

# INTERNAL PERMITTING DOCUMENT TRACKING MANIFEST

Company Name Superior Reedsville Filtration

Permitting Action Number RB-2501B Total Days 20 DAQ Days 20

**Permitting Action:**

- |   |                                    |   |
|---|------------------------------------|---|
| <input type="radio"/> Permit Determination  | <input type="radio"/> Temporary    | <input checked="" type="radio"/> Modification |
| <input type="radio"/> General Permit        | <input type="radio"/> Relocation   | <input type="radio"/> PSD (Rule 14)           |
| <input type="radio"/> Administrative Update | <input type="radio"/> Construction | <input type="radio"/> NNSR (Rule 19)          |

**Documents Attached:**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Engineering Evaluation/Memo   | <input type="checkbox"/> Completed Database Sheet |
| <input checked="" type="checkbox"/> Draft Permit                  | <input type="checkbox"/> Withdrawal               |
| <input checked="" type="checkbox"/> Notice                        | <input type="checkbox"/> Letter                   |
| <input type="checkbox"/> Denial                                   | <input type="checkbox"/> Other (specify) _____    |
| <input type="checkbox"/> Final Permit/General Permit Registration | _____   |

Date	From	To	Action Requested
5/24	Ed	Bew	Please Review
6/2	Bew	Ed	See Comments - Addition - to Notice

NOTE: Retain a copy of this manifest for your records when transmitting your document(s).



**Permit / Application Information Sheet**  
**Division of Environmental Protection**  
**West Virginia Office of Air Quality**

<b>Company:</b>	Superior Reedsville Filtration, LLC		<b>Facility:</b>	Reedsville	
<b>Region:</b>	6	<b>Plant ID:</b>	077-00015	<b>Application #:</b>	13-2501B
<b>Engineer:</b>	Andrews, Edward S.		<b>Category:</b>	Fiber	
<b>Physical Address:</b>	92 South Reedsville WV 26547		<b>SIC: [2421] LUMBER &amp; WOOD PRODUCTS, EXCEPT FURNITURE - SAWMILLS &amp; PLANING MILLS GENERAL</b> <b>NAICS: [327993] Mineral Wool Manufacturing</b>  <b>SIC: [2823] CHEMICALS AND ALLIED PRODUCTS - CELLULOSIC MAN-MADE FIBERS</b> <b>NAICS: [325221] Cellulosic Organic Fiber Manufacturing</b>  <b>SIC: [3089] RUBBER AND MISCELLANEOUS PLASTICS PRODUCTS - PLASTICS PRODUCTS, NEC</b> <b>NAICS: [326121] Unlaminated Plastics Profile Shape Manufacturing</b>		
<b>County:</b>	Preston				
<b>Other Parties:</b>	Contact - Wilkins, Rod 740-398-3809				

<b>Information Needed for Database and AIRS</b>
1. Need valid physical West Virginia address with zip

<b>Regulated Pollutants</b>		
CO	Carbon Monoxide	10.140 TPY
	Formaldehyde	4.320 TPY
HC26	Methanol	3.820 TPY
PM10	Particulate Matter < 10 um	51.910 TPY
SO2	Sulfur Dioxide	11.130 TPY
NOX	Nitrogen Oxides (including NO, NO2, NO3, N2O3, N2O4, and N2O5)	98.700 TPY

<b>Summary from this Permit 13-2501B</b>		
<b>Air Programs</b>	<b>Applicable Regulations</b>	
SIP	02 06 07 07 10 27	
<b>Fee Program</b>	<b>Fee</b>	<b>Application Type</b>
9C	\$1,000.00	MODIFICATION

**Notes from Database**  
 Permit Note: This action is for the installation of 16 additional glass melt furnaces-glass fiber extruding apparatus and binder applicators-glass fiber forming drums with a curing oven.

<b>Activity Dates</b>	
APPLICATION RECEIVED	11/06/2015
APPLICATION FEE PAID	11/17/2015
ASSIGNED DATE	11/17/2015
APPLICANT PUBLISHED LEGAL AD	11/21/2015
APPLICATION DEEMED COMPLETE	05/04/2016

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Please note, this information sheet is not a substitute for file research and is limited to data entered into the AIRTRAX database.

Company ID: 077-00015  
 Company: Superior Reedsville Filtration  
 Printed: 05/24/2016  
 Engineer: Andrews, Edward S.

Permit Writer	Edward S. Andrews, P.E.
Email Address	edward.s.andrews@wv.gov
Company Name	Superior Reedsville Filtration, LLC
Company ID	077-00015
Facility Name	Reedsville Plant
Permit Number	R13-2501B
County	Preston
Newspaper	<i>Preston County Journal</i>
Company Contact & Email	Rod Wilkins <rwilkins@superiorfibers.com>
Consultant Email Address	<a href="mailto:joyce.gentry@sj-environmental.com">joyce.gentry@sj-environmental.com</a>
Regional Office (if applicable)	NCRO - Brian Tephabock

**Andrews, Edward S**

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**From:** Adkins, Sandra K  
**Sent:** Monday, June 06, 2016 9:20 AM  
**To:** Wheeler, Cathy L  
**Cc:** Andrews, Edward S  
**Subject:** DAQ Public Notice

Please see below the Public Notice for Draft Permit R13-2501B for Superior Reedsville Filtration, LLC's Reedsville Plant located in Preston County.

The notice will be published in the *Preston County Journal* on Tuesday, June 7, 2016, and the thirty day public comment period will end on Thursday, July 7, 2016.

ID # 77-15  
Reg R13-2501B  
Company Superior  
Facility Reedsville Initials EA

**AIR QUALITY PERMIT NOTICE**

**Notice of Intent to Approve**

On November 6, 2015, Superior Reedsville Filtration LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a permit to modify a wet fiberglass manufacturing facility located off of State Route 92 South of Reedsville, Preston County, WV at latitude 39.506041 degrees and longitude - 79.85440 degrees. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of its preliminary determination to issue the permit as Permit R13-2501B.

The following changes in potential emissions will be authorized by this permit action: Particulate Matter less than 10 microns, 13.97 tons per year (TPY); Particulate Matter, 13.97 TPY; Sulfur Dioxide, decrease (-) 1.85 TPY; Oxides of Nitrogen, 4.59 TPY; Carbon Monoxide, 3.79 TPY; Volatile Organic Compounds, 7.18 TPY; Total Hazardous Air Pollutants, 4.06 TPY of which 2.14 tons of Formaldehyde and 1.91 tons of Methanol; and Carbon Dioxide Equivalent, 5,693.04 TPY.

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Thursday, July 7, 2016. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed modification will meet all state and federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Edward Andrews  
WV Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street, SE

*Entire Document*  
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Charleston, WV 25304

Telephone: 304/926-0499, ext. 1214

FAX: 304/926-0478

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

[www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx](http://www.dep.wv.gov/daq/Pages/NSRPermitsforReview.aspx)

**Andrews, Edward S**

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**From:** Adkins, Sandra K  
**Sent:** Monday, June 06, 2016 9:14 AM  
**To:** 'wentworth.paul@epa.gov'; 'bradley.megan@epa.gov'; rwilkins@superiorfibers.com; joyce.gentry@sj-environmental.com  
**Cc:** Durham, William F; McKeone, Beverly D; McCumbers, Carrie; Hammonds, Stephanie E; Rice, Jennifer L; Andrews, Edward S; Taylor, Danielle R; Tephabock, Brian S; Befonte, Donna M  
**Subject:** WV Draft Permit R13-2501B for Superior Reedsville Filtration, LLC; Reedsville Plant  
**Attachments:** 2501B.pdf; Eval2501B.pdf; notice.pdf

Please find attached the Draft Permit R13-2501B, Engineering Evaluation, and Public Notice for Superior Reedsville Filtration, LLC's Reedsville Plant, located in Preston County.

The notice will be published in the *Preston County Journal* on Tuesday, June 7, 2016, and the thirty day comment period will end on Thursday, July 7, 2016.

Should you have any questions or comments, please contact the permit writer, Ed Andrews, at 304 926-0499 x1214.

ID # 77-15  
Reg R13-2501B  
Company Superior  
Facility Reedsville Initials EA

*Entire Document*  
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west virginia department of environmental protection

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Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
Phone 304/926-0475 • FAX: 304/926-0479

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
www.wvdep.org

## ENGINEERING EVALUATION / FACT SHEET

### BACKGROUND INFORMATION

Application No.:	R13-2501B
Plant ID No.:	077-00015
Applicant:	Superior Reedsville Filtration LLC
Facility Name:	Reedsville Plant
Location:	Reedsville
NAICS Code:	327993
Application Type:	Modification
Received Date:	November 6, 2015
Engineer Assigned:	Edward S. Andrews, P.E.
Fee Amount:	\$1,000.00
Date Received:	November 18, 2015
Completeness Date:	May 4, 2016
Due Date:	August 2, 2016
Newspaper:	Dominion Post
Applicant Ad Date:	November 21, 2015
UTMs:	Easting: 603.30 km    Northing: 4,374.35 km    Zone: 17
Description:	This action is for the installation of 16 additional glass melt furnaces-glass fiber extruding apparatus and binder applicators-glass fiber forming drums with a curing oven.

### DESCRIPTION OF PROCESS

The Superior Fibers – Reedsville Manufacturing Facility melts glass cullet raw material, extrudes glass fibers, applies binder to the glass fibers, and then rolls the glass fibers with binder onto large drum rolls. These rolls are placed in in-process storage at the facility, to wait further processing at a later date, which consists of expanding, curing, trimming, packaging, and shipping to customers.

This facility currently has twenty-eight (28) Glass Melt Furnaces – Glass Fiber Extruding Apparatus (Emission Unit ID# GMF-1 – GMF-28) and Binder Applicator-Glass Fiber Forming

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Drums (Emission Unit ID# Drum-1 – Drum-28) equipment trains. These equipment items vent inside the production building, and thus do not have any vent/emission point ID# designations. Sixteen more Glass Melt Furnaces-Glass Fiber Extruding Apparatus (Emission Unit ID# GMF-29 – GMF-50) and Binder Applicator-Glass Fiber Forming Drums (Emission Unit ID# Drum-29 – Drum-50) equipment trains are requested in this R13-2501A modification application for planned installation and operation in early first quarter 2016.

The binder applied to the glass fiber consists of varying combinations of water, resin, latex, dye, and/or other additives. The following existing storage tanks and mixing tanks/vessels are used in the process:

- ID# T-1 (vents via breathing vent ID# TV-1 inside building), used to store forming oil which assists in releases of plastic from the rolled glass fiber mats.
- ID# T-2 (vents via header to stack ID# TV-2 to atmosphere), used to store resin.
- ID# T-3 (vents via header to stack ID# TV-2 to atmosphere), used to store resin.
- ID# T-4 (vents via header to stack ID# TV-2 to atmosphere), used to store resin.
- ID# T-6 (vents via breathing vent ID# TV-6 inside building), used to store adhesive oil, such as Hydrocal 900.
- ID# T-7 (vents via breathing vent ID# TV-7 inside building), used to store adhesive oil, such as Reofos 1886.
- ID# T-8 (vents via breathing vent ID# TV-8 inside building), used to store
- ID# T-9 through ID# T-14 are open top mix vessels that vent inside the production building (no vent ID#), used as mixing vessels to mix resin, water, and additives such as dyes and latexes, to blend the desired binder material.

The prepared binder is applied to the glass fiber just after it is extruded from the Glass Melt Furnaces, and just before rolling onto the Glass Fiber Forming Drums, which forms the intermediate glass fiber mat. This unexpanded mat is placed into in-process storage to wait for further processing.

The unexpanded glass fiber mats are unrolled on the Mat Let-Off Table (ID# Hood-1, vents via ID# EP-4 to atmosphere), and travels via conveyor to the Pulling & Expanding Station (ID# Hood-2, vents via ID# EP-5 to atmosphere) where the mats are manually pulled/expanded prior to curing. The expanded glass fiber mats are then conveyed through the Curing Oven (ID# Oven-1, vents to regenerative thermal oxidizer ID# CD-1 to ID# EP-1 vent to atmosphere). The mat is cured at approximately 300° F in the curing oven in order to set the binder, which contains thermosetting resin.

After the cured glass fiber mats exit the Curing Oven, the mats are trimmed to the proper width, cut to the desired length, rolled, weighed, and packaged. Some of the cured glass fiber mats are sprayed, prior to trimming and cutting, at the Adhesive Oil Spraying Station (ID# Spray-1, vent ID# EP-2 vent to atmosphere) to add desired filtration properties to certain products.

