrective action plan within ten (10) days to adequately mitigate the odors. The permittee shall implement any such plan immediately upon its approval by the Director. Failure to either submit or implement such a plan will be a violation of this permit.

Reporting:

The permittee shall report any deviations or exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

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.

Combustion Equipment

EU0010 – EU0040.

Emission Unit	EIQ Reference (2005)	Unit Description	Capacity
EU0010	EP04	Natural Gas Fired Boiler (#1)	21.9 MMBtu/hr
EU0020	EP05	Natural Gas Fired Boiler (#2)	21.9 MMBtu/hr
EU0030	EP01	Kettle Furnace – 84	4 MMBtu/hr
EU0040	EP02	Kettle Furnace – 86	4 MMBtu/hr

Permit Condition EU0010-001 through EU0020-001

10 CSR 10-2.040

Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:

The permittee shall not emit particulate matter from these emission units in excess of 0.39 pounds per million BTU of heat input.

Operational Limitation/Equipment Specifications:

These emission units shall be limited to burning pipeline grade natural gas.

Monitoring/Recordkeeping:

- 1) The permittee shall maintain calculations at the installation demonstrating compliance with this rule (see Attachment A).
- 2) The calculations shall be kept onsite and be made available to Department of Natural Resources' personnel upon request.

Reporting:

The permittee shall report any deviations or exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Resin Production
EIQ Reference (2005): EP18

EU0050 – EU0080

Emission Unit	Equipment ID	Location	Unit Description	Volume (gal)
EU0050	70K8400	Kettle Room	Resin Reactor	4,000
EU0060	70K8600	Kettle Room	Resin Reactor	4,000
EU0070	70T8401	Thin Tank Room	Resin Thin Tank	8,000
EU0080	70T8601	Thin Tank Room	Resin Thin Tank	8,000

Permit Condition EU0050-001 through EU0080-001

July 29, 1994 Amended Consent Agreement
(supercedes July 1991 Stipulation and Consent Order)

Emission Limitation:

- 1) The permittee shall limit VOC emissions from resin production to 0.97 tons/month.
- 2) Should VOC emissions from resin production at the North Kansas City installation exceed 0.97 tons/month due to an act of God or act of war, it shall not be a violation of this Amended Consent Agreement.

Monitoring/Recordkeeping:

- 1) The permittee shall monitor the monthly resin production.
- 2) The permittee shall maintain good operating and maintenance practices on the resin production process and the control devices.
- 3) The permittee shall maintain monthly records of the VOC emissions from the resin production.
- 4) The permittee shall maintain records showing any period of time when the control(s) were not operational during a period of resin production.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Permit Condition EU0050-002 through EU0080-002

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Requirements:

- 1) Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.
- 2) The polymerization of synthetic resin shall be done in a completely enclosed operation with the VOC emissions controlled by the use of the thermal oxidizer.
- 3) The permittee shall operate the thermal oxidizer at all times during the operation of the resin reactors or resin thin tanks (this requirement excludes periods of startup, shutdown and malfunction).
- 4) The permittee shall maintain a minimum overall destruction efficiency of VOCs of 98% for the thermal oxidizer.

Monitoring:

- 1) The permittee shall conduct performance testing on the thermal oxidizer once every five years or once per Title V permit term.
- 2) The permittee shall continuously monitor and maintain a minimum chamber temperature of 1400°F on the thermal oxidizer.
- 3) Accuracy of the thermocouple in the thermal oxidizer chamber will be verified by a second, or redundant thermocouple probe inserted into the chamber with a hand held meter. This validation check will be conducted a minimum of once per calendar year. The difference between the reading of the two thermocouples shall not exceed $\pm 30^{\circ}\text{F}$.
- 4) The permittee shall initiate procedures for corrective action within twenty-four (24) hours of detection of an operating malfunction of the thermal oxidizer.

Performance Testing:

- 1) The VOC control efficiency shall be determined by the testing methods referenced in 10 CSR 10-6.030(14)(A) – 40 CFR Part 60, Appendix A – Test Methods, Method 25 – Determination of Total Gaseous Non-methane Organic Emissions as Carbon. The same method shall be used to sample emissions from alternate control measures subject to the director's review in subsection (4)(A).
- 2) The date on which performance tests are conducted must be prearranged with the Air Pollution Control Program a minimum of 30 days prior to the proposed test date so that the Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. A completed Proposed Test Plan form may serve the purpose of notification and must be approved by the Air Pollution Control Program prior to conducting the required emission testing.
- 3) The permittee shall conduct performance testing during periods of representative conditions at the maximum process/production rate, or within 10% of this rate, not to include periods of startup, shutdown, or malfunction.
- 4) The permittee shall provide or cause to be provided, performance testing facilities as follows:
 - a) Safe sampling platform(s).
 - b) Safe access to sampling platform(s).
 - c) Utilities for sampling and testing equipment.
 - d) Sampling ports adequate for test methods applicable to this facility. This includes:

- i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures;
 - ii) Providing a stack or duct with cyclonic flow averaging less than 20° over all test points during the performance tests as stated in 40 CFR Part 60, Appendix A, Method 1 – Sample and Velocity Traverse for Stationary Sources; and
 - iii) Removal of the port caps 24 hours prior to testing to verify both their removability as well as full-diameter clearance to the stack; caps may be retained hand tight.
- 5) Operating Parameter Limits:
- a) During the performance test for the thermal oxidizer, the permittee shall establish site-specific operating parameter values for the minimum and maximum chamber temperature.
 - b) During the emission test, each operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every fifteen (15) minutes.
 - c) The permittee shall determine the operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the control efficiency.
 - d) The permittee may conduct multiple performance tests to establish alternative compliant operating parameter values.
 - e) The permittee may re-establish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test.

Recordkeeping:

- 1) The permittee shall keep records of resin production rates sufficient to determine daily VOC emissions. The permittee shall use the resin production rate records to calculate daily VOC emissions for Department of Natural Resources personnel upon request.
- 2) The permittee shall keep a log of all routine and unscheduled maintenance and repair activities on the thermal oxidizer (see Attachment B).
- 3) The permittee shall keep records of the continuously monitored chamber temperature of the thermal oxidizer.
- 4) The permittee shall record the results of the annual thermocouple testing.
- 5) The permittee shall keep record of the results of the most recent performance test conducted on the thermal oxidizer.
- 6) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Product Storage
 EIQ Reference (2005): EP08

EU0090 – EU0180

Emission Unit	Equipment ID	Location	Unit Description	Volume (gal)
EU0090	70B0650	Big Batch Area	Resin/Gel Coat Base Storage Tank	6,000
EU0100	70B0651	Big Batch Area	Resin/Gel Coat Base Storage Tank	6,000
EU0110	70B0652	Big Batch Area	Resin/Gel Coat Base Storage Tank	6,000
EU0120	70B0654	Big Batch Area	Resin/Gel Coat Base Storage Tank	6,000
EU0130	70B0655	Big Batch Area	Resin/Gel Coat Base Storage Tank	6,000
EU0140	70B0426	Building 48	Resin/Gel Coat Base Storage Tank	9,458
EU0150	70B0427	Building 48	Resin/Gel Coat Base Storage Tank	6,322
EU0160	70B0428	Building 48	Resin/Gel Coat Base Storage Tank	6,322
EU0170	70S0059	Building 3	Resin/Gel Coat Base Storage Tank	2,500
EU0180	70S0064	Building 3	Resin/Gel Coat Base Storage Tank	2,500

Raw Material Storage
 EIQ Reference (2005): EP14

EU0190 – EU0670

Emission Unit	Equipment ID	Location	Unit Description	Volume (gal)
EU0190	70B0425	Building 27	Resin/Gel Coat Base Storage Tank	9,458
EU0200	70S0101	Tank Farm	Methyl Methacrylate Storage Tank	9,000
EU0210	70S0102	Tank Farm	Methyl Methacrylate Storage Tank	9,000
EU0220	70S0103	Tank Farm	Methyl Methacrylate Storage Tank	9,000
EU0230	70S0140	Tank Farm	Xylene Storage Tank	21,000

EU0240	70S0506	Building 12	Propylene Glycol Storage Tank	8,000
EU0250	70S0507	Building 12	Propylene Glycol Storage Tank	8,000
EU0260	70S0511	Building 12	Propylene Glycol Storage Tank	8,200
EU0270	70S0514	Building 12	Diethylene Glycol Storage Tank	8,500
EU0280	70S0515	Building 12	Diethylene Glycol Storage Tank	8,500
EU0290	70S0516	Building 12	Diethylene Glycol Storage Tank	8,500
EU0300	70S0517	Building 12	Dipropylene Glycol Storage Tank	8,500
EU0310	70S0518	Building 12	Propylene Glycol Storage Tank	8,500
EU0320	70S0519	Building 12	Propylene Glycol Storage Tank	8,500
EU0330	70S0520	Building 12	Propylene Glycol Storage Tank	8,500
EU0340	70S7001	Building 27/48	Maleic Anhydride Storage Tank	14,000
EU0350	70S0100	Building 37/2 nd Floor	Dibasic Ester Storage Tank	5,200
EU0360	70S2901	Building 29	BYK A-500 Small Storage Tote	350
EU0370	70S2902	Building 29	DMPS Copolymer Small Storage Tote	350
EU0380	70S2903	Building 29	Intermediate Small Storage Tote	350
EU0390	70S2904	Building 29	Sorbitan Monoleate Small Storage Tote	350
EU0400	70S2905	Building 29	Intermediate Small Storage Tote	350
EU0410	70S2906	Building 29	Silicone Resin Solution Small Storage Tote	350
EU0420	70S2907	Building 29	Intermediate Small Storage Tote	350
EU0430	70S2908	Building 29	Quartenary Ammonium Salt Small Storage Tote	350
EU0440	70S2909	Building 29	Intermediate Small Storage Tote	350
EU0450	70S2910	Building 29	Colbalt Drier (12%) Small Storage Tote	350
EU0460	70S2911	Building 29	Ethylene Glycol Small Storage Tote	350