With the expansion project, an additional Mat Let-Off Table (ID# Hood-3, vents via ID# EP-8 to atmosphere), Pulling & Expanding Station (ID# Hood-4, vents via ID# EP-9 to atmosphere) Curing Oven (ID# Oven-2, vents to new regenerative thermal oxidizer ID# CD-3 to ID# EP-6 vent to atmosphere) and Adhesive Oil Spraying Station (ID# Spray-2, vents via filter (CD-4) to ID# EP-7 vent to atmosphere) will be added to the facility.

### SITE INSPECTION

Mr. Brian Tephabock, compliance supervisor, from the North Central Regional Office (NCRO) last inspected the facility on June 10, 2014. Mr. Tephabock found the facility to be operating in compliance with all applicable regulations and permit conditions. A compliance status code 30 (facility found in be in compliance) was issued because of this inspection. No site visit of this facility is necessary for this modification.

### ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

In this application, Superior provided emission estimates for the existing emission units and well as the proposed additional 16 glass melting furnaces and glass fiber forming drums. The reason that the applicant is revisiting the estimates for existing emission units is that the facility would have a potential to emit of oxides of nitrogen greater than 100 tpy as result of this proposed expansion. Thus, the facility would be subject to the Title V Operating Permit Program of the Clean Air Act.

Superior reviewed the emission calculations from the past permit application and discovered that the emissions estimates for the existing glass melting furnaces were based on emissions factors for the glass fiber manufacturing (Chapter 11.13 of AP-42). The emission factors for glass melting were developed from emission units engaged with melting raw materials (i.e. sand, sodium sulfate, etc.) into molten glass.

The furnaces at the Reedsville Plant are fed cultrate (broken/crushed glass) to be melted into molten glass. Superior's process is approximately 50 percent less energy intense than producing molten glass from sand and other raw materials. Realizing the disconnect between the emission factors of Chapter 11.13 and Superior's melting furnaces, Superior proposed to use emission factors from Chapter 1.4 – Natural Gas Combustion of AP-42. Superior's furnaces are natural gas fired units. However, the emission factors published in Chapter 1.4 were developed from boiler firing on natural gas.

This writer was not satisfied that the use of emission factors from Chapter 1.4 is appropriate for the glass melting furnaces at Reedsville Plant. The temperature needed in melt sand and sodium sulfate into glass ranges from 2,700 to 3,100 degrees Fahrenheit (F). Cullet melts between 2,600 to 2,800°F. The temperature in furnace section of industrial boiler should be 2,000°F with areas around the burner or combustion zone can be up to 2,800°F. Second, the purpose of combustion in boiler is to release heat energy in the fuel to be transferred thought the walls of the furnace zone heat the water, which is different from glass melting furnace that is

Evaluation of R13-2501B  
Superior Reedsville Filtration LLC  
Reedsville Plant  
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changing a solid to liquid state inside the furnace. Using either factor from Chapter 11.13 or 1.4 without any adjustment would not be representative of the glass melting furnaces at Superior's facility.

Superior claims that 50 percent less energy is used to melt glass from cullet than from raw materials. To develop a correction factor or approach, Superior presented two methods of estimating potential emissions from the furnaces. One approach was to take the average of glass melting and gas-fired boiler emission factors. The second method was to just divide the rate from the glass melting by 50%. Superior presented the following comparison, which is present in the following table:

Parameter	Existing Factor (lb/ton of material processed)	Source	Existing (lb/hr)	Existing (TPY)	Natural Gas Combustion Factor (lb/10 <sup>6</sup> SCF)	Emissions (lb/hr)	Emissions (TPY)	Average of two rates		50% reduction of original factor	
								Proposed Factor (lb/hr)	Proposed Factor (TPY)	Proposed Factor (lb/hr)	Proposed Factor (TPY)
CO	0.9	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-4 (Glass Furnace - Textile, Gas - melter) 0.9 lb/ton of material processed	0.84	3.68	84	0.35	1.53	0.595	2.605	0.42	1.84
NO <sub>x</sub>	20	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-4 (Glass Furnace - Textile, Gas - melter) 20 lb/ton of material processed	18.2	79.72	100	0.41	1.8	9.305	40.76	9.1	39.86
PM	5	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-2 (Glass Furnace - Textile, Gas - melter) 5 lb/ton of material processed	5.6	24.53	7.6	0.03	0.13	2.815	12.33	2.8	12.265
SO <sub>x</sub>	3	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-2 (Glass Furnace - textile Gas - recuperative) 3 lb/ton of material processed since Glass furnace - textile, Gas unit melter was ND	2.8	12.26	0.6	0.002	0.01	1.401	6.135	1.4	6.13
VOC	0.3	Emission Factor AP-42 Section 11.15 Glass Manufacturing Table 11.15-2 (pressed and blown - uncontrolled) 0.3 lb/ton of material processed since Glass Fiber furnace - textile, Gas unit melter was ND	0.28	1.23	5.5	0.02	0.09	0.15	0.66	0.14	0.615

Both approaches that the applicant proposed in the above table result in near the same emission rate. The difference between the two approaches is less than a half a percent except for carbon monoxide, which was over 7%. What was unusual in this comparison is the operating parameter that is used to determine the emission rate? The glass melting factor requires the hourly glass-melting rate while the boiler factors need the fuel usage rate, which is a direct function of heat input.

This writer recommends using the average of the two rates approach and applying a fifteen percent (15%) factor to attempt to account for variability from the generic emission factor to actual operations.

Pollutant	Melting		Forming (lb/hr)	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Nitrogen Oxides (NO <sub>x</sub> )	10.70	46.87	0	0

Carbon Monoxide (CO)	0.68	2.98	0	0
Particulate Matter (PM)	3.24	14.19	1.50	6.57
Sulfur Dioxide (SO <sub>2</sub> )	1.61	7.05	0	0
Volatile Organic Compounds (VOCs)	0.17	0.74	<0.01	0.04
Formaldehyde	0	0	<0.01	0.04
Methanol	0	0	0	0
Total Hazardous Air Pollutants (HAPs)	0	0	<0.01	0.04
Carbon Dioxide Equivalent (CO <sub>2</sub> e)	491.8	2,154.08	0	0

Pollutant	Melting		Forming	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Nitrogen Oxides (NO <sub>x</sub> )	6.07	26.59	0	0
Carbon Monoxide (CO)	0.54	2.37	0	0
Particulate Matter (PM)	1.84	8.06	0.75	3.29
Sulfur Dioxide (SO <sub>2</sub> )	0.91	3.99	N/A	0
Volatile Organic Compounds (VOCs)	0.10	0.44	<0.01	0.04
Formaldehyde	N/A	0	<0.01	0.04
Methanol	N/A	0	0	0
Total Hazardous Air Pollutants (HAPs)	N/A	0	<0.01	0.04
Carbon Dioxide Equivalent (CO <sub>2</sub> e)	386.42	1,692.52	0	0

Pollutant	Oil Spraying (Spray-2)		Mat Let-Off Table (Hood-3)		Pulling & Expanding (Hood-4)	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Particulate Matter (PM)	2.50	10.95	0	0	0	0
Volatile Organic Compounds (VOCs)	5.00	21.90	0.05	0.22	0.05	0.22
Formaldehyde	0	0	0.01	0.04	0.01	0.04
Total Hazardous Air Pollutants (HAPs)	0	0	0.01	0.04	0.01	0.04

Pollutant	Curing Oven-2 vented to the CD-3 (lb/hr)	Curing Oven-2 vented to the CD-3 (tpy)
Nitrogen Oxides (NO <sub>x</sub> )	2.48	10.86
Carbon Monoxide (CO)	0.48	2.10
Particulate Matter (PM)	0.02	0.12
Sulfur Dioxide (SO <sub>2</sub> )	<0.01	0.04
Volatile Organic Compounds (VOCs)	1.04	4.56
Formaldehyde	0.46	2.01
Methanol	0.44	1.93
Total Hazardous Air Pollutants (HAPs)	0.90	3.94
Carbon Dioxide Equivalent (CO <sub>2e</sub> )	913.36	4000.52

The annual emissions presented in the above tables was based on the hourly emissions on the maximum operating schedule possible.

The other source of emissions at the Reedsville plant is due to working and breathing losses from storage vessel. To support the proposed expansion, Superior proposed to increase the throughput of liquids through the existing vessels. The projected formaldehyde emission increase due to the throughput was based on an indoor air sampling study using NIOSH Method #2532 conducted in 1993 and was adjusted linearly by 50 percent.

Vessel	Pollutant	Permit Limit (tpy)	New Potential to Emit (tpy)	Net Difference (tpy)
T-1	VOC	0.1	0.10	0.00
T-2	Formaldehyde	0.009	0.01*	0.001
	VOC	0.045	0.05*	0.005
T-3	Formaldehyde	0.009	0.01*	0.001
	VOC	0.045	0.05*	0.005
T-4	Formaldehyde	0.009	0.01*	0.001
	VOC	0.045	0.05*	0.005
T-5	Ethylene Glycol	0.10	0.10	0.00
T-6	VOC	0.10	0.10	0
T-7	VOC	0.10	0.10	0
T-8	VOC	0.10	0.10	0
T-9	Formaldehyde	0.009	0.02	0.001
	VOC	0.045	0.09	0.005
T-10	Formaldehyde	0.009	0.02	0.01
	VOC	0.045	0.09	0.05

T-11	Formaldehyde	0.009	0.02	0.01
	VOC	0.045	0.09	0.05
T-12	Formaldehyde	0.009	0.02	0.01
	VOC	0.045	0.09	0.05
T-13	Formaldehyde	0.009	0.02	0.01
	VOC	0.045	0.09	0.05
T-14	Formaldehyde	0.009	0.02	0.01
	VOC	0.045	0.09	0.05

\* Values were rounded up to the nearest hundreds of ton.

A summary of the change in permitted emission is present in the following section under the discussion concerning 45 CSR 13 applicability.

### REGULATORY APPLICABILITY

The following state regulations apply to the Reedsville Plant.

#### **45CSR6 To Prevent and Control Air Pollutant From Combustion of Refuse**

The existing and proposed regenerative thermal oxidizer (RTO) are subject to the particulate matter and visible emission standards of this rule for the incineration of gaseous material generated from curing ovens. Manufacturers of oxidizers that are specifically configured to destroy a gaseous stream are usual designed to handle a concentration of specific compound at a specified volumetric instead of flow mass rate of material, which Rule 6 is based on. The existing and proposed oxidizer are designed to handle a volume of 13,300 standard cubic feet per minute (scfm) of exhaust composited with formaldehyde and methanol.

The August 5, 2005 compliance test report contained inlet mas rates of VOC (includes formaldehyde and methanol) from the curing ovens, which average to be 32.41 pounds per hour at a flow rate of 7,125 scfm. Assuming the mass rate of the gaseous material from the curing ovens to be linear, this writer adjusted the mass rate into the RTO at maximum flow conditions of 13,300 scfm, which equates to 60.52 pounds per hour. Using this value and the procedure outlined in 45 CSR §6-4.1.a., the allowable PM rate for this units under Rule 6 is 0.16 pounds per hour of PM. The permitted limit for the existing RTO is 0.06 pounds per hour of PM. Superior estimated the potential to emit of PM from the proposed RTO to be 0.02 pounds per hour. Thus, these RTOs should be capable of meeting the PM standard of this rule.

Rule 6 establishes a visible emission standard for incinerators, which is less than 20 percent opacity. Incinerators designed for materials in a gaseous state and properly installed usually exhibits no visible emissions. From the Inspection Memo dated June 11, 2014, the report indicated that the existing RTO is meeting the opacity standard of 45 CSR §6-4.3.

## 45CSR7 To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations

The purpose of this rule is to control particulate matter from manufacturing processes and associated operations located in West Virginia. The existing and proposed glass melting furnaces and forming drums are subject to the PM and visible emission standards of Rule 7.

The glass melting furnaces are classified as Type “a” under Rule 7. In addition, Rule 7 has a “duplicate source operation” to be applied to the allowable for any expansion of a manufacturing process (See 45 CSR §7-4.4.) The proposed project would be expanding the glass fiber mat manufacturing capability at the Reedsville Plant, thus the equation outlined in 45 CSR §7-4.1. must be applied to determine the allowable PM rate under Rule 7.

Because melting and forming operations are exhausted inside the manufacturing building (Building 1) before being emitted to the atmosphere, these two manufacturing process operations were combined. The following table was developed to present the corresponding allowable with the potential to emit of each source operation.