EU0470	70S2912	Building 29	DMMA Small Storage Tote	350
EU0480	T501	Building 12	Glycol Storage Tank	8,179
EU0490	T502	Building 12	Glycol Storage Tank	8,179
EU0500	T503	Building 12	Glycol Storage Tank	8,179
EU0510	T504	Building 12	Glycol Storage Tank	8,179
EU0520	T505	Building 12	Glycol Storage Tank	8,179
EU0530	T508	Building 12	Glycol Storage Tank	8,221
EU0540	T509	Building 12	Glycol Storage Tank	8,221
EU0550	T510	Building 12	Glycol Storage Tank	8,221
EU0560	T512	Building 12	Glycol Storage Tank	8,221
EU0570	T513	Building 12	Glycol Storage Tank	8,221
EU0580	T521	Building 12	Glycol Storage Tank	8,179
EU0590	T522	Building 12	Glycol Storage Tank	3,948
EU0600	T523	Building 12	Glycol Storage Tank	3,948
EU0610	T524	Building 12	Glycol Storage Tank	1,765
EU0620	T525	Building 12	Glycol Storage Tank	692
EU0630	T526	Building 12	Glycol Storage Tank	692
EU0640	70S0108	Tank Farm	Styrene Storage Tank	35,000
EU0650	70H0002	Tank Farm	Methyl Methacrylate Storage Tank	13,000
EU0660	70S0733	Building 53	Neopentyl Glycol (90%) Storage Tank	15,000
EU0670	70S8054	Building 53	Neopentyl Glycol (90%) Storage Tank	15,000

Permit Condition EU0090-001 through EU0670-001

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Limitation:

- 1) Stationary VOC storage containers with a capacity greater than two hundred fifty (250) gallons shall be equipped with a submerged-fill pipe or bottom fill, except where more effective air pollution control is used and has been approved by the Air Pollution Control Program. (NOTE: EU0360 – EU0470 are not stationary VOC storage containers.)
- 2) Covers shall be installed on all open-top tanks used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

Recordkeeping/Monitoring:

- 1) The permittee shall maintain records that include the composition and vapor pressure of the materials stored in these tanks and totes.
- 2) The permittee shall maintain records that indicate that each stationary tank is equipped with an approved bottom fill or submerged-fill pipe.
- 3) All records shall be maintained onsite for the life of the source and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Small Batch Area
 EIQ Reference (2005): EP15

EU0680 – EU1070

Emission Unit	Equipment ID	Location	Unit Description	Volume (gal)
EU0680	70G6201	Building 3 Second Floor	Gel Coat Colorant Dispersion Tank	1,100
EU0690	70G6202	Building 3 Second Floor	Gel Coat Colorant Dispersion Tank	1,100
EU0700	70D7000	Small Batch Area	Gel Coat Portable Tank Dispersion	250
EU0710	70D7100	Small Batch Area	Gel Coat Portable Tank Dispersion	250
EU0720	70D7200	Small Batch Area	Gel Coat Portable Tank Dispersion	250
EU0730	70D7300	Small Batch Area	Gel Coat Portable Tank Dispersion	250

EU0740	70D7400	Small Batch Area	Gel Coat Portable Tank Dispersion	250
EU0750	70D7500	Small Batch Area	Gel Coat Portable Tank Dispersion	250
EU0760	70D7700	Small Batch Area	Gel Coat Drum Dispersion	55
EU0770	70D7800	Small Batch Area	Gel Coat Drum Dispersion	55
EU0780	70D7900	Small Batch Area	Gel Coat Drum Dispersion	55
EU0790	70Z0001	Small Batch Area	Gel Coat Air Mixer – Pails	5
EU0800	70Z0002	Small Batch Area	Gel Coat Air Mixer – Pails	5
EU0810	70Z0003	Small Batch Area	Gel Coat Air Mixer – Pails	5
EU0820	70Z0004	Small Batch Area	Gel Coat Air Mixer – Pails	5
EU0830	70Z0005	Small Batch Area	Gel Coat Air Mixer – Pails	5
EU0840	70Z0006	Small Batch Area	Gel Coat Air Mixer – Pails	5
EU0850	70G6301	Building 37 Second Floor	Gel Coat Dispersion Tank	660
EU0860	70G6302	Building 37 Second Floor	Neutral Gel Coat Dispersion Tank	660
EU0870	70G9001	Building 3 Second Floor	Gel Coat Dispersion Tank	2,000
EU0880	70G9101	Building 3 Second Floor	Gel Coat Drum Dispersion	55
EU0890	70G9102	Building 3 Second Floor	Gel Coat Drum Dispersion	55-250
EU0900	70G6001	Building 3 Second Floor	Neutral Gel Coat Dispersion Tank	1,100
EU0910	70G6002	Building 3 Second Floor	Neutral Gel Coat Dispersion Tank	1,100
EU0920	70G6101	Building 3 Second Floor	Gel Coat Dispersion Tank	440
EU0930	70G6102	Building 3 Second Floor	Gel Coat Dispersion Tank	440
EU0940	70G6401	Building 3 Second Floor	Gel Coat Dispersion Tank	550
EU0950	70G6402	Building 3 Second Floor	Gel Coat Dispersion Tank	550
EU0960	70G6403	Building 3 Second Floor	Gel Coat Dispersion Tank	550

EU0970	70G6501	Building 3 Second Floor	Gel Coat Dispersion Tank	550
EU0980	70G6502	Building 3 Second Floor	Gel Coat Dispersion Tank	550
EU0990	70G6503	Building 3 Second Floor	Gel Coat Dispersion Tank	550
EU1000	70B0301	Building 3 Second Floor	Gel Coat Dispersion Tank	2,400
EU1010	70B0302	Building 3 Second Floor	Gel Coat Dispersion Tank	2,400
EU1020	70B0303	Building 3 Second Floor	Gel Coat Dispersion Tank	2,150
EU1030	70B0304	Building 3 Second Floor	Gel Coat Dispersion Tank	2,150
EU1040	70B0067	Building 3	Gel Coat Storage Tank	4,400
EU1050	70B0068	Building 3	Gel Coat Storage Tank	4,400
EU1060	70B0069	Building 3	Gel Coat Storage Tank	4,400
EU1070	70B0070	Building 3	Gel Coat Storage Tank	4,400

Permit Condition EU0680-001 through EU1070-001

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Limitation:

Covers shall be installed and maintained on all open-top tanks used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

Reporting:

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Permit Condition EU0680-002 through EU1070-002

10 CSR 10-6.220

Restriction of Emission of Visible Air Contaminants

Emission Limitation:

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from any source, visible emissions with an opacity greater than 20%.

- 2) The permittee may discharge into the atmosphere from any source of emissions, for a period(s) aggregating not more than six (6) minutes in any 60 minutes, air contaminants with an opacity up to 60%.

Monitoring:

- 1) The permittee shall conduct a visual emission observation on this emission point once a month using the procedures contained in U.S. EPA Test Method 22. 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 were observed using these procedures, then no further observations would be required that month. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) Should a violation be observed, monitoring frequency will progress in the following manner:
 - a) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks after the date of the initial violation. Should no violation of this regulation be observed during this period, then,
 - b) Observations must be made once every two weeks for a period of eight (8) 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 once per month.
- 3) The permittee shall have an annual Certified Method 9 Test performed on this emission point.

Recordkeeping:

- 1) The permittee shall maintain records of all observation results (see Attachment C), 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. (see Attachment F)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment D)
- 4) Attachments C, D and F contain logs for these recordkeeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit. Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.B.

Big Batch Area
 EIQ Reference (2005): EP17

EU1080 – EU1310

Emission Unit	Equipment ID	Unit Description	Volume (gal)
EU1080	70G5601	Gel Coat Dispersion Tank (60)	3,300
EU1090	70G5701	Gel Coat Dispersion Tank (90)	5,000
EU1100	70G5801	Gel Coat Dispersion Tank (60)	3,300
EU1110	70G5901	Gel Coat Dispersion Tank (90)	5,000
EU1120	70G5101	Gel Coat Dispersion Tank	550
EU1130	70G5102	Gel Coat Dispersion Tank	715
EU1140	70G5103	Gel Coat Dispersion Tank	550
EU1150	70G5104	Gel Coat Dispersion Tank	715
EU1160	70G5201	Gel Coat Dispersion Tank	1,100
EU1170	70G5202	Gel Coat Dispersion Tank	1,100
EU1180	70G5203	Gel Coat Dispersion Tank	1,100
EU1190	70G5204	Gel Coat Dispersion Tank	1,100
EU1200	70G5301	Gel Coat Dispersion Tank	440
EU1210	70G5302	Gel Coat Dispersion Tank	550
EU1220	70G5303	Gel Coat Dispersion Tank	550
EU1230	70G5304	Gel Coat Dispersion Tank	550
EU1240	70G5401	Gel Coat Dispersion Tank	550
EU1250	70G5402	Gel Coat Dispersion Tank	550
EU1260	70G5403	Gel Coat Dispersion Tank	550
EU1270	70G5404	Gel Coat Dispersion Tank	550
EU1280	70G5501	Gel Coat Dispersion Tank	550
EU1290	70G5502	Gel Coat Dispersion Tank	715
EU1300	70G5503	Gel Coat Dispersion Tank	550
EU1310	70G5504	Gel Coat Dispersion Tank	715

Permit Condition EU1080-001 through EU1310-001

10 CSR 10-2.300
Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Limitation:
 Covers shall be installed and maintained on all open-top tanks used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

Reporting:

The permittee shall report any deviations/exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Permit Condition EU1080-002 through EU1310-002

10 CSR 10-6.060

Construction Permits Required (#052000-007A)

Operational Requirements:

- 1) The baghouse shall be used to control emissions from the Big Batch Operation (EP17) during the powder addition phase of each batch, which is 25% or less of the batch operating time.
- 2) The filtration system shall be operated and maintained in accordance with the manufacturer's specifications.
- 3) The baghouse shall be equipped with a gauge or meter that indicates the pressure drop across the filters. Replacement filters shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance and abrasion resistance).

Monitoring/Recordkeeping:

- 1) The permittee shall monitor and record the operating pressure drop across the filtration system controlling the emissions from the Big Batch Operation (EP17) at least once in every twenty-four (24) hours of operation.
- 2) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty (see Attachment E).
- 3) The permittee shall maintain an operating and maintenance log for the filtration system controlling emission from the Big Batch Operation (EP17). The log shall include the following:
 - a) The usage time of the baghouse relative to the operating time of the Big Batch Process;
 - b) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions (see Attachment F); and
 - c) Maintenance activities, including inspection schedule, repair actions, and replacements (see Attachment B).
- 4) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Permit Condition EU1080-003 through EU1310-003

10 CSR 10-6.220

Restriction of Emission of Visible Air Contaminants

Emission Limitation:

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from any source, visible emissions with an opacity greater than 20%.
- 2) The permittee may discharge into the atmosphere from any source of emissions, for a period(s) aggregating not more than six (6) minutes in any 60 minutes, air contaminants with an opacity up to 60%.

Monitoring:

- 1) The permittee shall conduct a visual emission observation on this emission point once a month using the procedures contained in U.S. EPA Test Method 22. 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 were observed using these procedures, then no further observations would be required that month. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
- 2) Should a violation be observed, monitoring frequency will progress in the following manner:
 - a) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks after the date of the initial violation. Should no violation of this regulation be observed during this period, then,
 - b) Observations must be made once every two weeks for a period of eight (8) 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 once per month.
- 3) The permittee shall have an annual Certified Method 9 Test performed on this emission point.

Recordkeeping:

- 1) The permittee shall maintain records of all observation results (see Attachment C), 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. (see Attachment F)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment D)
- 4) Attachments C, D and F contain logs for these recordkeeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit. Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.B.

Permit Condition EU1080-004 through EU1110-004

10 CSR 10-6.060

Construction Permits Required (#052000-007A)

Operational Requirements:

- 1) The Big Batch process (60s & 90s) emissions shall be routed to the Thermal Oxidizer for a period greater than or equal to 75% of the batch operating time.
- 2) The thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications to ensure a minimum volatile organic compound (VOC) destruction efficiency of 98%.

Monitoring/Recordkeeping:

The permittee shall maintain an operating and maintenance log for the thermal oxidizer that shall include the following:

- 1) The usage time of the thermal oxidizer for the Big Batch process (60s & 90s) relative to the operating time of the 60s & 90s;
- 2) Incidents of malfunction; with impact on emissions, duration of event, probable cause and corrective actions (see Attachment F); and
- 3) Maintenance activities; with inspection schedule, repair actions and replacements, etc. (see Attachment B).

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported in the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Powder Coatings Production

EU1320 – EU1390

Emission Unit	Equipment ID	EIQ Reference (2005)	Unit Description	Capacity
EU1320	70K8000	EP21	Powder Coatings Reactor	4,500 Gal
EU1330	70K8100	EP21	Powder Coatings Reactor	8,400 Gal
EU1340	70SZ8142	EP24	Crusher #1	9,912 Lbs/hr
EU1350	70S8180	EP24	Finished Product Silo	10,000 Gal
EU1360	70S8185	EP24	Finished Product Silo	10,000 Gal
EU1370	70PK8190	EP24	Packing Machine Bags	700 Bags/hr
EU1380	70PK8195	EP24	Super Sack Filling Machine	45,000 Lbs/hr
EU1390	70H0001	EP26	Reaction Water Storage Tank (Hazardous Waste)	19,000 Gal

Permit Condition EU1320-001 through EU1390-001

10 CSR 10-6.060
Construction Permits Required
Construction Permit #082001-020

Operational Requirements:

- 1) The permittee shall control emissions from the solid raw materials silos and funnels, and powder coating packaging system (EP24) using baghouses.
- 2) The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources personnel may easily observe them.
- 3) Replacement filters for the baghouses shall be kept on hand at all times and shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
- 4) Thermal oxidizer must be in use at all times when the reactors (EP21) and reaction water storage tank (EP26) are in operation (this requirement excludes periods of startup, shutdown and malfunction).
- 5) Thermal oxidizer shall be operated and maintained in accordance with the manufacturer's specifications to ensure a minimum volatile organic compound (VOC) destruction efficiency of 98%.

Monitoring/Recordkeeping:

- 1) The permittee shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours.
- 2) The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty (see Attachment E).
- 3) The permittee shall maintain an operating and maintenance log for the baghouses which shall include the following:
 - a) Incidents of malfunction, with impact on emissions, duration of even probable cause, and corrective actions (see Attachment F); and
 - b) Maintenance activities, including the inspection schedule, repair actions, and replacements (see Attachment B).
- 4) The permittee shall maintain an operating and maintenance log for the thermal oxidizer that shall include the following:
 - a) Incidents of malfunction; with impact on emissions, duration of event, probable cause and corrective actions (see Attachment F).
 - b) Maintenance activities, including the inspection schedule, repair actions, and replacements (see Attachment B).
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Permit Condition EU1320-002 through EU1380-002

10 CSR 10-6.220

Restriction of Emission of Visible Air Contaminants

Emission Limitation:

- 1) The permittee shall not cause or permit to be discharged into the atmosphere from any source, visible emissions with an opacity greater than 20%.
- 2) The permittee may discharge into the atmosphere from any source of emissions, for a period(s) aggregating not more than six (6) minutes in any 60 minutes, air contaminants with an opacity up to 60%.

Monitoring:

- 1) The permittee shall conduct a visual emission observation on this emission point once a month using the procedures contained in U.S. EPA Test Method 22. 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 were observed using these procedures, then no further observations would be required that month. For emission units with

visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.

- 2) Should a violation be observed, monitoring frequency will progress in the following manner:
 - a) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks after the date of the initial violation. Should no violation of this regulation be observed during this period, then,
 - b) Observations must be made once every two weeks for a period of eight (8) 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 once per month.
- 3) The permittee shall have an annual Certified Method 9 Test performed on this emission point.

Recordkeeping:

- 1) The permittee shall maintain records of all observation results (see Attachment C), 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. (see Attachment F)
- 3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment D)
- 4) Attachments C, D and F contain logs for these recordkeeping requirements. These logs, or an equivalent created by the permittee, must be used to certify compliance with this requirement.
- 5) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit. Reports of any deviations from monitoring, recordkeeping and reporting requirements of this permit shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(6)(C)1.B.

Permit Condition EU1320-003 through EU1330-003

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Requirements:

- 1) Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.
- 2) The polymerization of synthetic resin shall be done in a completely enclosed operation with the VOC emissions controlled by the use of the thermal oxidizer.
- 3) The permittee shall operate the thermal oxidizer at all times during the operation of the powder coatings process (this requirement excludes periods of startup, shutdown and malfunction).

- 4) The permittee shall maintain a minimum overall destruction efficiency of VOCs of 98% for the thermal oxidizer.

Monitoring:

- 1) The permittee shall conduct performance testing on the thermal oxidizer once every five years or once per Title V permit term.
- 2) The permittee shall continuously monitor and maintain a minimum chamber temperature of 1400°F on the thermal oxidizer.
- 3) Accuracy of the thermocouple in the thermal oxidizer chamber will be verified by a second, or redundant thermocouple probe inserted into the chamber with a hand held meter. This validation check will be conducted a minimum of once per calendar year. The difference between the reading of the two thermocouples shall not exceed $\pm 30^{\circ}\text{F}$.
- 4) The permittee shall initiate procedures for corrective action within twenty-four (24) hours of detection of an operating malfunction of the thermal oxidizer.

Performance Testing:

- 1) The VOC control efficiency shall be determined by the testing methods referenced in 10 CSR 10-6.030(14)(A) – 40 CFR Part 60, Appendix A – Test Methods, Method 25 – Determination of Total Gaseous Non-methane Organic Emissions as Carbon. The same method shall be used to sample emissions from alternate control measures subject to the director's review in subsection (4)(A).
- 2) The date on which performance tests are conducted must be prearranged with the Air Pollution Control Program a minimum of 30 days prior to the proposed test date so that the Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. A completed Proposed Test Plan form may serve the purpose of notification and must be approved by the Air Pollution Control Program prior to conducting the required emission testing.
- 3) The permittee shall conduct performance testing during periods of representative conditions at the maximum process/production rate, or within 10% of this rate, not to include periods of startup, shutdown, or malfunction.
- 4) The permittee shall provide or cause to be provided, performance testing facilities as follows:
 - a) Safe sampling platform(s).
 - b) Safe access to sampling platform(s).
 - c) Utilities for sampling and testing equipment.
 - d) Sampling ports adequate for test methods applicable to this facility. This includes:
 - i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures;
 - ii) Providing a stack or duct with cyclonic flow averaging less than 20° over all test points during the performance tests as stated in 40 CFR Part 60, Appendix A, Method 1 – Sample and Velocity Traverse for Stationary Sources; and
 - iii) Removal of the port caps 24 hours prior to testing to verify both their removability as well as full-diameter clearance to the stack; caps may be retained hand tight.
- 5) Operating Parameter Limits:
 - a) During the performance test for the thermal oxidizer, the permittee shall establish site-specific operating parameter values for the minimum and maximum chamber temperature.
 - b) During the emission test, each operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every fifteen (15) minutes.