Table #6 – Rule 7 PM Allowable for the Expansion				
Source	Existing Allowable (lb/hr)	Allowable for the expansion (lb/hr)	Total Allowable (lb/hr)	Proposed Potential PM from Expansion (lb/hr)
New Melting	2.18	1.00	3.18	1.84
New Forming	3.40	1.27	4.67	1.5
Building 1				3.34
New Oil Spray Station	3.75	2.69	6.44 <sup>1</sup>	2.50

1 – Allowable for Existing and New Oil Spray Stations.

The allowable particulate matter is greater than the proposed PM rate for the each of the expanded process operations. Thus, when these processes are operating they should meet the applicable requirements of Section 4 of Rule 7.

The existing furnaces and forming stations with other associated activities are located in an industrial building that limits the entrainment of fugitive particulate matter in the atmosphere and should meet the control requirements of 45 CSR §7-5.1.

This rule also establishes a visual emission standard for manufacturing processes, which is 20% opacity. The proposed sources should meet all of the applicable requirements under Rule 7.

#### **45CSR10 To Prevent and Control Air Pollution from the Emission of Sulfur Oxides**

45CSR10 (Rule 10) applies to this facility. The gas-fired boiler is exempt from sections 3 through 8, because of Section 9, which exempts fuel-burning units having a heat input under ten (10) million Btu per hour.

Rule 10 also set an allowable for sulfur dioxide from manufacturing processes under Section 4. The total allowable sulfur dioxide emission concentration from manufacturing process source operations is 2,000 parts per million by volume. The converted sulfur dioxide rate from the furnaces, which is 0.94 pounds per hour, into a concentration rate by volume yielded an SO<sub>2</sub> concentration rate of 204 parts per million by volume (ppmvd). This indicates that the proposed furnaces will meet the sulfur dioxide emission concentration standard.

The curing oven with associated RTO has the potential to emit sulfur dioxide emissions. Therefore, Section 4 and Section 5 of Rule 10 would be applicable as well. However, the total amount of sulfur dioxide from this process operation is 87 pounds per year. 45 CSR §10-4.1.e. excludes process source operations that have a potential to emit of 500 pounds per year or less from the 2,000 ppmvd standard. Thus, the curing oven with the RTO is not subject to 45 CSR §10-4.1.

Because the RTO is combusting a waste stream, 45 CSR 10-5.1 is applicable. This rule prohibits the combustion of process waste streams with a hydrogen sulfide concentration of 50 grains per 100 cubic feet of carrier gas. For this process, the curing oven has converted the residual sulfur in the natural gas, which is the source of the sulfur being introduced in the curing oven, into sulfur dioxide before exiting the oven. Thus, the exhaust from the curing oven has no hydrogen sulfide in it. Therefore, the curing oven with associated RTO should meet the limitation of Rule 10.

#### **45 CSR 27 To Prevent and Control the Emissions of Toxic Air Pollutants**

This rule requires sources that operate a “chemical processing unit” that treat, store, manufacture, or use toxic air pollutants (TAPs) that have the potential to emit of a TAP greater than the threshold listed in Table 27A to control such emission using the “Best Available Technology” (BAT).

Superior submitted a BAT plan for controlling formaldehyde emissions with this application. Superior has proposed process controls with add-on control device to control the formaldehyde emissions from the expansion to meet the BAT requirements of Rule 27. The main source of potential formaldehyde emissions occurs in the curing oven when the binder is being cured onto the glass fibers. Superior has proposed to route these emissions to the RTO to be destroyed. Superior has proposed to operate the RTO in a manner that the unit will reduce the formaldehyde emissions by at least 98%. In addition to the add-on controls, Superior has proposed to limit the formaldehyde content of the binder to 0.51% as applied to mats.

Under Rule 27, the BAT controls cannot represent a level of control less stringent than any requirement for a similar unit subject to requirements under Parts 60, 61 or 63. For this particular review, Subpart HHHH – National Emission Standard for Hazardous Air Pollutants for

Wet-Formed Fiberglass Mat Production under Part 63. This standard requires formaldehyde to be limited to 0.05 pounds per ton of mat produced or reduce uncontrolled formaldehyde emissions to at least 96%. Superior's proposal exceeds this reduction requirement by 2%. Under Subpart HHHH, the preferred control technology to meet the emission standard of the subpart is to install and operate a thermal oxidizer to reduce formaldehyde emissions from the drying and curing oven.

The writer reviewed the submitted BAT plan for the proposed expansion and concurs with the applicant's recommended level of control for the process.

Rule 27 requires sources to control fugitive sources of TAPs from equipment leaks and storage vessels. 45 CSR §27-2.12. defines "toxic air pollutant service" as any component that makes contact a process stream containing 10% or more by weight of a toxic air pollutant. Superior receives resin with a content of less than 0.1% determine using the ASTM sodium sulfite method. At the facility, the formaldehyde resins are mixed with water and other additives, which dilutes the formaldehyde, contain down further. Thus, the facility should not have any component in TAP service. Superior's process piping should be only in liquid service. This means leaks can be detected using visual means. The writer recommends requiring a Leak Detection and Repair (LDAR) program using visual means to detect leaks and repair such within 15 days of detection as a means to minimize fugitive formaldehyde emissions from equipment leaks.

The storage vessels at the facility have the potential to emit 0.09 tons per year of formaldehyde.

#### **New Source Performance Standards (40 CFR Part 60)**

The proposed expansion does not trigger any applicable standard under Part 60.

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

Part 63 NESHAP allowable emission limits are established on the basis of a maximum achievable control technology (MACT) determination for a particular major source. Major source under Part 63 is defined as having potential emissions in excess of 25 tpy for total HAP and/or potential emissions in excess of 10 tpy for any individual HAP. The current HAP potential from the Reedsville Plant is 4.05 tons per year. The proposed expansion will increase the potential to emit of HAP up to 8.15 tons per year. After the proposed expansion, the Reedsville Plant will remain classified as an Area (minor) source of HAP since its potential emissions of HAP are less than the 10/25 major source thresholds. Subpart HHHH only applies to wet fiberglass mat production facilities that are major source of HAPs. Thus, Subpart HHHH does not apply to the Reedsville Plant.

40 CFR 63 – Subpart SSSSSS applies to glass manufacturer operations located at area sources of HAPs. Affected sources under this subpart are continuous glass melting operations that introduce HAP metals into the furnace and excludes trace HAP metals in sand. Superior's operations uses cullet and is not an affected source under this subpart. Thus, Subpart SSSSSS is

not applicable to the glass melting operations at the Reedsville Plant. There are no other NESHAPs that identify affected sources that could be related to the proposed expansion.

**45CSR13 - Permits for Construction, Modification, Relocation and Operation of Stationary sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation**

The proposed expansion has the potential increase of oxides of nitrogen emissions beyond the modification threshold values of 6 pounds per hour and 10 tons per year. Therefore, the applicant is required to obtain a modification permit in accordance with 45 CSR 13 (Rule 13) for the proposed expansion. The facility has met the applicable requirements of this rule by publishing a Class I Legal Advertisement in the *Dominion Post* on November 21, 2015, paid the administrative update fee, NSPS fee, and submitted a complete permit application.

The following table illustrates the changes of permitted emissions under Permit R13-2501A to the proposed levels in the modification.

Table #7 Summary of Permitted Emission to Proposed Emissions				
Pollutant	Current Permit (tpy)	Revised Potential (tpy)	Facility Potential After Expansion (tpy)	Change between Permitted and Expansion (tpy)
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	35.02	26.57	48.99	13.97
SO <sub>2</sub>	12.98	7.10	11.13	-1.85
NO <sub>x</sub>	94.11	61.25	98.70	4.59
CO	7.01	6.33	10.80	3.79
VOC	31.97	16.33	39.15	7.18
Total HAPs	4.09	4.09	8.15 <sup>1</sup>	4.06
Formaldehyde	2.18	2.18	4.32	2.14
Methanol	1.91	1.91	3.82	1.91

1 – This rate includes ethylene glycol from Tank T-5.

**45CSR30 – Requirements For Operating Permits**

The facility is currently a minor source with respect to the Title V permit program. The potential emissions as a result of the expansion will not exceed the major source threshold level as defined in 45 CSR 30. Thus, the facility is not subject 45 CSR 30.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The proposed changes to the Reedsville Plant will not change the status of the facility (area source of HAP). Thus, the potential to emit of combined hazardous air pollutants will remain to be less than 25 tons per year for combined HAP with no single hazardous air pollutant (formaldehyde) being greater than 10 tons per year. No new HAP will be emitted from the

facility as a result of the proposed changes. Therefore, no further information was provided on the toxicology of the HAPs emitted at the Reedsville facility.

### AIR QUALITY IMPACTS ANALYSIS

This writer deemed that an air dispersion modeling study or analysis was not necessary, because the proposed facility does not represent a major source as defined in 45CSR14.

### MONITORING OF OPERATIONS

The existing monitoring of Permit R13-2501A will be applied to include the new emission sources as part of the proposed expansion. Visible emission checks on Emission Points 6, 7, 8, 9 and the roof monitors of Building 1. The temperature of the new RTO will be monitored. The existing record keeping of the resins usage and formaldehyde content of the wet mat entering either curing oven is sufficient.

The writer recommends established a accept level for operating and maintaining the closed vent system to ensure that the exhaust from the curing oven is being completely routed to the control device.

The writer recommends tracking the natural gas usage at the facility. This would ensure compliance with emission limits for the melting operation, curing ovens, RTOs and the boiler.

### CHANGES TO PERMIT R13-2501A

Permit R13-2501A has one emission limit table that covers all sources at the facility. It should be noted that the melting and forming operations all vent inside of the building instead of individual emission points at the table implies. This writer recommends subdividing the table by type of source operation (i.e. melting and forming, curing ovens, other operations) into individual conditions with restrictions or requirements that are linked to the corresponding emission limits.

The emission limit for the melting and forming operations were combined as one emission point (Building 1) in Condition 4.1.1.a. Items b, c, and d of this condition outlines the applicable requirements of Rule 7 that pertain to the melting and forming operation. Items e and f outlines restrictions that satisfies compliance with the applicable standards under Rule 10 for the melting and forming operation.

The emission limits for the curing operations were outlined in one condition (Condition 4.1.2.a). In addition, the Rule 6 visible emission standard was incorporated as Condition 4.1.2.b. Item c was established from Condition 4.1.4. in R13-2501A. Condition 4.1.5. was subdivided into three separate items. Item d of Condition 4.1.2. requires the curing ovens to be vented though a closed vent system to the corresponding RTO. Item e then defines the acceptable standard of maintaining and operating the closed vent system which includes incorporating

Condition 4.1.8. of R13-2501A as well. Item f incorporates the destruction efficiency and links it to the minimum temperature of the RTO, which is addressed in Condition 4.1.6. from R13-2501A.

Items g and h incorporates Condition 4.1.3. (production limits and fuel limits). These items were developed to set a maximum natural gas usage rate from these sources to account for all of the natural gas usage at the facility since the facility measures the total gas usage from a common metering point.

Condition 4.1.21. through 4.1.25. of Permit R13-2501A are requirements directly inserted from 45 CSR 27. The permit does not really link the formaldehyde emission limits to Rule 27 or the BAT plan. This writer recommends adding the rule citation of 45 CSR §27-3.1. to the formaldehyde limitations and omitting the direct citations expect for reporting of abnormal releases in 45 CSR §27-10.4, which will be incorporated into as Condition 4.5.1. Condition 4.1.23. of Permit R13-2501A, which is the Rule 27 requirement to control TAPs from tanks, was written in a manner that linked the formaldehyde limits for the tanks being satisfied by resin limitation and locating the vessel indoors as Condition 5.1.3. in the draft.

Permit R13-2501A established limitations and incorporated direct rule citations for the boilers and storage tanks. The writer recommends creating Section 5 for these sources. 45 CSR §2-8.4.b. exempts natural gas fired boilers from the testing and monitoring of visible emission requirements of Section 8 of Rule 2. The gas-fired boiler at the facility is only capable of operating on natural gas. Therefore, Condition 4.2.1. of Permit R13-2501A was omitted and restriction to operate the boiler on natural gas was inserted in 5.1.1.c.

#### RECOMMENDATION TO DIRECTOR

The information provided in the permit application and the conditions set forth in the permit indicates the facility should meet all applicable state rules and federal regulations when operated. Therefore, the writer recommends that Superior Reedsville Filtration LLC, should be granted a Rule 13 Modification Permit for their proposed expansion of the Reedsville Plant located near Reedsville, WV.