- c) The permittee shall determine the operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the control efficiency.
- d) The permittee may conduct multiple performance tests to establish alternative compliant operating parameter values.
- e) The permittee may re-establish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test.

Recordkeeping:

- 1) The permittee shall keep records of powder coatings production rates sufficient to determine daily VOC emissions. The permittee shall use the production rate records to calculate daily VOC emissions for Department of Natural Resources personnel upon request.
- 2) The permittee shall keep a log of all routine and unscheduled maintenance and repair activities on the thermal oxidizer (see Attachment B).
- 3) The permittee shall keep records of the continuously monitored chamber temperature of the thermal oxidizer.
- 4) The permittee shall record the results of all annual thermocouple testing.
- 5) The permittee shall keep record of the results of the most recent performance test conducted on the thermal oxidizer.
- 6) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

EU1400

Emission Unit	EIQ Reference (2005)	Unit Description	Capacity
EU1400	EP22	Hot Oil Heater	12 MMBtu/hr

Permit Condition EU1400-001

10 CSR 10-6.040
Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:

The permittee shall not emit particulate matter from these emission units in excess of 0.23 pounds per million BTU of heat input.

Operational Limitation/Equipment Specifications:

This emission unit shall be limited to burning pipeline grade natural gas.

Monitoring/Recordkeeping:

- 1) The permittee shall maintain calculations at the installation demonstrating compliance with this rule (see Attachment A).
- 2) The calculations shall be kept onsite and be made available to Department of Natural Resources' personnel upon request.

Reporting:

The permittee shall report any deviations/exceedances of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Gel Coat and Resin Loading/Packaging

EU1410 – EU1430

Emission Unit	EIQ Reference (2005)	Unit Description	Configuration
EU1410	EP16	Small Batch Area Packaging	Gravity Feed
EU1420	EP16	Big Batch Area Packaging	Drumming Machine
EU1430	EP19	Tanker Truck Loading	Flexible Hose

Permit Condition EU1410-001 through EU1430-001

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Limitation:

Covers shall be installed and maintained on all open-top tanks used for the production on non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures required operator access.

Reporting:

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Process Solvent Cleaning

EU1440

Emission Unit	Location	Unit Description
EU1440	Small Batch Area	Port Washer

Permit Condition EU1440-001

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Limitation:

Covers shall be installed and maintained on all containers and tanks containing VOC used for cleaning equipment. These covers shall remain closed except when operator access is required.

Reporting:

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

Pilot Lab Production Area

EIQ Reference (2005): EP30

EU1450 – EU1490

Emission Unit	Equipment ID	Unit Description	Volume (gal)
EU1450	T1401	Resin Reactor	60
EU1460	T2401	Resin Reactor	10
EU1470	T1601	Resin Thin Tank	120
EU1480	T1701	Resin Thin Tank	120
EU1490	T2601	Resin Thin Tank	20

Permit Condition EU1450-001 through EU1490-001

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Requirements:

- 1) Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.
- 2) The polymerization of synthetic resin shall be done in a completely enclosed operation with the VOC emissions controlled by the use of the thermal oxidizer.
- 3) The permittee shall operate the thermal oxidizer at all times during the operation of the resin reactors or resin thin tanks (this requirement excludes periods of startup, shutdown and malfunction).
- 4) The permittee shall maintain a minimum overall destruction efficiency of VOCs of 95% for the thermal oxidizer.

Monitoring:

- 1) The permittee shall continuously monitor and maintain a minimum chamber temperature of 1400°F.
- 2) Accuracy of the thermocouple in the thermal oxidizer chamber will be verified by a second, or redundant thermocouple probe inserted into the chamber with a hand held meter. This validation check will be conducted a minimum of once per calendar year. The difference between the reading of the two thermocouples shall not exceed $\pm 30^\circ\text{F}$.
- 3) The permittee shall initiate procedures for corrective action within twenty-four (24) hours of detection of an operating malfunction of the thermal oxidizer.

Recordkeeping:

- 1) The permittee shall keep records of resin production rates sufficient to determine daily VOC emissions. The permittee shall use the resin production rate records to calculate daily VOC emissions for Department of Natural Resources personnel upon request.
- 2) The permittee shall keep a log of all routine and unscheduled maintenance and repair activities on the thermal oxidizer.
- 3) The permittee shall keep records of the continuously monitored chamber temperature of the thermal oxidizer.
- 4) All records shall be maintained onsite for a minimum of five (5) years and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation. Any deviations from this permit condition shall be reported no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

EU1500 – EU1550

Emission Unit	Equipment ID	Unit Description	Volume (gal)
EU1500	T1101	Monomer Feed Tank	48
EU1510	T1301	Monomer Feed Tank	48
EU1520	T2101	Monomer Feed Tank	8
EU1530	T2301	Monomer Feed Tank	8
EU1540	T1201	Catalyst Feed Tank	6
EU1550	T2201	Catalyst Feed Tank	1

Permit Condition EU1500-001 through EU1550-001

10 CSR 10-2.300

Control of Emissions from the Manufacturing of Paints, Varnishes Lacquers, Enamels, and Other Allied Surface Coating Products

Operational Requirement:

Covers shall be installed and maintained on all open-top tanks or vessels used for the production of non-waterbase coating products. These covers shall remain closed except when production, sampling, maintenance or inspection procedures require operator access.

Reporting:

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

EU1560

Emission Unit	Manufacturer	Unit Description	Capacity
EU1560	Caterpillar	Emergency Generator (Diesel)	587 Hp

Permit Condition EU1560-001

10 CSR 10-6.260

Restriction of Emission of Sulfur Compounds

Emission Limitation:

- 1) Emissions from any existing or new source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide.
- 2) Stack gasses shall not contain more than thirty-five milligrams (35 mg) per cubic meter of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three-hour time period.
- 3) 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. [10 CSR 10-6.260(4) of August 30, 1996 version, 10 CSR 10-6.260(3)(B) of May 30, 2004 version & 10 CSR 10-6.010 Ambient Air Quality Standards]

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

Monitoring/Recordkeeping:

- 1) The permittee shall keep calculations demonstrating compliance with this rule (see Attachment H).
- 2) These calculations shall be maintained onsite for the life of the source and shall be made available to Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report any deviations of this permit condition to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than the annual compliance certification, as required by 10 CSR 10-6.065(5)(C)1.B.

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.

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.

10 CSR 10-6.060 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 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 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.

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. Qualified personnel shall perform all tests.
- 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 10-2.100 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 Cook Composites and Polymers Co. 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 10-2.070 Restriction of 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.

**10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61
Subpart M National Emission Standard for Asbestos**

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

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 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' personnel upon request.
- 2) Reporting
 - a) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
 - b) The permittee shall submit a report of all required monitoring by:
 - i) June 1st for monitoring which covers the January through December time period.
 - ii) Exception. Monitoring requirements which require reporting more frequently than 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 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.
- 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.

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

- 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

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:

- 1) 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.
- 2) 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
- 3) 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 Gromacki, Manufacturing Director. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, 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 name and title of the new person 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 the former responsible person 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

Attachment A

Calculations to demonstrate compliance with 10 CSR 10-2.040.

Emission Unit	Heat Input (MMBtu/hr)	Emission Factor ¹ (lb/MMscf)	MHDR ² (MMscf/hr)	PTE (lb/MMBtu)	Emission Limit ³ (lb/MMBtu)
EU0010	21.90	7.60	0.0219	0.0076	0.39
EU0020	21.90	7.60	0.0219	0.0076	0.39
EU0030	4.00	7.60	0.0040	0.0076	0.39
EU0040	4.00	7.60	0.0040	0.0076	0.39
EU1090	12.00	7.60	--	0.0075	0.23

¹ AP-42, table 1.4-2

² As reported in the 2005 EIQ, converted to scf assuming 0.25 psi delivery pressure

³ As calculated from 10 CSR 10-2.040

Attachment D

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

Hour	Minute	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 E

Construction Permit #052000-007A and #082001-020 require that the operating pressure drop of the baghouses be maintained within manufacturer specifications. The following table provides operating ranges for these baghouses. These values exclude periods of startup, shutdown and malfunction.