Edward S. Andrews, P.E.  
Engineer

Date: June 3, 2016

Evaluation of R13-2501B  
Superior Reedsville Filtration LLC  
Reedsville Plant  
Non-confidential



This permit will supersede and replace Permit R13-2501A.

Facility Location: Route 92 South  
Reedsville, Preston County, West Virginia

Mailing Address: P.O. Box 478  
Reedsville, WV 26547

Facility Description: Glass mat manufacturing facility

NAICS Codes: 327993

UTM Coordinates: 603.30 km Easting • 4,374.35 km Northing • Zone 18

Permit Type: Modification

Description of Change: This action is for the installation of sixteen additional glass melt furnaces-glass fiber extruding apparatus and binder applicators-glass fiber forming drums.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.*

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*The source is not subject to 45CSR30.*

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**1.0. Emission Units**

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Control Device</b>
Oven-1	EP-1	Fiberglass Mat Curing Oven	CD-1, Regenerative Thermal Oxidizer
Oven-2	EP-6	Fiberglass Mat Curing Oven	CD-3, Regenerative Thermal Oxidizer
GMF1-GMF44	Bldg.1	Glass Melting Furnaces with Glass Fiber Extruders	PE
Boiler 1	EP-3	3.0 MMBtu/hr Natural Gas Boiler	None
Drum1 - Drum 44	Bldg. 1	Glass Fiber Forming Drums with Binder Applicators	PE
Hood-1	EP-4	Mat Let Off Table	None
Hood -3	EP-7	Mat Let Off Table	None
Hood-2	EP-5	Pulling and Expanding Station	None
Hood-4	EP-8	Pulling and Expanding Station	None
T-1	TV-1	Forming Oil Storage Tank	None
T-2	TV-2	Bulk Resin Storage Tank	None
T-3	TV-3	Bulk Resin Storage Tank	None
T-4	T-4	Bulk Resin Storage Tank	None
T-5	TV-5	Ethylene Glycol Storage Tank	None
T-6	TV-6	Adhesive Oil Storage Tank	None
T-7	TV-7	Adhesive Oil Storage Tank	None
T-8	TV-8	Waste Oil Storage Tank	None
T9-T14	None	Binder Mix Tanks	None
Spray 1	EP-2	Adhesive Oil Spraying Station	None

## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5 μm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>PM<sub>10</sub></b>	Particulate Matter less than 10μm in diameter
<b>CO</b>	Carbon Monoxide	<b>Ppb</b>	Pounds per Batch
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>Pph</b>	Pounds per Hour
<b>DAQ</b>	Division of Air Quality	<b>Ppm</b>	Parts per Million
<b>DEP</b>	Department of Environmental Protection	<b>Ppm<sub>v</sub> or ppm<sub>v</sub></b>	Parts per Million by Volume
<b>dscm</b>	Dry Standard Cubic Meter	<b>PSD</b>	Prevention of Significant Deterioration
<b>FOIA</b>	Freedom of Information Act	<b>Psi</b>	Pounds per Square Inch
<b>HAP</b>	Hazardous Air Pollutant	<b>SIC</b>	Standard Industrial Classification
<b>HON</b>	Hazardous Organic NESHAP	<b>SIP</b>	State Implementation Plan
<b>HP</b>	Horsepower	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>lbs/hr</b>	Pounds per Hour	<b>TAP</b>	Toxic Air Pollutant
<b>LDAR</b>	Leak Detection and Repair	<b>TPY</b>	Tons per Year
<b>M</b>	Thousand	<b>TRS</b>	Total Reduced Sulfur
<b>MACT</b>	Maximum Achievable Control Technology	<b>TSP</b>	Total Suspended Particulate
<b>MDHI</b>	Maximum Design Heat Input	<b>USEPA</b>	United States Environmental Protection Agency
<b>MM</b>	Million	<b>UTM</b>	Universal Transverse Mercator
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VEE</b>	Visual Emissions Evaluation
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>NA</b>	Not Applicable	<b>VOL</b>	Volatile Organic Liquids
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### **2.3. Authority**

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

### **2.4. Term and Renewal**

- 2.4.1. This permit supersedes and replaces previously issued Permit R13-2501A. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2501, R13-2501A, R13-2501B, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
[45CSR§§13-5.11 and 10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

## **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.  
[45CSR§13-4.]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.  
[45CSR§13-5.4.]

## **2.10 Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.  
[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or 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 (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by

improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

**2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

**2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

*[Reserved]*

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary

exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
  1. The permit or rule evaluated, with the citation number and language;
  2. The result of the test for each permit or rule condition; and,
  3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

### **3.4. Recordkeeping Requirements**

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in

a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
[45CSR§4. *State Enforceable Only.*]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**  
Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street  
Charleston, WV 25304-2345

**If to the US EPA:**  
Associate Director  
Office of Air Enforcement and Compliance Assistance  
(3AP20)  
U.S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

#### 3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

#### 4.0. Source-Specific Requirements for the Glass Melting and Forming Operations

##### 4.1. Limitations and Standards

4.1.1. The following conditions and requirements are specific to the glass melting and fiber formation operations at the permitted facility:

- a. Maximum emissions to the atmosphere from the glass melting and fiber forming operation shall not exceed the limits set forth in the following table:

Emission Source ID #	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
(GMF-1 -- GMF-44) & (Drum-1 - Drum-44)	Total Glass Furnace Melting Emissions & Total Glass Fiber Forming Emissions	Nitrogen Oxides	16.77	73.45
		Carbon Monoxide	1.22	5.34
		VOC	0.27	1.26
		Sulfur Dioxide	2.52 <sup>1</sup>	11.04
		Particulate Matter-10	7.33	32.11
		Formaldehyde	0.002	0.08

1 – Satisfies the sulfur dioxide allowable of 45 CSR §10-4.1.

- b. Particulate Matter emissions from Building 1 shall not exceed 7.85 pounds per hour. [45CSR §§7-4.1. & 4.4.]
- c. No opening from Building 1 (Roof Monitor Vents) shall exhibit visible emissions of 20 percent opacity or greater on a 6 minute block average. [45 CSR §7-3.1.]
- d. Building 1 shall be maintained in such a manner to control fugitive particulate matter as if a partial enclosure control were in use. [45 CSR §7-5.1]
- e. The primary feedstock for all of the glass melting furnaces at the facility shall be glass cullet.
- f. The glass melting furnaces shall be fueled only with pipeline quality natural gas. Compliance with this limitation and item e of this condition will show satisfy compliance with the sulfur dioxide allowable of 45 CSR §10-4.1. [45 CSR 10-4.1.]
- g. The maximum amount of natural gas consumed by the glass melting furnaces shall not exceed 6,470 scfh. Compliance with this hourly limit is satisfied by limiting the 12-month rolling total amount of natural gas consumed by the furnaces to 56.7 million standard cubic feet (MMSCF).

4.1.2. The following conditions and requirements are specific to the curing operations at the permitted facility:

- a. The maximum emission rates to the atmosphere from the curing operation shall not exceed the limits set forth in the following table from the corresponding emission point:

Emission Point ID# (Source ID #)	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
EP-1	Curing Oven (Oven-1) exhaust routed to Regenerative Thermal Oxidizer (CD-1)	Nitrogen Oxides	2.48	10.86
		Carbon Monoxide	0.51	2.25
		Particulate Matter-10	0.06 <sup>2</sup>	0.27
		Sulfur Dioxide	0.01 <sup>3</sup>	0.03
		VOC	1.04	4.56
		Formaldehyde* <sup>1</sup>	0.46	2.01
		Methanol*	0.44	1.91
EP-6	Curing Oven (Oven-2) exhaust routed to Regenerative Thermal Oxidizer (CD-3)	Nitrogen Oxides	2.48	10.86
		Carbon Monoxide	0.51	2.25
		Particulate Matter-10	0.02 <sup>2</sup>	0.09
		Sulfur Dioxide	0.01 <sup>3</sup>	0.03
		VOC	1.04	4.56
		Formaldehyde* <sup>1</sup>	0.46	2.01
		Methanol*	0.44	1.91

\* Denotes the pollutant is classified as a hazardous air pollutant.

1 Denotes the pollutant is classified as a toxic air pollutant under 45 CSR 27.

2 – Satisfies the PM allowable of 45 CSR §6-4.1.

3 – Satisfies the Hydrogen Sulfide Allowable of 45 CSR §10-5.1.

- b. Visible emissions from Emission Points E-1 and E-6 shall not exhibit an opacity of 20 percent or greater on a six minute block average.  
 [45 CSR §6-4.3]
- c. Glass fiber mats placed in either of the curing ovens shall not exceed a formaldehyde content by weight of more than 0.51%.  
 [45 CSR §27-3.1]
- d. The exhaust from Oven-1 and Oven-2 shall be routed to the Regenerative Thermal Oxidizer (RTO) CD-1 and CD-3 respectively through a closed vent system.
- e. The closed vent system as required in item d of this condition shall meet the following:
  - i. The system pressure loss, as measured at the inlet of both RTO (CD-1 & CD-3), shall maintain a pressure gradient range of -0.25 to -0.75 inches of water column.
  - ii. The system shall be constructed and maintained free of leaks. A leaking component is defined as a measured instrument reading greater than 500 ppm above background or by visual inspection.
  - iii. Detected leaks shall be repaired as soon as practicable with the first attempt at repair within 5 calendar days after detecting the leak. Repair shall be completed no later than 15 calendar days after the leak is detected.  
 [45 CSR §13-5.11.]
- f. Regenerative Thermal Oxidizers CD-1 and CD-3 shall be designed to achieve a minimum destruction efficiency of 98% for VOC, formaldehyde, and methanol emissions. To demonstrate compliance with this limit CD-1 and CD-3 shall be maintained and operated with a combustion chamber temperature of no less than 1,550°F for CD-1 and 1,500°F for CD-2 on a three (3) hour rolling average while the respective curing oven are curing wet mats.

- g. The glass fiber mat feed rate for each curing oven (Source ID# Oven-1 and Oven-2) shall not exceed 3,375 lb/hr of wet glass fiber mats. Compliance with this limit shall be based on using a twelve (12) month rolling total of finished product not to exceed 14,782 tons for Oven-1 and 12,782 tons for Oven-2 or a combined total of 27,564 tons from both ovens. A twelve (12) month rolling total shall mean the sum of glass fiber filter material produced at any given time for the previous twelve consecutive months.
  - h. The curing ovens and the RTOs shall be fueled with natural gas. The maximum amount of natural gas consumed by the ovens and RTOs shall not exceed 15,366 scfh. Compliance with this hourly limit is based on a 12-month rolling total of 134.6 million standard cubic feet (MMSCF).
- 4.1.3. The following conditions and requirements are specific to the mat Let-Off table, Pulling & Expanding, and Adhesive Oil Spraying Stations at the permitted facility:
- a. The maximum emission rates to the atmosphere from these sources shall not exceed the limits set forth in the following table from the corresponding emission point:

Table 4.1.3.a. Emission Limits for Mat Let-Off Tables, Pulling & Expanding, Adhesive Oil Spraying Stations

Emission Point ID# (Source ID #)	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
EP-4 (Hood-1)	Mat Let-Off Table	Formaldehyde	0.01	0.04
		VOC	0.05	0.22
EP-8 (Hood-3)	Mat Let-Off Table	Formaldehyde	0.01	0.04
		VOC	0.05	0.22
EP-5 (Hood-2)	Pulling & Expanding Station	Formaldehyde	0.01	0.04
		VOC	0.05	0.22
EP-9 (Hood-4)	Pulling & Expanding Station	Formaldehyde	0.01	0.044
		VOC	0.05	0.22
EP-2 (Spray-1)	Adhesive Oil Spraying Station	Particulate Matter-10	2.5 <sup>1</sup>	4.56
		VOC	5	9.13
EP-7 (Spray-2)	Adhesive Oil Spraying Station	Particulate Matter-10	2.5	4.56
		VOC	5	21.9

1 – Satisfies the PM Allowable of 45 CSR §7-4.1.

- b. Emission Points EP-2, EP-4, EP-5, EP-7, EP-8, EP-9 shall not exhibit visible emissions greater than 20 percent opacity on a 6 minute block average.  
**[45 CSR §7-3.1.]**
- 4.1.4. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.  
**[45CSR§7-5.1]**
- 4.1.5. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and

general material handling to minimize particulate matter generation and atmospheric entrainment.  
[45CSR§7-5.2]

- 4.1.6. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in this rule may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.  
[45CSR§7-9.1]
- 4.1.7. Compliance with the annual emission limits shall be determined using rolling yearly totals. A rolling yearly total shall mean the sum of the emissions at any given time for the previous twelve (12) consecutive months.
- 4.1.8. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
[45CSR§13-5.11.]