Baghouse Manufacturer Suggested Operating Range	
	Pressure Drop Range (inches of water)
Small Batch Baghouse	0.5 to 4
Big Batch Baghouse	0.5 to 4
Powder Raw Material Baghouse	1 to 8
Powder Finished Goods Baghouse	1 to 8

Attachment G

The following tables demonstrate compliance with 10 CSR 10-6.400:

Small Batch Area			
Emission Unit	Unit Description	Maximum Uncontrolled PM Emission Rate (lbs/hr)	PM Emission Limit (lbs/hr)
EU0680	Gel Coat Colorant Dispersion Tank	0.2292	0.7318
EU0690	Gel Coat Colorant Dispersion Tank	0.2292	0.7318
EU0700	Gel Coat Portable Tank Dispersion	0.0521	0.2712
EU0710	Gel Coat Portable Tank Dispersion	0.0521	0.2712
EU0720	Gel Coat Portable Tank Dispersion	0.0521	0.2712
EU0730	Gel Coat Portable Tank Dispersion	0.0521	0.2712
EU0740	Gel Coat Portable Tank Dispersion	0.0521	0.2712
EU0750	Gel Coat Portable Tank Dispersion	0.0521	0.2712
EU0760	Gel Coat Drum Dispersion	0.0115	0.0983
EU0830	Gel Coat Drum Dispersion	0.0115	0.0983
EU0840	Gel Coat Drum Dispersion	0.0115	0.0983
EU0850	Gel Coat Dispersion Tank	0.1375	0.5197
EU0860	Neutral Gel Coat Dispersion Tank	0.1375	0.5197
EU0870	Gel Coat Dispersion Tank	0.4167	1.0924
EU0880	Gel Coat Drum Dispersion	0.0115	0.0983
EU0890	Gel Coat Drum Dispersion	0.0521	0.2712
EU0900	Neutral Gel Coat Dispersion Tank	0.2292	0.7318
EU0910	Neutral Gel Coat Dispersion Tank	0.2292	0.7318
EU0920	Gel Coat Dispersion Tank	0.0917	0.3961
EU0930	Gel Coat Dispersion Tank	0.0917	0.3961
EU0940	Gel Coat Dispersion Tank	0.1146	0.4600
EU0950	Gel Coat Dispersion Tank	0.1146	0.4600
EU0960	Gel Coat Dispersion Tank	0.1146	0.4600
EU0970	Gel Coat Dispersion Tank	0.1146	0.4600
EU0980	Gel Coat Dispersion Tank	0.1146	0.4600
EU0990	Gel Coat Dispersion Tank	0.1146	0.4600
EU1000	Gel Coat Dispersion Tank	0.5000	1.2343
EU1010	Gel Coat Dispersion Tank	0.5000	1.2343
EU1020	Gel Coat Dispersion Tank	0.4479	1.1466
EU1030	Gel Coat Dispersion Tank	0.4479	1.1466

Big Batch Area			
Emission Unit	Unit Description	Maximum Uncontrolled PM Emission Rate (lbs/hr)	PM Emission Limit (lbs/hr)
EU1080	Gel Coat Dispersion Tank (60)	2.0625	3.1897
EU1090	Gel Coat Dispersion Tank (90)	3.1250	4.2137
EU1100	Gel Coat Dispersion Tank (60)	2.0625	3.1897
EU1110	Gel Coat Dispersion Tank (90)	3.1250	4.2137
EU1120	Gel Coat Dispersion Tank	0.1146	0.4600
EU1130	Gel Coat Dispersion Tank	0.1490	0.5484
EU1140	Gel Coat Dispersion Tank	0.1146	0.4600
EU1150	Gel Coat Dispersion Tank	0.1490	0.5484
EU1160	Gel Coat Dispersion Tank	0.2292	0.7318
EU1170	Gel Coat Dispersion Tank	0.2292	0.7318
EU1180	Gel Coat Dispersion Tank	0.2292	0.7318
EU1190	Gel Coat Dispersion Tank	0.2292	0.7318
EU1200	Gel Coat Dispersion Tank	0.0917	0.3961
EU1210	Gel Coat Dispersion Tank	0.1146	0.4600
EU1220	Gel Coat Dispersion Tank	0.1146	0.4600
EU1230	Gel Coat Dispersion Tank	0.1146	0.4600
EU1240	Gel Coat Dispersion Tank	0.1146	0.4600
EU1250	Gel Coat Dispersion Tank	0.1146	0.4600
EU1260	Gel Coat Dispersion Tank	0.1146	0.4600
EU1270	Gel Coat Dispersion Tank	0.1146	0.4600
EU1280	Gel Coat Dispersion Tank	0.1146	0.4600
EU1290	Gel Coat Dispersion Tank	0.1490	0.5484
EU1300	Gel Coat Dispersion Tank	0.1146	0.4600
EU1310	Gel Coat Dispersion Tank	0.1490	0.5484

Attachment H

The following calculations demonstrate that the Emergency Generator (EU1560) is always in compliance with 10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*:

General Equation and Basis

$$SO_2 (ppmv) = EF \left(\frac{lbs}{MMBtu} \right) \times F_{factor} \left(\frac{MMBtu}{wscf} \right) \times \left(\frac{wscf}{lbs} \right) \times \left(\frac{ppmv}{ppmw} \right)$$

- 1) SO_2 emission factor for diesel engines < 600 HP, $EF = 0.29 \left(\frac{lbs}{MMBtu} \right)$ (From AP-42 Table 3.3-1)
- 2) The F factor is the ratio of gas volume of products of combustion to the heat content of the fuel. For fuel oil: $F_{factor} = \left(\frac{1 MMBtu}{10,320 wscf} \right)$ (From Part 60 Appendix A Method 19 Table 19-2)
- 3) Conversion factor for lb/scf to ppm, $\left(\frac{ppm}{1.660E^{-7} lb / scf} \right)$

(From Part 60 Appendix A Method 19 Table 19-1)

$$\text{Conversion factor for ppmw to ppmv, } \frac{\left(\frac{28.8}{MW_{SO_2}} \right)}{1 ppmw} = \frac{\left(\frac{28.8}{64.0} \right) ppmv}{ppmw} = \left(\frac{0.45 ppmv}{ppmw} \right)$$

(From AP-42 Appendix A)

Compliance Demonstration

$$ppmv SO_2 = \left(\frac{0.29 lb}{MMBtu} \right) \times \left(\frac{MMBtu}{10,320 wscf} \right) \times \left(\frac{ppmw}{1.667E^{-7} lb / scf} \right) \times \left(\frac{0.45 ppmv}{ppmw} \right) = 76 ppmv$$

76 ppmv $SO_2 \ll 500$ ppmv SO_2 , therefore EU1560 is always in compliance.

Attachment I

Facility Emissions Summary for VOCs and HAPs

The following tables summarize the calculations that demonstrate that, when in compliance with the voluntary permit condition (PW001), the facility will be below the major source thresholds at maximum production.

Process	HAP	Potential Emissions (tpy)*
Pilot Lab	Ethyl Acrylate	1.45E-03
	Ethyl Benzene	1.68E-03
	Ethylene Glycol	8.61E-03
	Glycol Ethers	1.13E-02
	Methyl Ethyl Ketone	3.63E-03
	Xylene	8.83E-03
	Toluene	1.76E-02
Gel Coat Small Batch	Cobalt	1.54E-02
	Cumene	2.81E-03
Gel Coat Big Batch	Cobalt	7.19E-03
	Cumene	1.321E-03
Resin Production	Ethylbenzene	1.02E-03
	Ethylene Glycol	1.32E-03
	Hydroquinone	2.26E-04
	Maleic Anhydride	3.07E-01
	Methanol	1.33E-04
	N,N-Dimethylaniline	6.48E-04
	Phthalic Anhydride	3.03E-05
	Xylene	5.36E-03
Powder Coating Production	Ethylene Glycol	1.23E-01
Miscellaneous Operations	Cobalt	1.02E-05
	Cumene	1.87E-06
	Maleic Anhydride	2.43E-01
	Methyl Ethyl Ketone	6.66E-02
	Xylene	1.29E-02
Voluntary Emission Limits	Styrene	10
	Methyl Methacrylate	10
Total		20.841

**All HAP emissions are uncontrolled potentials except for the 60s & 90s big batch gel coat, resin and powder coating production, which have controls required by permit.*

Process	Potential VOC Emissions (tpy)*
Combustion	1.855
Pilot Lab	0.451
Gel Coat Small Batch	22.419
Gel Coat Big Batch	10.977
Resin Production	2.595
Powder Coating Production	0.822
Miscellaneous Operations	4.719
Total VOC PTE	43.837

**All VOC emissions are uncontrolled potentials except the 60s & 90s big batch gel coat, resin and powder coating production, which have controls required by permit.*

Potential Emissions Calculations for HAPs and VOCs at Maximum Production Capability

Combustion

Emission Unit	MHDR (MMBtu/hr)	Emission Factor (lb/MMft³)	Uncontrolled PTE (ton VOC/yr)
Kettle Furnace-84	4	2.8	0.0483
Kettle Furnace-86	4	2.8	0.0483
Boiler #1	21.9	5.5	0.5198
Boiler #2	21.9	5.5	0.5198
Thermal Oxidizer	8.4	5.5	0.1994
Hot Oil Heater	12	2.8	0.1450
Thermal Oxidizer (pilot lab)	0.5	5.5	0.0119
Emergency Generator	587 Hp	0.00247lb/Hp-hr	0.3625
Total			1.855

Pilot Lab

Reactor

ID	Description	Capacity (gal)	Lbs/Batch	Maximum Throughput (lbs)	Emission Factor¹ (lb/ton)	Uncontrolled PTE (ton VOC/yr)
T1401	Reactor	60	570	171,000	4.8	0.2052
T2401	Reactor	10	95	28,500	4.8	0.0342
Total				199,500		0.2394

¹ Emission Factor derived from SCC Factors 3-01-018-38 Polyester/Alkyd Resins: Reactor Kettle

Thin Tanks

ID	Description	Capacity (gal)	Maximum Throughput (lbs)	Emission Factor¹ (lb/ton)	Uncontrolled PTE (ton VOC/yr)
T1601	Thin Tank	120	128,908	6.7	0.08637
T1701	Thin Tank	120	128,908	6.7	0.08637
T2601	Thin Tank	20	21,485	6.7	0.01440
Total			279,300		0.18714

¹ Emission Factor derived from SCC Factors 3-01-018-39 Polyester/Alkyd Resins: Resin Thinning Tank. The emission factor for the thin tanks corresponds to lbs VOC/ton Solvent. Assume 40% solvent in batch.