## 4.2. Monitoring Requirements

- 4.2.1. The permittee shall install, maintain, and operate a temperature sensing device to measure and record the operating temperature of each RTO (CD-1 and CD-3). Such devices must measure and record the temperature at a frequency of no greater than once every 15 minutes.

For the purpose of demonstrating compliance with the limits in Condition 4.1.2.f., the permittee shall determine the hourly average temperature using at least 4 readings from the corresponding hour. Then the permittee shall determine the three-hour average using the hourly average of previous three hours. The permittee shall determine the three-hour average on a continuous basis for every hour that wet glass fiber mats are cured in the respective oven. Records of readings, hourly average and three-hour averages and calibrations of devices shall be maintained in accordance with Condition 3.4.1.

[45 CSR 27-11.2]

- 4.2.3. In order to determine compliance with Conditions 4.1.2.b, the permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for Emission Points EP-1 and EP-6. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24 hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records of observation shall be maintained in accordance with Condition 3.4.1.  
[45CSR§6-4.3]
- 4.2.3. In order to determine compliance with Conditions 4.1.1.c. and 4.1.3.b., the permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the Building 1 (Roof Monitors), EP-2, EP-4, EP-5, EP-7, EP-8, and EP-9. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine

if the unit(s) has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24 hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records of observation shall be maintained in accordance with Condition 3.4.1.

[45CSR§7-8.2]

#### **4.3. Testing Requirements**

- 4.3.1. To determine compliance with mass emission limits for VOC's, formaldehyde, and methanol for Emission Point EP-6 set forth under Condition 4.1.2, the permittee shall conduct a performance test within 180 days after startup of Oven-2 in accordance with EPA Method 318 (Extractive FTIR Method for the Measurement of Emissions from the Mineral Wool and Wool Fiberglass Industries) and in accordance with Condition 3.3.1. The performance test will also demonstrate compliance with the destruction efficiency (per Condition 4.1.2.f) of total VOCs, formaldehyde, and methanol by the Regenerative Thermal Oxidizer CD-3. During such performance test, the permittee shall operate Oven-2 at an hourly production rate of no less than 90% of the permitted level in Condition 4.1.2.g. for each test run. The permittee shall record and report the hourly feed rate into the oven, and the RTO operating temperature for each test run.

[45 CSR 27-10.1]

#### **4.4. Recordkeeping Requirements**

- 4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit, and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of the analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.
- 4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
- 4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.

- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
  - f. Steps taken to correct the malfunction.
  - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. To determine compliance with 4.1.2.c., the permitted facility shall maintain product information of the formaldehyde content by weight of the glass fiber mats placed in either curing oven (Source ID# Oven-1 and Oven-2). Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.5. The permittee shall maintain monthly reports of daily records certifying the binder percent of the processed mat weights, pounds of product processed through curing ovens, and corresponding hours of mats processed through the each curing oven. Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.6. The permittee shall keep monthly reports of daily records of urea formaldehyde resin usage. Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.7. The permittee shall keep average hourly calculations of the formaldehyde and methanol emissions for the cured mats processed through the curing oven on a daily basis. Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.8. The permittee shall keep a monthly record and 12 month rolling total of natural gas consumed by the facility. If the 12-month rolling total is less than 217.1 MMSCF then compliance with Conditions 4.1.1.g, 4.1.2.h, and 5.1.1.d. is satisfied.  
[45 CSR §2-8.3.c. and §10-8.3.c.]

#### **4.5. Reporting Requirements**

- 4.5.1. The emission to the air of any toxic air pollutant resulting from an abnormal release or spill in excess of the following amounts shall be reported to the Director or his authorized representative not later than 24-hours after the chemical processing unit owner/operator has knowledge of such emission:
- a. For ethylene oxide, and vinyl chloride, one (1) pound
  - b. For acrylonitrile and butadiene, ten (10) pounds
  - c. For all other toxic air pollutants, which includes formaldehyde, fifty (50) pounds.

The permittee shall file a written report with the Director stating the details of all such incidents resulting in the emission of more than fifty (50) pounds of any toxic air pollutant within seven (7) days of the occurrence. The permittee shall submit to the Director, at his request, records of all abnormal toxic air pollutant discharges to the air.

**[45CSR§27-10.4]**

- 4.5.2. Any Method 9 observation as required in Condition 4.2.2. in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the permittee shall submit a written report, certified by a responsible official, to the Director within five (5) days after taking said reading. Such notification shall be submitted in accordance with Condition 3.5.3

**[45 CSR §6-7.2]**

- 4.5.3. Any Method 9 observation as required in Condition 4.2.3. in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the permittee shall submit a written report, certified by a responsible official, to the Director within five (5) days after taking said reading. Such notification shall be submitted in accordance with Condition 3.5.3.

**[45CSR§7-8.2]**

**5.0. Source-Specific Requirements for the Tank Farm and Boiler**

**5.1. Limitations and Standards**

- 5.1.1. The following conditions and requirements are specific to the boiler (ID #Boiler-1):
- a. NO<sub>x</sub> emissions emitted to the atmosphere from the boiler shall not exceed 1.29 tons per year on a 12 month rolling total.
  - b. CO emissions emitted to the atmosphere from the boiler shall not exceed 1.09 tons per year on a 12 month rolling total.
  - c. The boiler shall only be fired with pipeline quality natural gas. This condition satisfies compliance with the limitations of 45CSR§2-3.1., 45CSR§2-4.1.b., and 45CSR§10-3.1.e. [45CSR§2A-3.1.a., 45CSR§10-10.3., and 45CSR§10A-3.1.b.]
  - d. The boiler shall not be designed or constructed with a maximum design heat input in excess of 3.0 MMBtu/hr. Compliance with this limit shall be through fuel usage that indicates the total amount of natural gas fuel burned during any 12 consecutive months is less than 26.3 MM cubic feet. Satisfying compliance with this limit demonstrates compliance with the annual emissions limits in items a and b of this condition.
- 5.1.2. Maximum emissions to the atmosphere from the storage vessels identified as T-1 through T-14 shall not exceed the limits set forth in the following table:

Table 5.1.2. – Emission Limits for Storage Vessels

Emission Point ID#	Name of Storage Vessel	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
TV-1	Forming Mold Oil Storage Tank	VOC	2	0.2
TV-2	Bulk Resin Storage Tank	Formaldehyde	0.01	0.01
		VOC	0.02	0.09
TV-3	Bulk Resin Storage Tank	Formaldehyde	0.01	0.01
		VOC	0.02	0.09
TV-4	Bulk Resin Storage Tank	Formaldehyde	0.01	0.01
		VOC	0.02	0.09
TV-5	Ethylene Glycol Storage Tank	VOC & VHAP	1	0.1
TV-6	Adhesive Oil Storage Tank	VOC	1	0.1
TV-7	Adhesive Oil Storage Tank	VOC	1	0.1
TV-8	Waste Oil Storage Tank	VOC	1	0.1
TV-9	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-10	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-11	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-12	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-13	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-14	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09

- 5.1.3. Compliance with the formaldehyde (TAP) limits in Condition 5.1.2. is satisfied by limiting the TAP concentration of any of the organic liquids storage in any of the vessels listed in Table 5.1.2. to no greater than 1% by weight and all vessels listed in Table 5.1.2. shall be located in a partial enclosure with a roof.  
[45 CSR 27-5.1]
- 5.1.4. The permittee shall develop and implement a leak detection and repair (LDAR) program of the all the components that are in contact with a TAP (a liquid that contains formaldehyde). Such a program shall meet the following requirements:
- a. A leaking component is defined as a measured instrument reading greater than 10,000 ppm above background or by visual inspection.
  - b. Inspect all affected components on a monthly basis and pump seals on a weekly basis.
  - c. Detected leaks shall be repaired as soon as practicable with the first attempt at repair within 5 calendar days after detecting the leak. Repair shall be completed no later than 15 calendar days after the leak is detected.  
[45 CSR §13-5.1.]
- 5.1.5. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
[45CSR§13-5.11.]

## 5.2. Monitoring Requirements

- 5.2.1. For the purposes of demonstrating compliance with the requirements of the LDAR program in Condition 5.1.4., the permittee shall conduct the following:
- a. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of issuance of the permit. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
  - b. After the initial, subsequent inspections for all components shall be visual, olfactory, and auditory inspections and conducted for defect that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
  - c. Detected leaks shall be repaired in accordance timing with the stated in Condition 4.1.1f.iii.
  - d. Records of such inspections shall be maintained in accordance with 3.4.1.
  - e. The use of the procedures listed as Alternative Methods to Method 21 (i.e. soapy water) to determine a leak or a leak has been repaired is acceptable or eliminating visual indicators of leaks (eliminating drips).
  - f. Records of such inspections and any repairs shall be maintained in accordance with Condition 3.4.1.

**5.3. Recordkeeping Requirements**

- 5.3.1. To demonstrate compliance with Condition 5.1.3., the permittee shall record the formaldehyde content of the urea formaldehyde resin received by the facility. Such records shall be maintained in accordance with Condition 3.4.1.



### CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup> \_\_\_\_\_  
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title \_\_\_\_\_  
(please print or type) Name Title

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

<sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
  - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
  - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.

**Andrews, Edward S**

---

**From:** Andrews, Edward S  
**Sent:** Wednesday, May 04, 2016 10:54 AM  
**To:** 'Rod Wilkins'  
**Subject:** RE: Superior Reedsville Expansion Permit

Rod,

Your timing could be any better. I was getting ready to start back on your application this morning. I have a question about the process from the glass melters to the forming drums. Is it a continuous process or can you operation both independent of each other?

Is the expansion going in a new building or existing one?

I don't like how the existing permit is set up plus there might be an issue meeting the Rule 7 limit. I will be contacting Joyce in the near future about specifics on the Rule 7 limits and some ideas about how to address it in the permit.

If you want to give me a call on Wednesday afternoon or Thursday morning would be fine.

Ed

Sincerely,

Edward S. Andrews, P.E.  
Engineer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304  
304.926.0499 ext. 1214

ID # 77-15  
Reg R13-2501A  
Company Superior  
Facility Reedsville Initials \_\_\_\_\_

*Entire Document*  
**NON-CONFIDENTIAL**

**From:** Rod Wilkins [mailto:rwilkins@superiorfibers.com]  
**Sent:** Wednesday, May 04, 2016 10:06 AM  
**To:** Andrews, Edward S <Edward.S.Andrews@wv.gov>  
**Cc:** Joyce Gentry <Joyce.gentry@sj-environmental.com>  
**Subject:** Superior Reedsville Expansion Permit

Ed,

Please find attached the revised calculations for the Superior Reedsville Facility. As was discussed the average between the natural gas combustion factors and the previous emission factor with a 15% increase were used. The changes based on the stack test results for the NOx and VOC for the RTO were also incorporated. There has been some business market changes since the original plan for the expansion was developed. Instead of the installation of 22 new melters and drums, business conditions only warrant the installation of 16 new

melters and drums. One of our large customers has recently vertically integrated which caused us to decrease our needed capacity for the expansion.

If you should have any questions, you can contact myself on the business conditions or Joyce Gentry on the calculations.

I would like to schedule a call with yourself and Joyce early next week to review the permit status.

Thanks,

Rod

Rod Wilkins  
CTO Superior Fibers  
456 Robert Stone Way  
Reedsville, WV 26547  
Phone: 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

## Andrews, Edward S

---

**From:** Rod Wilkins <rwilkins@superiorfibers.com>  
**Sent:** Thursday, May 05, 2016 8:19 AM  
**To:** Andrews, Edward S  
**Subject:** Re: Superior Reedsville Expansion Permit

Ed,

1. The glass melters and the forming drums operate independently.
2. The expansion partly in going into the existing building part in a new building. The new building is under 1 acre in size.

Thanks,

Rod

---

**From:** Andrews, Edward S <Edward.S.Andrews@wv.gov>  
**Sent:** Wednesday, May 4, 2016 10:53:47 AM  
**To:** Rod Wilkins  
**Subject:** RE: Superior Reedsville Expansion Permit

Rod,

Your timing could be any better. I was getting ready to start back on your application this morning. I have a question about the process from the glass melters to the forming drums. Is it a continuous process or can you operation both independent of each other?