Loading Loss

Solvent	Maximum Usage (lbs)	Product Loaded¹ (lbs)	Product Loaded² (gal)	Filling Pressure³ (psia)	Molecular Weight	Uncontrolled PTE⁵ (ton VOC/yr)
80% Xylene / 20% Ethylbenzene	2,277	7,969	839	0.450	106.17	5.94E-04
Toluene	7,595	26,584	2,798	1.288	92.14	4.92E-03
n-Butyl Alcohol	268	936	99	0.600	74.12	6.49E-05
Heavy Aromatic Solvent	481	1,682	177	0.138	100.00	3.60E-05
Naphtha						
Methyl Ethyl Ketone	1,152	4,032	424	3.750	72.11	1.70E-03
Light Aromatic Solvent	7,978	27,922	2,939	0.225	100.00	9.79E-04
Naphtha						
Medium Aliphatic Solvent	977	3,421	360	0.075	142.00	5.68E-05
Naphtha (mineral spirits)						
Ethylene Glycol	5,231	18,309	1,927	0.075	118.18	2.53E-04
Monobutyl Ether						
Isopropyl Alcohol	2,474	8,657	911	2.880	60.09	2.34E-03
n-Butyl Acetate	4,789	16,761	1,764	0.625	116.16	1.90E-03
2-Ethyl Hexanol	153	535	56	0.038	130.23	4.07E-06
Dipropylene Glycol	1,431	5,007	527	0.049	148.20	5.64E-05
Monomethyl Ether						
Propylene Glycol	2,381	8,333	877	0.313	116.20	4.72E-04
Monopropyl Ether						
Methyl n-Amyl Ketone	852	2,981	314	0.213	114.19	1.13E-04
Secondary Butyl Alcohol	1,813	6,345	668	1.300	74.12	9.53E-04
Propylene Glycol	4,412	15,442	1,625	0.313	132.20	9.94E-04
Monomethyl Ether						
Acetate						
Aromatic 200 Solvent	1,365	4,778	503	0.138	100.00	1.02E-04
Poly Alkyl Glycol	2,255	7,893	831	0.000	270.00	5.32E-07
Butyl Ether						
Styrene	24,741	86,593	9,115	0.391	104.15	5.50E-03
Ethyl Acrylate	546	1,911	201	1.788	100.11	5.33E-04
Miscellaneous VOC ⁴	6,631	23,208	2,443	0.625	116.16	2.63E-03
Total	79,800					2.42E-02

¹ Assume organic resins contain approximately 40 percent solvent.

² It is assumed that the total volume loaded out may be determined by dividing the organic resin thinned in solvent by a weighted average density of 9.5 lbs per gallon.

³ Partial pressures were previously determined using Raoult's Law by CFR, L.L.C.

⁴ Miscellaneous VOC conservatively assumed to be represented by n-Butyl Acetate

⁵ Loading Loss Emissions calculated using AP-42 Section 5.2, equation 1; Assume a loading temperature of 150°F

Reactor

HAP	Emission Factor (lb HAP/ton resin)	Uncontrolled PTE (lb HAP/yr)	Uncontrolled PTE (ton HAP/yr)
Ethyl Benzene	0.0176	1.7551	0.0009
Ethylene Glycol	0.1727	17.2237	0.0086
Glycol Ethers	0.2266	22.6061	0.0113
Xylene	0.0941	9.3841	0.0047

Thin Tanks

HAP	Emission Factor (lb HAP/ton resin)	Uncontrolled PTE (lb HAP/yr)	Uncontrolled PTE (ton HAP/yr)
Ethyl Acrylate	0.0131	1.8292	0.0009
Ethyl Benzene	0.0098	1.3719	0.0007
Methyl Ethyl Ketone	0.0276	3.8597	0.0019
Xylene	0.0525	7.3352	0.0037
Toluene	0.1822	25.4447	0.0127

Pilot Lab VOC Summary

Source	VOC Emissions (tpy)
Reactor	0.239
Thin Tanks	0.187
Loading Loss	2.42E-02
Total	0.451

Pilot Lab HAP Summary

HAP	HAP Emissions (tpy)*
Ethyl Acrylate	1.45E-03
Ethyl Benzene	1.68E-03
Ethylene Glycol	8.61E-03
Glycol Ethers	1.13E-02
Methyl Ethyl Ketone	3.63E-03
Xylene	8.83E-03
Toluene	1.76E-02

Gel Coat Small Batch

Total Capacity (gal)	Lbs/Batch	Maximum Throughput ² (lbs)	Emission Factor ¹ (lb/ton)	Uncontrolled PTE (ton VOC/yr)
42,129	463,419	56,382,645	1.5	21.143

¹ Emission factor developed by CCP (refer to Permit Number 052000-007; Project Number 1999-06-014).

² Based on a 72 hour cycle time; limiting factors are filtering and packaging capability.

Loading Loss

Raw Material	Maximum Product Loaded ¹ (lbs)	Maximum Product Loaded ² (gal)	Filling Pressure ³ (psia)	Molecular Weight	Uncontrolled PTE ⁵ (ton VOC/yr)
Styrene	4,510,6116	4,100,556	0.1036	104	0.7127
Methyl Methacrylate	7,047,831	640,711	0.5356	100	0.5536
Miscellaneous VOC ⁴	4,228,698	384,427	0.00988	148.2	0.0091
Total	56,382,645				1.275

¹ Assume gel coat contains approximately 40 percent solvent. Therefore, assume for the purpose of estimating emissions that the amount of gel coat containing the specific solvent may be determined by dividing the amount of solvent used by 40 percent.

² It is assumed that the total volume loaded out may be determined by dividing the gel coat by a weighted average density of 11 lbs per gallon.

³ Partial pressures were determined using Raoult's Law.

⁴ Assume miscellaneous VOC emissions are represented by the constituent dipropylene glycol monomethyl ether.

⁵ Loading Loss Emissions calculated using AP-42 Section 5.2 equation 1, assuming a filling temperature of 100°F

HAP	Emission Factor (lb HAP/ton gel coat)	Uncontrolled PTE (lb HAP/yr)	Uncontrolled PTE (ton HAP/yr)
Cobalt	0.0011	30.736	1.54E-02
Cumene	0.0002	5.621	2.81E-03

Gel Coat Small Batch VOC Summary

Source	VOC Emissions (tpy)
Process Vessels	21.143
Loading Loss	1.275
Total	22.419

Gel Coat Big Batch

10s & 20s

ID	Description	Capacity		Maximum Throughput ² (lbs)	Emission Factor ¹ (lb/ton)	Uncontrolled PTE (ton VOC/yr)
		(gal)	Lbs/Batch			
G5101	10 Drum	550	6,050	736,083	1.5	0.2760
G5102	13 Drum	715	7,865	956,908	1.5	0.3588
G5103	10 Drum	550	6,050	736,083	1.5	0.2760
G5104	13 Drum	715	7,865	956,908	1.5	0.3588
G5201	20 Drum	1,100	12,100	1,472,167	1.5	0.5521
G5202	20 Drum	1,100	12,100	1,472,167	1.5	0.5521
G5203	20 Drum	1,100	12,100	1,472,167	1.5	0.5521
G5204	20 Drum	1,100	12,100	1,472,167	1.5	0.5521
G5301	8 Drum	440	4,840	588,867	1.5	0.2208
G5302	10 Drum	550	6,050	736,083	1.5	0.2760
G5303	10 Drum	550	6,050	736,083	1.5	0.2760
G5304	10 Drum	550	6,050	736,083	1.5	0.2760
G5401	10 Drum	550	6,050	736,083	1.5	0.2760
G5402	10 Drum	550	6,050	736,083	1.5	0.2760
G5403	10 Drum	550	6,050	736,083	1.5	0.2760
G5404	10 Drum	550	6,050	736,083	1.5	0.2760
G5501	10 Drum	550	6,050	736,083	1.5	0.2760
G5502	13 Drum	715	7,865	956,908	1.5	0.3588
G5503	10 Drum	550	6,050	736,083	1.5	0.2760
G5504	13 Drum	715	7,865	956,908	1.5	0.3588
Total				18,402,083		6.901

¹ Emission factor developed by CCP (refer to Permit Number 052000-007; Project Number 1999-06-014).

² Permit Number 052000-007 indirectly limits production from the 10, 20, 60 & 90's to 48,402,083 pounds per year (assuming a gel coat density of 11 pounds per gallon). Throughput is evenly distributed between production units. Based on a 72 hour cycle time; limiting factors are pumps, filtering, and packaging capability.

60s & 90s

ID	Description	Capacity		Maximum Throughput ² (lbs)	Emission Factor ¹ (lb/ton)	Controlled PTE (ton VOC/yr)
		(gal)	Lbs/Batch			
G5601	60 Drum	3,300	36,300	5,963,855	1.5	0.59
G5701	90 Drum	5,000	55,000	9,036,145	1.5	0.90
G5801	60 Drum	3,300	36,300	5,963,855	1.5	0.59
G5901	90 Drum	5,000	55,000	9,036,145	1.5	0.90
Total				30,000,000		2.98

¹ Emission factor developed by CCP (refer to Permit Number 052000-007; Project Number 1999-06-014).