Is the expansion going in a new building or existing one?

I don't like how the existing permit is set up plus there might be an issue meeting the Rule 7 limit. I will be contacting Joyce in the near future about specifics on the Rule 7 limits and some ideas about how to address it in the permit.

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Ed

Sincerely,

Edward S. Andrews, P.E.  
Engineer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304  
304.926.0499 ext. 1214

**From:** Rod Wilkins [mailto:[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)]  
**Sent:** Wednesday, May 04, 2016 10:06 AM  
**To:** Andrews, Edward S <[Edward.S.Andrews@wv.gov](mailto:Edward.S.Andrews@wv.gov)>  
**Cc:** Joyce Gentry <[Joyce.gentry@sj-environmental.com](mailto:Joyce.gentry@sj-environmental.com)>  
**Subject:** Superior Reedsville Expansion Permit

Ed,

Please find attached the revised calculations for the Superior Reedsville Facility. As was discussed the average between the natural gas combustion factors and the previous emission factor with a 15% increase were used. The changes based on the stack test results for the NOx and VOC for the RTO were also incorporated. There has been some business market changes since the original plan for the expansion was developed. Instead of the installation of 22 new melters and drums, business conditions only warrant the installation of 16 new melters and drums. One of our large customers has recently vertically integrated which caused us to decrease our needed capacity for the expansion.

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Rod

Rod Wilkins  
CTO Superior Fibers  
456 Robert Stone Way  
Reedsville, WV 26547  
Phone: 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

## Andrews, Edward S

---

**From:** Rod Wilkins <[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)>  
**Sent:** Tuesday, May 10, 2016 10:13 AM  
**To:** Andrews, Edward S; [Joyce.gentry@sj-environmental.com](mailto:Joyce.gentry@sj-environmental.com)  
**Subject:** RE: Superior Reedsville Expansion Permit

Ed & Joyce,

Please use conference # 712-432-5610 code 8925# for our 1:30 PM call tomorrow.

Thanks,

Rod

Rod Wilkins  
Chief Technical Officer  
Superior Fibers LLC  
456 Robert Stone Way  
Reedsville, WV 26547  
Cell 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

---

**From:** Andrews, Edward S [<mailto:Edward.S.Andrews@wv.gov>]  
**Sent:** Thursday, May 05, 2016 7:31 AM  
**To:** Rod Wilkins  
**Subject:** Re: Superior Reedsville Expansion Permit

Rod, That will be fine.

---

**From:** Rod Wilkins <[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)>  
**Sent:** Thursday, May 5, 2016 6:51:24 AM  
**To:** Andrews, Edward S  
**Subject:** Re: Superior Reedsville Expansion Permit

Ed,

I'll call you next Wednesday at 1:30.

Please let me know if that's a problem.

Thanks,  
Rod

Rod Wilkins  
Chief Technical Officer

Superior Fibers LLC  
456 Robert Stone Way  
Reedsville, WV 26547  
Cell 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

On May 4, 2016, at 1:19 PM, Andrews, Edward S <[Edward.S.Andrews@wv.gov](mailto:Edward.S.Andrews@wv.gov)> wrote:

Rod, I was thinking next week.

Sorry about that.

Ed

**From:** Rod Wilkins [<mailto:rwilkins@superiorfibers.com>]  
**Sent:** Wednesday, May 04, 2016 11:33 AM  
**To:** Andrews, Edward S <[Edward.S.Andrews@wv.gov](mailto:Edward.S.Andrews@wv.gov)>  
**Subject:** Re: Superior Reedsville Expansion Permit

Ed,

I'm tied up this afternoon. I'll call you at 9:30 tomorrow morning.

Thanks,  
Rod

Rod Wilkins  
Chief Technical Officer  
Superior Fibers LLC  
456 Robert Stone Way  
Reedsville, WV 26547  
Cell 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

On May 4, 2016, at 10:54 AM, Andrews, Edward S <[Edward.S.Andrews@wv.gov](mailto:Edward.S.Andrews@wv.gov)> wrote:

Rod,

Your timing could be any better. I was getting ready to start back on your application this morning. I have a question about the process from the glass melters to the forming drums. Is it a continuous process or can you operation both independent of each other?

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I don't like how the existing permit is set up plus there might be an issue meeting the Rule 7 limit. I will be contacting Joyce in the near future about specifics on the Rule 7 limits and some ideas about how to address it in the permit.

If you want to give me a call on Wednesday afternoon or Thursday morning would be fine.

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Edward S. Andrews, P.E.  
Engineer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304  
304.926.0499 ext. 1214

**From:** Rod Wilkins [<mailto:rwilkins@superiorfibers.com>]  
**Sent:** Wednesday, May 04, 2016 10:06 AM  
**To:** Andrews, Edward S <[Edward.S.Andrews@wv.gov](mailto:Edward.S.Andrews@wv.gov)>  
**Cc:** Joyce Gentry <[Joyce.gentry@sj-environmental.com](mailto:Joyce.gentry@sj-environmental.com)>  
**Subject:** Superior Reedsville Expansion Permit

Ed,

Please find attached the revised calculations for the Superior Reedsville Facility. As was discussed the average between the natural gas combustion factors and the previous emission factor with a 15% increase were used. The changes based on the stack test results for the NOx and VOC for the RTO were also incorporated. There has been some business market changes since the original plan for the expansion was developed. Instead of the installation of 22 new melters and drums, business conditions only warrant the installation of 16 new melters and drums. One of our large customers has recently vertically integrated which caused us to decrease our needed capacity for the expansion.

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Thanks,

Rod

Rod Wilkins  
CTO Superior Fibers  
456 Robert Stone Way  
Reedsville, WV 26547  
Phone: 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

**Andrews, Edward S**

---

**From:** Rod Wilkins <rwilkins@superiorfibers.com>  
**Sent:** Wednesday, May 11, 2016 2:23 PM  
**To:** Andrews, Edward S; Joyce Gentry  
**Subject:** Boiler

The boiler is natural gas.

Thanks,

Rod

Rod Wilkins  
CTO Superior Fibers  
456 Robert Stone Way  
Reedsville, WV 26547  
Phone: 740-398-3809  
rwilkins@superiorfibers.com

## Andrews, Edward S

---

**From:** Joyce Gentry <Joyce.gentry@sj-environmental.com>  
**Sent:** Wednesday, May 18, 2016 3:06 PM  
**To:** Andrews, Edward S  
**Cc:** Rod Wilkins  
**Subject:** Redline Permit  
**Attachments:** SJDOCS-#7189787-v1-R13-2501B\_-\_Redline\_and\_comments.DOCX

**Joyce Gentry, P.E.**

**Senior Engineer**

S&J Environmental Services LLC

P.O. Box 1588, Charleston, WV 25326-1588

*Overnight*

Chase Tower, 17th Floor

707 Virginia Street, East, Charleston, WV 25301

O: 304-556-8215 F: 304-353-8180 C: 304-541-6315

[joyce.gentry@sj-environmental.com](mailto:joyce.gentry@sj-environmental.com)



---

Steptoe & Johnson PLLC Note:

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

*West Virginia Department of Environmental Protection*  
*Earl Ray Tomblin*  
*Governor*

*Division of Air Quality*

*Randy C. Huffman*  
*Cabinet Secretary*

# Permit to Modify



**R13-2501B**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

*Issued to:*  
**Superior Reedsville Filtration, LLC**  
**Reedsville Plant**  
**077-00015**

---

*William F. Durham*  
*Director*

*Issued: DRAFT*

This permit will supersede and replace Permit R13-2501A.

Facility Location: Route 92 South  
Reedsville, Preston County, West Virginia

Mailing Address: P.O. Box 478  
Reedsville, WV 26547

Facility Description: Glass mat manufacturing facility

NAICS Codes: 32721

UTM Coordinates: 603.30 km Easting • 4,374.35 km Northing • Zone 18

Permit Type: Modification

Description of Change: This action is for the installation of sixteen additional glass melt furnaces-glass fiber extruding apparatus and binder applicators-glass fiber forming drums.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [ §§22B-1-1 et seq. ], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.*

---

*The source is not subject to 45CSR30.*

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**1.0. Emission Units**

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Control Device</b>
Oven-1	EP-1	Fiberglass Mat Curing Oven	CD-1, Regenerative Thermal Oxidizer
Oven-2	EP-6	Fiberglass Mat Curing Oven	CD-3, Regenerative Thermal Oxidizer
GMF1-GMF44	Bldg.1	Glass Melting Furnaces with Glass Fiber Extruders	PE
Boiler 1	EP-3	3.0 MMBtu/hr Natural Gas Boiler	None
Drum1 - Drum 44	Bldg. 1	Glass Fiber Forming Drums with Binder Applicators	PE
Hood-1	EP-4	Mat Let Off Table	None
Hood -3	EP-7	Mat Let Off Table	None
Hood-2	EP-5	Pulling and Expanding Station	None
Hood-4	EP-8	Pulling and Expanding Station	None
T-1	TV-1	Forming Oil Storage Tank	None
T-2	TV-2	Bulk Resin Storage Tank	None
T-3	TV-3	Bulk Resin Storage Tank	None
T-4	T-4	Bulk Resin Storage Tank	None
T-5	TV-5	Ethylene Glycol Storage Tank	None
T-6	TV-6	Adhesive Oil Storage Tank	None
T-7	TV-7	Adhesive Oil Storage Tank	None
T-8	TV-8	Waste Oil Storage Tank	None
T9-T14	None	Binder Mix Tanks	None
Spray 1	EP-2	Adhesive Oil Spraying Station	None

**2.0. General Conditions**

**2.1. Definitions**

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

**2.2. Acronyms**

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5 µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CO</b>	Carbon Monoxide	<b>Ppb</b>	Pounds per Batch
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>Pph</b>	Pounds per Hour
<b>DAQ</b>	Division of Air Quality	<b>Ppm</b>	Parts per Million
<b>DEP</b>	Department of Environmental Protection	<b>Ppm<sub>v</sub> or ppm<sub>v</sub></b>	Parts per Million by Volume
<b>dscm</b>	Dry Standard Cubic Meter	<b>PSD</b>	Prevention of Significant Deterioration
<b>FOIA</b>	Freedom of Information Act	<b>Psi</b>	Pounds per Square Inch
<b>HAP</b>	Hazardous Air Pollutant	<b>SIC</b>	Standard Industrial Classification
<b>HON</b>	Hazardous Organic NESHAP	<b>SIP</b>	State Implementation Plan
<b>HP</b>	Horsepower	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>lbs/hr</b>	Pounds per Hour	<b>TAP</b>	Toxic Air Pollutant
<b>LDAR</b>	Leak Detection and Repair	<b>TPY</b>	Tons per Year
<b>M</b>	Thousand	<b>TRS</b>	Total Reduced Sulfur
<b>MACT</b>	Maximum Achievable Control Technology	<b>TSP</b>	Total Suspended Particulate
<b>MDHI</b>	Maximum Design Heat Input	<b>USEPA</b>	United States Environmental Protection Agency
<b>MM</b>	Million	<b>UTM</b>	Universal Transverse Mercator
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VEE</b>	Visual Emissions Evaluation
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>NA</b>	Not Applicable	<b>VOL</b>	Volatile Organic Liquids
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### **2.3. Authority**

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

### **2.4. Term and Renewal**

- 2.4.1. This permit supersedes and replaces previously issued Permit R13-2501A. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2501, R13-2501A, R13-2501B, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
[45CSR§§13-5.11 and 10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

## **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

## **2.10 Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or 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 (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by

improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

**2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

**2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

*[Reserved]*

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary

exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
  1. The permit or rule evaluated, with the citation number and language;
  2. The result of the test for each permit or rule condition; and,
  3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

### **3.4. Recordkeeping Requirements**

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded

in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. *State Enforceable Only.*]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street  
Charleston, WV 25304-2345

**If to the US EPA:**

Associate Director  
Office of Air Enforcement and Compliance Assistance  
(3AP20)  
U.S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

#### 3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

#### 4.0. Source-Specific Requirements for the Glass Melting and Forming Operations

##### 4.1. Limitations and Standards

4.1.1. The following conditions and requirements are specific to the glass melting and fiber formation operations at the permitted facility:

a. Maximum emissions to the atmosphere from the glass melting and fiber forming operation shall not exceed the limits set forth in the following table:

Emission Source ID #	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
(GMF-1 -- GMF-44)	Total Glass Furnace Melting Emissions	Nitrogen Oxides	10.70	46.87
		Carbon Monoxide	0.68	3.00
		VOC	0.17	0.09
		Sulfur Dioxide	1.61 <sup>1</sup>	7.05
(Drum-1 - Drum-44)	Total Glass Fiber Forming Emissions	Particulate Matter-10	1.27	5.56
		Formaldehyde	0.001	0.001

1 – Satisfy the sulfur dioxide allowable of 45 CSR §10-4.1.

- b. Particulate Matter emissions from Building 1 shall not exceed 7.85 pounds per hour. [45CSR §§7-4.1. & 4.4.]
- c. No opening from Building 1 (Roof Monitor Vents) shall exhibit visible emissions 20 opacity of greater on a 6 minute block average. [45 CSR §7-3.1.]
- d. Building 1 shall be maintain in such a manor to control fugitive particulate matter as partial enclosure. [45 CSR §7-5.1]
- e. The primary feedstock for all of the glass melting furnaces at the facility shall be glass cullet.
- f. The glass melting furnaces shall be fuel only with pipeline quality natural gas. Compliance with this limitation and item e of this condition satisfy compliance with sulfur dioxide allowable of 45 CSR §10-4.1. [45 CSR 10-4.1.]
- g. The maximum amount of natural gas consumed by the glass melting furnaces shall not exceed 6,470 scfh. Compliance with this hourly limits based on a 12-month rolling total of 56.7 million standard cubic feet (MMSCF).

4.1.2. The following conditions and requirements are specific to the curing operations at the permitted facility:

a. The permittee maximum emission rates to the atmosphere from the curing operation shall not exceed the limits set forth in the following table from the corresponding emission point:

Table 4.1.2.a. Emission Limits from Curing Ovens

Emission Point ID# (Source ID #)	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
EP-1	Curing Oven (Oven-1) exhaust routed to Regenerative Thermal Oxidizer (CD-1)	Nitrogen Oxides	2.48	10.86
		Carbon Monoxide	0.51	2.25
		Particulate Matter-10	0.06 <sup>2</sup>	0.27
		Sulfur Dioxide	0.01 <sup>3</sup>	0.03
		VOC	1.04	4.56
		Formaldehyde* <sup>1</sup>	0.46	2.01
		Methanol*	0.44	1.91
EP-6	Curing Oven (Oven-2) exhaust routed to Regenerative Thermal Oxidizer (CD-3)	Nitrogen Oxides	2.48	10.86
		Carbon Monoxide	0.51	2.25
		Particulate Matter-10	0.02 <sup>2</sup>	0.09
		Sulfur Dioxide	0.01 <sup>3</sup>	0.03
		VOC	1.04	4.56
		Formaldehyde* <sup>1</sup>	0.46	2.01
		Methanol*	0.44	1.91

\* Denotes the pollutant is classified as a hazardous air pollutant.

<sup>1</sup> Denotes the pollutant is classified as a toxic air pollutant under 45 CSR 27.

<sup>2</sup> – Satisfies the PM allowable of 45 CSR §6-4.1.

<sup>3</sup> – Satisfies the Hydrogen Sulfide Allowable of 45 CSR §10-5.1.

- b. Visible emissions from Emission Points E-1 and E-6 shall not exhibit opacity of 20 percent or greater on a six minute block average.  
 [45 CSR §6-4.3]
- c. Glass fiber mats placed in either the curing ovens shall not exceed a formaldehyde content by weight of more than 0.51%.  
 [45 CSR §27-3.1]
- d. The exhaust from Oven-1 and Oven-2 shall be routed to CD-1 and CD-3 respectively through a closed vent system.
- e. The closed vent system as required in item d of this condition shall meet the following:
  - i. The system pressure loss, as measured at the inlet of both RTO (CD-1 & CD-3), shall maintain a pressure gradient range of -0.25 to -0.75 inches of water column.
  - ii. The system shall be constructed and maintained free of leaks. A leaking component is defined as a measured instrument reading greater than 500 ppm above background or by visual inspection.
  - iii. Detected leaks shall be repaired as soon as practicable with the first attempt at repair within 5 calendar days after detecting the leak. Repair shall be completed no later than 15 calendar days after the leak is detected.  
 [45 CSR §13-5.11.]
- f. Control devices CD-1 and CD-3 shall be designed to achieve a minimum destruction efficiency of 98% for VOC, formaldehyde, and methanol emissions. To demonstrate compliance with this limit CD-1 and shall maintain and operated with a combustion chamber temperature of no less than 1,550°F for CD-1 and 1,500°F for CD-3 on a three (3) hour rolling average while the respective curing over curing wet mats.

- g. The glass fiber mat feed rate for each curing oven (Source ID# Oven-1 and Oven-2) shall not exceed 3,375 lb/hr of wet glass fiber mats. Compliance with this limit shall be based on using a twelve (12) month rolling total of finished product not to exceed 14,782 tons for Oven-1 and 12,782 tons for Oven-2. A twelve (12) month rolling total shall mean the sum of glass fiber filter material produced at any given time for the previous twelve consecutive months.
  - h. The curing ovens and the RTO shall be fuel with natural gas. The maximum amount of natural gas consumed by the ovens and RTOs shall not exceed 14050 scfh. Compliance with this hourly limits based on a 12-month rolling total of 123.1 million standard cubic feet (MMSCF).
- 4.1.3. The following conditions and requirements are specific to the mat Let-Off table, Pulling Expanding and Adhesive Oil Spraying Stations at the permitted facility:
- a. The permittee maximum emission rates to the atmosphere from these sources shall not exceed the limits set forth in the following table from the corresponding emission point:

Table 4.1.3.a. Emission Limits for Mat Let-Off Tables, Pulling & Expanding, Adhesive Oil Spraying Stations

Emission Point ID# (Source ID #)	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
EP-4 (Hood-1)	Mat Let-Off Table	Formaldehyde	0.01	0.04
		VOC	0.05	0.22
EP-8 (Hood-3)	Mat Let-Off Table	Formaldehyde	0.01	0.04
		VOC	0.05	0.22
EP-5 (Hood-2)	Pulling & Expanding Station	Formaldehyde	0.01	0.04
		VOC	0.05	0.22
EP-9 (Hood-4)	Pulling & Expanding Station	Formaldehyde	0.01	0.044
		VOC	0.05	0.22
EP-2 (Spray-1)	Adhesive Oil Spraying Station	Particulate Matter-10	2.5 <sup>1</sup>	4.56
		VOC	5	9.13
EP-7 (Spray-2)	Adhesive Oil Spraying Station	Particulate Matter-10	2.5	4.56
		VOC	5	9.13

1 – Satisfy the PM Allowable of 45 CSR §7-4.1.

- b. Emission Points EP-2, EP-4, EP-5, EP-7, EP-8, EP-9 shall exhibit visible emissions 20 opacity of greater on a 6 minute block average.  
**[45 CSR §7-3.1.]**
- 4.1.4. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.  
**[45CSR§7-5.1]**
- 4.1.5. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment. **[45CSR§7-5.2]**

- 4.1.6. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in this rule may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. [45CSR§7-9.1]
- 4.1.7. Compliance with the annual emission limits shall be determined using rolling yearly totals. A rolling yearly total shall mean the sum of the emissions at any given time for the previous twelve (12) consecutive months.
- 4.1.8. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. [45CSR§13-5.11.]

## 4.2. Monitoring Requirements

- 4.2.1. The permittee shall install, maintain, and operate a temperature sensing device to measure and record the operating temperature of each RTO (CD-1 and CD-3). Such devices must measure and record the temperature at a frequency of no greater than once every 15 minutes.

For the purpose of demonstrating compliance with the limits in Condition 4.1.2.f., the permittee shall determine the hourly average temperature using at least 4 readings from the corresponding hour. Then the permittee shall determine the three-hour average using the hourly average of previous three hours. The permittee shall determine the three-hour average on continuous basis for every hour that wet glass fiber mats are cured in the respective oven. Records of readings, hourly average and three-hour averages and calibrations of devices shall be maintain in accordance with Condition 3.4.1.

- 4.2.3. In order to determine compliance with Conditions 4.1.2.b, permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for Emission Points EP-1 and EP-6. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24 hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records of observation shall be maintained in accordance with Condition 3.4.1. [45CSR§6-4.3]

- 4.2.3. In order to determine compliance with Conditions 4.1.1.c. and 4.1.3.b., the permittee shall conduct monthly visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for the Building 1 (Roof Monitors), EP-2, EP-4, EP-5, EP-7, EP-8, and EP-9. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit(s) has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an opacity evaluation in accordance with 40CFR60 Appendix A, Method 9, within 24

hours. A 40CFR60 Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within 24 hours and the units are operated at normal operating conditions with no visible emissions being observed. Records of observation shall be maintained in accordance with Condition 3.4.1.

[45CSR§7-8.2]

#### **4.3. Testing Requirements**

4.3.1. To determine compliance with mass emission limits for VOC's, formaldehyde, and methanol for the Emission Point EP-6 set forth under Condition 4.1.2, the permittee shall conduct a performance test within 180 days after startup of Oven-2 in accordance with EPA Method 318 (Extractive FTIR Method for the Measurement of Emissions from the Mineral Wool and Wool Fiberglass Industries) and in accordance with Condition 3.3.1. The performance test will also demonstrate compliance with the destruction efficiency (per Condition 4.1.2.f) of total VOCs, formaldehyde, and methanol by the Regenerative Thermal Oxidizer CD-3. During such performance test, the permittee shall operate Oven-2 at an hourly production rate of no less than 90% of the permitted level in Condition 4.1.2.g. for each test run. The permittee shall record and report the hourly feed rate into the oven, and the RTO operating temperature for each test run.

[45 CSR 27-10.1]

#### **4.4. Recordkeeping Requirements**

4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit, and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.

- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

- 4.4.4. To determine compliance with 4.1.2.c., the permitted facility shall maintain product information of the formaldehyde content by weight of the glass fiber mats placed in either curing oven (Source ID# Oven-1 and Oven-2). Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.5. The permittee shall maintain monthly reports of daily records certifying the binder percent of the processed mat weights, pounds of product processed through the curing ovens, and corresponding hours of mats processed through the each curing oven. Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.6. The permittee shall keep monthly reports of daily records of urea formaldehyde resin usage. Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.7. The permittee shall keep average hourly calculations of the formaldehyde and methanol emissions for the cured mates processed through the curing oven on a daily basis. Such records shall be maintained in accordance with Condition 3.4.1.
- 4.4.8. The permittee shall keep a monthly record and 12 month rolling total of natural gas consumed by the permittee facility. This 12-month rolling is less than 215.1 MMSCF then compliance with Conditions 4.1.1.g, 4.1.2.h, and 5.1.1.d. is satisfied.  
[45 CSR §2-8.3.c. and §10-8.3.c.]

#### **4.5. Reporting Requirements**

- 4.5.1. The emission to the air of any toxic air pollutant resulting from an abnormal release or spill in excess of the following amounts shall be reported to the Director or his authorized representative not later than 24-hours after the chemical processing unit owner/operator has knowledge of such emission:
  - a. For ethylene oxide, and vinyl chloride, one (1) pound
  - b. For acrylonitrile and butadiene, ten (10) pounds
  - c. For all other toxic air pollutants, which includes formaldehyde, fifty (50) pounds.

The permittee shall file a written report with the Director stating the details of all such incidents resulting in the emission of more than fifty (50) pounds of any toxic air pollutant within seven (7) days of the occurrence. The permittee shall submit to the Director, at his request, records of all abnormal toxic air pollutant discharges to the air.

[45CSR§27-10.4]

- 4.5.2. Any Method 9 observation as required in Condition 4.2.2. in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes

in any sixty (60) minute period, the permittee shall submit a written report, certified by a responsible official, to the Director within five (5) days after taking said reading. Such notified shall be submitted in accordance with Condition 3.5.3

**[45 CSR §6-7.2]**

- 4.5.3. Any Method 9 observation as required in Condition 4.2.3. in excess of twenty percent (20%) opacity, or excess of forty (40%) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, the permittee shall submit a written report, certified by a responsible official, to the Director within five (5) days after taking said reading. Such notified shall be submitted in accordance with Condition 3.5.3.