² Permit Number 052000-007 indirectly limits production from the 10, 20, 60 & 90's to 48,402,083 pounds per year (assuming a gel coat density of 11 pounds per gallon). Throughput is evenly distributed between production units.

Loading Loss

Raw Material	Maximum Product Loaded ¹ (lbs)	Maximum Product Loaded ² (gal)	Filling Pressure ³ (psia)	Molecular Weight	Uncontrolled PTE (lb VOC/yr)	Uncontrolled PTE ⁵ (ton VOC/yr)
Styrene	38,721,666	3,520,151	0.1036	104	1223.64	0.6118
Methyl Methacrylate	6,050,260	550,024	0.5356	100	950.43	0.4752
Miscellaneous VOC ⁴	3,630,156	330,014	0.00988	148.2	15.59	0.0078
Total	48,402,083					1.095

¹ Assume gel coat contains approximately 40 percent solvent. Therefore, assume for the purpose of estimating emissions that the amount of gel coat containing the specific solvent may be determined by dividing the amount of solvent used by 40 percent.

² It is assumed that the total volume loaded out may be determined by dividing the gel coat by a weighted average density of 11 lbs per gallon.

³ Partial pressures were determined using Raoult's Law

⁴ Assume miscellaneous VOC emissions are represented by the constituent dipropylene glycol monomethyl ether.

⁵ Loading Loss Emissions calculated from AP-42 Section 5.2 equation 1, assuming 100°F filling temperature.

60s & 90s

HAP	Emission Factor (lb HAP/ton gel coat)	Uncontrolled PTE (lb HAP/yr)	Uncontrolled PTE (ton HAP/yr)
Cobalt	1.09E-03	16.354	2.17E-03
Cumene	1.99E-04	2.991	3.96E-04

10s & 20s

HAP	Emission Factor (lb HAP/ton gel coat)	Uncontrolled PTE (lb HAP/yr)	Uncontrolled PTE (ton HAP/yr)
Cobalt	1.09E-03	10.031	5.02E-03
Cumene	1.99E-04	1.835	9.17E-04

Gel Coat Big Batch VOC Summary

Source	VOC Emissions (tpy)
10s & 20s	6.901
60s & 90s	2.98
Loading Loss	1.095
Total	10.977

Gel Coat Big Batch HAP Summary

HAP	Potential Emissions (tpy)*
Cobalt	7.19E-03
Cumene	1.32E-03

Resin Production

Reactors

ID	Description	Capacity		Maximum Throughput (lbs)	Emission Factor ¹ (lb/ton)	Controlled PTE (ton VOC/yr)
		(gal)	Lbs/Batch ²			
K8400	Reactor	4,000	37,000	16,206,000	4.8	0.39
K8600	Reactor	4,000	37,000	16,206,000	4.8	0.39
Total				32,412,000		0.78

¹ Emission Factor derived from SCC Factors 3-01-018-38 Polyester/Alkyd Resins: Reactor Kettle

² An average density is assumed to be 9.25 pounds per gallon. Assume an average cook takes approximately 17 hours.

Thin Tanks

ID	Description	Capacity		Throughput (lbs)	Emission Factor ² (lb/ton)	Controlled PTE (ton VOC/yr)
		(gal)	Lbs/Batch ¹			
T8401	Thin Tank	8,000	51,800	22,688,400	6.7	0.30
T8601	Thin Tank	8,000	51,800	22,688,400	6.7	0.30
Total				45,376,800		0.61

¹ Kettle solids conservatively estimated to contain 40% VOC.

² Emission Factor derived from SCC Factors 3-01-018-39 Polyester/Alkyd Resins: Resin Thinning Tank. The emission factor for the thin tanks corresponds to lbs VOC/ton solvent. Assume 40% solvent in batch.

Thermaclean™ Reactors

ID	Description	Capacity		Kettle Throughput (lbs)	Factor ¹ (lb/1000 lbs)	Estimated Uncontrolled PTE (lb VOC/yr)
		(gal)	Lbs/Batch ²			
K7700	Reactor/Blend	1,500	13,050	11,431,800	6.00E-04	3.66E-03
K9100	Reactor/Blend	2,500	21,750	19,053,000	6.00E-04	6.10E-03
Total				30,484,800		9.76E-03

¹ CCP manufactures several different formulas of a low volatile cleaner referred to as Thermaclean™. Many formulas contain up to 78% water with the primary organic ingredient being dibasic ester. An emission factor was developed using EPA Tanks 4.0. Thermaclean™ was assumed to be 100% dibasic ester. Dibasic ester has a very low vapor pressure of 0.2 mmHg at 68°F.

² Assume an average density of 8.7 lb/gal.

Finished Resin Storage Tanks

Tank ID	Tank Size (gal)	Maximum Throughput (lbs)	Maximum Throughput (gals)	VOC Working Loss ¹ (tpy)	VOC Breathing Loss ¹ (tpy)
70B0650	6,000	5,049,722	545,916	6.75E-03	1.00E-03
70B0651	6,000	5,049,722	545,916	6.75E-03	1.00E-03
70B0652	6,000	5,049,722	545,916	6.75E-03	1.00E-03
70B0654	6,000	5,049,722	545,916	6.75E-03	1.00E-03
70B0655	6,000	5,049,722	545,916	6.75E-03	1.00E-03
70B0426	9,458	7,960,045	860,545	1.31E-02	1.89E-03
70B0425	9,458	7,960,045	860,545	1.31E-02	1.89E-03
70S0059	2,500	2,104,051	227,465	6.75E-03	1.00E-03
70S0064	2,500	2,104,051	227,465	6.75E-03	1.00E-03
Total		45,376,800		0.0735	0.0108

Note: Conservatively assumed that UPR is distributed evenly through 16 finished resin storage tanks.

¹ Calculated using EPA Tanks 4.0

Loading Loss

Product	Maximum Loaded (lbs)	Maximum Loaded (gal)	Filling Pressure (psia)	Molecular Weight	Uncontrolled PTE ¹ (tons VOC/yr)
UPR Tank Wagon Filling	45,376,800	4,905,600	0.1269	104	1.115

¹ Loading Loss Emissions calculated using AP-42 Section 5.2 equation 1, assuming 110°F loading temperature.

Reactors

HAP	Emission Factor (lb HAP/ton resin)	Controlled PTE (lb HAP/yr)	Controlled PTE (ton HAP/yr)
Ethylbenzene	0.0021	0.684	3.42E-04
Ethylene Glycol	0.0081	2.633	1.32E-03
Hydroquinone	0.0005	0.151	7.57E-05
Maleic Anhydride	1.8916	613.10	3.07E-01
N,N-Dimethylaniline	0.0013	0.433	2.17E-04
Phthalic Anhydride		0.061	3.03E-05
Xylene	0.0111	3.586	1.79E-03

Thin Tanks

HAP	Emission Factor (lb HAP/ton resin)	Controlled PTE (lb HAP/yr)	Controlled PTE (ton HAP/yr)
Ethylbenzene	1.18E-03	0.3817	1.91E-04
Hydroquinone	2.61E-04	0.0845	4.23E-05
Methanol	2.30E-04	0.0746	3.73E-05
N,N-Dimethylaniline	7.46E-04	0.2418	1.21E-04
Xylene	6.18E-03	2.0021	1.00E-03

Loading Loss

HAP	Emission Factor (lb HAP/lb VOC)	Uncontrolled PTE (lb HAP/yr)	Uncontrolled PTE (ton HAP/yr)
Ethylbenzene	4.39E-04	0.9797	4.90E-04
Methanol	8.59E-05	0.1915	9.58E-05
N,N-Dimethylaniline	2.78E-04	0.6205	3.10E-04
Xylene	2.30E-03	5.1385	2.57E-03
Hydroquinone	9.73E-05	0.2169	1.08E-04

Resin Production VOC Summary

Source	VOC Emissions (tpy)
Reactors	0.78
Thin Tanks	0.61
ThermaClean™	9.76E-03
Resin Storage Tanks	0.0843
Loading Loss	1.115
Total	2.595

Resin Production HAP Summary

HAP	Potential Emissions (tpy)*
Ethylbenzene	1.02E-03
Ethylene Glycol	1.32E-03
Hydroquinone	2.26E-04
Maleic Anhydride	3.07E-01
Methanol	1.33E-04
N,N-Dimethylaniline	6.48E-04
Phthalic Anhydride	3.03E-05
Xylene	5.36E-03

Powder Coating Production

Reactors

ID	Working Capacity (gal)	Maximum Throughput ⁴ (lbs/batch)	Maximum Batches/yr	Maximum Throughput (lbs)	Emission Factor ² (lb VOC/ton resin)	Controlled PTE ³ (tons VOC/yr)
K8000	3,170	34,870	313	10,914,310	4.8	0.2619
K8100	6,610	72,710	274	19,922,540	4.8	0.4781
Total				30,836,850		0.7401

¹ K8100 - Typical batch cycle time is 32 hours (kettle time 24 hrs; drop to flaking belt 8 hrs). K8000 - Typical batch cycle time is 28 hours (kettle time 24hrs; drop to flaking belt 4 hrs).

² Emission Factors derived from: SCC Factor 3-01-018-38 Polyester/Alkyd Resins: Reactor Kettle (4.8 lbs VOC/ton product).

³ Reaction Kettles are vented to the existing thermal oxidizer which has design efficiency >98%.

⁴ Based on an average kettle density of 11.0 pounds per gallon (reviewed 61% of 2004 production).

Cooling/Flaking Belt

ID	Maximum Throughput (lbs resin/hour)	Maximum Batches/yr	Maximum Throughput (lbs)	Emission Factor (lb VOC/hr)	Uncontrolled PTE (tons VOC/yr)
CNV-8140	9,912	587	27,332,663	0.0441	0.0824

¹ The flaking belt is the limiting step to total powder coatings production (flaking belt supports 2 reactors).

² Small kettle drops for a period of approximately 4 - 5 hours. Large kettle drops for a period of approximately 8 - 9 hours.

Reactors

HAP	Emission Factor (lb HAP/ton resin)	Controlled PTE (lb HAP/yr)	Controlled PTE (ton HAP/yr)
Ethylene Glycol	0.8	246.69	0.1233

Powder Coating Production VOC Summary

Source	VOC Emissions (tpy)
Reactors	0.7401
Cooling/Flaking Belt	0.0824
Total	0.822

Miscellaneous Operations

Blend Tank Rinsing (VOCs/HAPs)

HAP	Maximum Amount Used (lbs)	Emission Factor ¹ (lbs/ton)	Uncontrolled PTE (ton/yr)
Styrene	822,913	6.7	1.378
Methyl Ethyl Ketone	39,786	6.7	0.067
Total			1.445

¹ SCC 30101472: Equipment cleaning tanks and vessels

QA Laboratory (VOCs/HAPs)

Pollutant	Weight % of Pollutant	Emission Factor (lb/Gal)	Uncontrolled PTE (lb/yr)	Uncontrolled PTE (ton/yr)
Styrene	32	3.41	2,255	1.13
Methyl Methacrylate	5	0.53	352	0.176
Cobalt Compounds	2.90E-04	0.00	0.020	1.02E-05
Cumene	5.31E-05	0.00	0.004	1.87E-06
Misc. VOC	2.99	0.32	211	0.106
Total				1.410

Raw Material Storage Tanks

New Tank ID	Working Volume (gal)	Density (lbs/gal)	Maximum Throughput (lb)	VOC Working Loss Emissions ¹ (tpy)	VOC Breathing Loss Emissions ¹ (tpy)
70S0108	35,000	7.53	30,387,138	1.19E-01	1.65E-02
70S0101	10,000	7.82	1,517,493	8.42E-02	4.42E-02
70S0102	10,000	7.82	1,517,493	8.42E-02	4.42E-02
70S0103	10,000	7.82	1,517,493	8.42E-02	4.42E-02
70S0140	21,000	7.25	49,680	6.65E-04	1.12E-02
70S0150	9,828	7.82	1,491,392	8.42E-02	4.42E-02
70S7001	10,000	12.45	8,494,000	7.25E-02	9.47E-03
70S0147	10,000	8.65	693,872	4.50E-05	3.50E-05
70S0518	8,500	8.65	589,791	4.50E-05	3.50E-05
70S0519	8,500	8.65	589,791	4.50E-05	3.50E-05
70S0520	8,500	8.65	589,791	4.50E-05	3.50E-05
70S0733	15,000	8.4	8,526,493	6.13E-03	9.55E-04
70S8054	15,000	8.4	8,526,493	6.13E-03	9.55E-04
Total			64,490,920	0.5419	0.2162

¹ Calculated using EPA Tanks 4.0

Raw Material Loading Loss (VOCs/HAPs)

Raw Material	Maximum Throughput (gal)	Filling Pressure (psia)	Molecular Weight	Filling Temperature (deg. F)	Uncontrolled PTE (lbs/yr)	Uncontrolled PTE (tpy)
Styrene	4,035,476	0.0611	104.00	55	899.60	0.4498
Methyl Methacrylate	772,874	0.3643	100.00	55	987.75	0.4939
80% Xylene / 20% Ethylbenzene	6,852	0.0769	106.17	55	1.96	0.0010
Maleic Anhydride	682,249	0.157	100.00	140	322.54	0.1613
Total						1.106

¹ Loading Loss Emissions calculated using AP-42 Section 5.2 equation 1.

STATEMENT OF BASIS

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 May 25, 2005;
- 2) 2005 Emissions Inventory Questionnaire, received March 30, 2006;
- 3) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

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.

10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds

This rule does not apply to Boilers #1, #2, Kettle Furnaces 84, 86, and the Hot Oil Heater (EU0010 through EU0040 and EU1400) because these units use only pipeline grade natural gas. In accordance with 10 CSR 10-6.260(1)(A)2., combustion equipment that uses exclusively pipeline grade natural gas is exempt from this regulation.

Construction Permit Revisions

The following revisions were made to construction permits for this installation:

Construction Permit # 0397-012

Special Condition #8 of Construction Permit #052000-007 states:

"Construction Permit Number: 052000-007 supercedes the conditions, recordkeeping and reporting requirements that were included in the Special Conditions of Construction Permit Number: 0397-012." Therefore, the requirements from Construction Permit Number: 0397-012 were not included in the operating permit.

Construction Permit #052000-007

All special conditions of Construction Permit Amendment #052000-007A supercede the special conditions of this permit. Therefore, only the special conditions of the amendment were included.

Construction Permit #082001-020

Special Condition #1 of Construction Permit #082001-020 states:

“Cook Composites & Polymers Company shall control emissions from the Terephthalic acid (TPA) storage system (EP25) using baghouses as specified in the permit application.” The TPA storage system was never constructed, and therefore was omitted from the permit conditions.

New Source Performance Standards (NSPS) Applicability

40 CFR Part 60, Subpart D, *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*

40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units*

40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

Boilers #1 and #2 (EU0010 and EU0020) were installed in 1964, which is prior to the applicability dates for 40 CFR Part 60, Subpart D, Db and Dc. Therefore, these requirements were not included in the operating permit.

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*

This rule applies to tanks storing VOC liquids that have a capacity greater than or equal to 75 m³ (19,812 Gal). There are two vessels at this installation that fit this definition, however, in accordance with rule, both tanks are exempt from the requirements of this subpart. The Xylene Storage Tank – 21,000 Gal, (EU0230) was installed prior to July 23, 1984 and therefore is not subject to this rule. The Styrene Storage Tank – 35,000 Gal, (EU0640) has a true vapor pressure of 0.6 kPa. All vessels with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa are exempt from this regulation.

Maximum Available Control Technology (MACT) Applicability

40 CFR Part 63, Subpart HHHHH, *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing*

The permittee has taken a federally enforceable permit limit for HAPs (Construction Permit #052000-007A), and therefore shall not be subject to this regulation.

Other Regulatory Determinations

Attachment I, *Basis for PTE calculations*

- 1) Maximum production potential of all processes at the installation, assuming the following:
 - a) Parameters submitted for the Pilot Lab in the New Source Review Permit Application Project No. 2000-08-023,

- b) Parameters submitted for the Powder Coatings Production in the New Source Review Permit Project No. 2001-04-019,
 - c) Resin Production – Capacity of reactors (4,000 gal/reactor), estimated average density of product lines (9.25 lb/gal; reviewed 70% of production in 2004), estimated average batch time (17 hrs), unsaturated polyester resin thinned in approximately 40% solvent,
 - d) Thermaclean™ Production – Capacity of reactors (1,500 and 2,500 gallons), estimated average density of product lines (8.7 lb/gal), estimated average batch time (10 hrs),
 - e) Big Batch Gel Coat Production – New Source Review Permit Project No. 1999-06-014 limits styrene emissions from Big Batch Operation to less than 12.1 tons in every consecutive 12-month period; As a result, production was distributed between process equipment in Big Batch Operation, and
 - f) Small Batch Gel Coat Production – capacity of process units, estimated average density of product lines (10.04 lb/gal), estimated average cycle time 72 hours.
- 2) Continuously operating controls on the Resin Production, 60s & 90s Big Batch Gel Coat Production and Powder Coatings Production processes (as required by Construction Permit #082001-020, #052000-007A and 10 CSR 10-2.300).
 - 3) Limiting Styrene and Methyl Methacrylate emissions below 10 tons per year (see PW001).

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*

Attachment G demonstrates continuous compliance with this rule for the Big Batch and Small Batch Gel Coat Production Areas. No monitoring or recordkeeping is required to ensure compliance, therefore these limits were only included as an attachment and not in the body of the permit. The rest of the emission units at the facility have a potential to emit for particulate matter of less than 0.5 lb/hr, and therefore, in accordance with 10 CSR 10-6.400(1)(B)11., are exempt from this regulation.

10 CSR 10-2.040, *Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*

This rule applies to the emission units EU0010 through EU0040, and EU1090. Attachment A demonstrates continuous compliance with this rule if the permittee only uses natural gas as fuel for these units.

10 CSR 10-2.300, *Control of Emissions from the Manufacturing of Paints, Varnishes, Lacquers, Enamels and other Allied Surface Coating Products*

The condenser at this installation is not a surface condenser, but is an integral part of the process equipment for product quality, and therefore not deemed a control device. However, the thermal oxidizer was approved (December 5, 2001 letter from MDNR to Mr. John Bauer of CCP) as an equivalent control device in accordance with the rule.

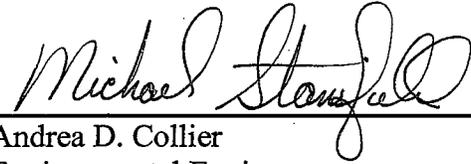
Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

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 that 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 that was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

Prepared by:

For 

Andrea D. Collier
Environmental Engineer