**[45CSR§7-8.2]**

## 5.0. Source-Specific Requirements for the Tank Farm and Boiler

### 5.1. Limitations and Standards

5.1.1. The following conditions and requirements are specific to the boiler (ID #Boiler-1):

- a. NO<sub>x</sub> emissions emitted to the atmosphere from the boiler shall not exceed 1.29 tons per year on a 12 month rolling total.
- b. CO emissions emitted to the atmosphere from the boiler shall not exceed 1.09 tons per year on a 12 month rolling total.
- c. The boiler shall only be fired with pipeline quality natural gas. This condition satisfies compliance with the limitations of 45CSR§2-3.1., 45CSR§2-4.1.b., and 45CSR§10-3.1.e. [45CSR§2A-3.1.a., 45CSR§10-10.3., and 45CSR§10A-3.1.b.]
- d. The boiler shall not be designed or constructed with a maximum design heat input in excess of 3.0 MMBtu/hr. Compliance with this limit shall be through fuel usage that indicates the total amount of natural gas fuel during any 12 consecutive months is less than 26.3 MM cubic feet. Satisfying compliance with this limit demonstrates compliance with the annual emissions limits in items a and b of this condition.

5.1.2. Maximum emissions to the atmosphere from the storage vessels identified as T-1 through T-14 shall not exceed the limits set forth in the following table:

Emission Point ID#	Name of Storage Vessel	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)
TV-1	Forming Mold Oil Storage Tank	VOC	2	0.2
TV-2	Bulk Resin Storage Tank	Formaldehyde	0.01	0.01
		VOC	0.02	0.09
TV-3	Bulk Resin Storage Tank	Formaldehyde	0.01	0.01
		VOC	0.02	0.09
TV-4	Bulk Resin Storage Tank	Formaldehyde	0.01	0.01
		VOC	0.02	0.09
TV-5	Ethylene Glycol Storage Tank	VOC & VHAP	1	0.1
TV-6	Adhesive Oil Storage Tank	VOC	1	0.1
TV-7	Adhesive Oil Storage Tank	VOC	1	0.1
TV-8	Waste Oil Storage Tank	VOC	1	0.1
TV-9	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-10	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-11	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-12	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-13	Binder Mix Tank	Formaldehyde	0.01	0.02
		VOC	0.02	0.09
TV-14	Binder Mix Tank	Formaldehyde	0.01	0.02

	VOC	0.02	0.09
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- 5.1.3. Compliance with the formaldehyde (TAP) limits in Condition 5.1.2. is satisfied by limiting the TAP concentration of any of the organic liquids storage in any of the vessels listed in Table 5.1.2. to no greater than 1% by weight and all vessels listed in Table 5.1.2. shall be located in partial enclosure with a roof.  
[45 CSR 27-5.1]
- 5.1.4. To satisfy 45 CSR §27-4.1., the permittee shall develop and implement a leak detection and repair (LDAR) program of the all the components that are in contact with a TAP (a liquid that contains formaldehyde). Such a program shall meet the following requirements:
- a. A leaking component is defined as a measured instrument reading greater than 10,000 ppm above background or by visual inspection.
  - b. Inspect all affected components on a monthly and pump seals on a weekly basis unless the permittee develops a program using Method 21 then the frequency of inspections shall be conducted in accordance with Subpart V of Part 61.
  - c. Detected leaks shall be repaired as soon as practicable with the first attempt at repair within 5 calendar days after detecting the leak. Repair shall be completed no later than 15 calendar days after the leak is detected.  
[45 CSR §27-.4.1.]
- 5.1.5. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
[45CSR§13-5.11.]

## 5.2. Monitoring Requirements

- 5.2.1. For the purposes of demonstrating compliance with the requirements of the LDAR in Condition 5.1.4., the permittee shall conduct the following:
- a. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of issuance of the permit. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
  - b. After the initial, subsequent inspections for all components shall be visual, olfactory, and auditory inspections shall be conducted for defect that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices.
  - c. Detected leaks shall be repaired in accordance timing stated in Condition 4.1.1f.iii.
  - d. Records of such inspections shall be maintained in accordance with 3.4.1.
  - e. The use of the procedures listed as Alternative Methods to Method 21 (i.e. soapy water) to determine a leak or a leak has been repaired is acceptable or eliminating visual indicators a leaks (eliminating drips).

- f. Records of such inspections and any repairs shall be maintained in accordance with Condition 3.4.1.

### **5.3. Recordkeeping Requirements**

- 5.3.1. To demonstrate compliance with Condition 5.1.3., the permittee shall record the formaldehyde content of the urea formaldehyde resin received by the permitted facility. Such records shall be maintained in accordance with Condition 3.4.1.



### CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup> \_\_\_\_\_  
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title \_\_\_\_\_  
(please print or type) Name Title

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

- <sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:
- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
    - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
    - (ii) the delegation of authority to such representative is approved in advance by the Director;
  - b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
  - c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
  - d. The designated representative delegated with such authority and approved in advance by the Director.

**Andrews, Edward S**

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**From:** Rod Wilkins <rwilkins@superiorfibers.com>  
**Sent:** Wednesday, May 04, 2016 10:06 AM  
**To:** Andrews, Edward S  
**Cc:** Joyce Gentry  
**Subject:** Superior Reedsville Expansion Permit  
**Attachments:** Superior\_CalculationsReedsvilleexpansionpermit16drums52016.pdf

Ed,

Please find attached the revised calculations for the Superior Reedsville Facility. As was discussed the average between the natural gas combustion factors and the previous emission factor with a 15% increase were used. The changes based on the stack test results for the NOx and VOC for the RTO were also incorporated. There has been some business market changes since the original plan for the expansion was developed. Instead of the installation of 22 new melters and drums, business conditions only warrant the installation of 16 new melters and drums. One of our large customers has recently vertically integrated which caused us to decrease our needed capacity for the expansion.

If you should have any questions, you can contact myself on the business conditions or Joyce Gentry on the calculations.

I would like to schedule a call with yourself and Joyce early next week to review the permit status.

Thanks,

Rod

Rod Wilkins  
CTO Superior Fibers  
456 Robert Stone Way  
Reedsville, WV 26547  
Phone: 740-398-3809  
rwilkins@superiorfibers.com

ID # 77-15  
Reg RB-2501B  
Company Superior  
Facility Reedsville Initials SGJ

*Entire Document*  
**NON-CONFIDENTIAL**

Emission Point ID# (Source ID #)	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source	Change in Calculations	Reason
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD-1)	Carbon Dioxide	731.11	3202.2474	40 CFR 98 Subpart C - Eq.C-1	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD-1)	Carbon Monoxide	0.51	2.25	R13-2501A Permit	Yes.	Separated Curing Oven and RTO
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD-1)	Formaldehyde	0.46	2.01	R13-2501A Permit	Yes.	Separated Curing Oven and RTO
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD-1)	Methane	0.01	0.0603515	R13-2501A Permit	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD-1)	Methanol	0.436	1.91	R13-2501A Permit	Yes.	Separated Curing Oven and RTO
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD-1)	N2O	0.00	0.00603	40 CFR 98 Subpart C - Eq.C-1	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD-1)	Nitrogen Oxides	3	13.1	R13-2501A Permit	Yes.	Separated Curing Oven and RTO
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD-1)	Particulate Matter-10	0.06	0.27	R13-2501A Permit	Yes.	Separated Curing Oven and RTO
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD-1)	Sulfur Dioxide	0.01	0.03	R13-2501A Permit	Yes.	Separated Curing Oven and RTO
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD-1)	VOC	6.97	20.2	R13-2501A Permit	No	
EP-2(Spray-1)	Adhesive Oil Spraying Station	Particulate Matter-10	2.5	4.563	R13-2501A Permit	No	
EP-2(Spray-1)	Adhesive Oil Spraying Station	VOC	5	9.125	R13-2501A Permit	No	
EP-3 (Boiler-1)	Natural Gas Fired Boiler	Carbon Dioxide	350.93	1537.081	40 CFR 98 Subpart C - Eq.C-1	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
EP-3 (Boiler-1)	Natural Gas Fired Boiler	Carbon Monoxide	0.25	1.082	R13-2501A Permit	No	
EP-3 (Boiler-1)	Natural Gas Fired Boiler	Methane	0.007	0.029	40 CFR 98 Subpart C - Eq.C-8	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements

Emission Point ID# (Source ID #)	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source	Change in Calculations	Reason
EP-3 (Boiler-1)	Natural Gas Fired Boiler	N2O	0.0007	0.0029	40 CFR 98 Subpart C - Eq.C-8	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
EP-3 (Boiler-1)	Natural Gas Fired Boiler	Nitrogen Oxides	0.29	1.288	R13-2501A Permit	No	
EP-3 (Boiler-1)	Natural Gas Fired Boiler	Particulate Matter-10	0.02	0.098	R13-2501A Permit	No	
EP-3 (Boiler-1)	Natural Gas Fired Boiler	Sulfur Dioxide	0.002	0.008	R13-2501A Permit	No	
EP-3 (Boiler-1)	Natural Gas Fired Boiler	VOC	0.071	0.071	R13-2501A Permit	No	
EP-4 (Hood-1)	Mat Let-Off Table	Formaldehyde	0.01	0.044	R13-2501A Permit	No	
EP-4 (Hood-1)	Mat Let-Off Table	VOC	0.05	0.22	R13-2501A Permit	No	
EP-5 (Hood -2)	Pulling & Expanding Station	Formaldehyde	0.01	0.044	R13-2501A Permit	No	
EP-5 (Hood -2)	Pulling & Expanding Station	VOC	0.05	0.22	R13-2501A Permit	No	
None (Drum-1 - Drum-28)	Total Glass Fiber Forming Emissions	Formaldehyde	0.001	0.001	R13-2501A Permit	No	
None (Drum-1 - Drum-28)	Total Glass Fiber Forming Emissions	Particulate Matter-10	1.27	5.56	R13-2501A Permit	No	
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Carbon Dioxide	491.3	2151.89	40 CFR 98 Subpart C - Eq.C-1	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Carbon Monoxide	0.84	3.68	R13-2501A Permit	Yes.	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-4 (Glass Furnace - Textile, Gas - melter) 0.9 lb/ton of material processed
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Methane	0.009	0.04	40 CFR 98 Subpart C - Eq.C-8	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	N2O	0.0009	0.0004	40 CFR 98 Subpart C - Eq.C-8	Yes.	Added document PTE below 40 CFR 98 report and GHG PSD requirements
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Nitrogen Oxides	18.2	79.72	R13-2501A Permit	Yes.	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-4 (Glass Furnace - Textile, Gas - melter) 20 lb/ton of material processed
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Particulate Matter-10	5.6	24.53	R13-2501A Permit	Yes.	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-2 (Glass Furnace - Textile, Gas - melter) 6 lb/ton of material processed

Emission Point ID# (Source ID #)	Source Name	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source	Change in Calculations	Reason
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Sulfur Dioxide	2.8	12.26	R13-2501A Permit	Yes.	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-2 (Glass Furnace - textile Gas - recuperative) 3 lb/ton of material processed since Glass furnace - textile, Gas unit melter was ND
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	VOC	0.28	1.23	R13-2501A Permit	Yes.	Emission Factor AP-42 Section 11.15 Glass Manufacturing Table 11.15-2 (pressed and blown - uncontrolled) 0.3 lb/ton of material processed since Glass Fiber furnace - textile, Gas unit melter was ND
TV-1	Forming Mold Oil Storage Tank	VOC	1	0.1	R13-2501A Permit	Yes.	Reflect increased throughput
TV-2	Bulk Resin Storage Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-2	Bulk Resin Storage Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-3	Bulk Resin Storage Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-3	Bulk Resin Storage Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-4	Bulk Resin Storage Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-4	Bulk Resin Storage Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-5	Ethylene Glycol Storage Tank	VOC	1	0.1	R13-2501A Permit	Yes.	Reflect increased throughput
TV-6	Adhesive Oil Storage Tank	VOC	1	0.1	R13-2501A Permit	Yes.	Reflect increased throughput
TV-7	Adhesive Oil Storage Tank	VOC	1	0.1	R13-2501A Permit	Yes.	Reflect increased throughput
TV-8	Waste Oil Storage Tank	VOC	1	0.1	R13-2501A Permit	Yes.	Reflect increased throughput
TV-9	Binder Mix Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-9	Binder Mix Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-10	Binder Mix Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-10	Binder Mix Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-11	Binder Mix Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-11	Binder Mix Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-12	Binder Mix Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-12	Binder Mix Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-13	Binder Mix Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-13	Binder Mix Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput
TV-14	Binder Mix Tank	Formaldehyde	0.002	0.009	R13-2501A Permit	Yes.	Reflect increased throughput
TV-14	Binder Mix Tank	VOC	0.01	0.045	R13-2501A Permit	Yes.	Reflect increased throughput

Emission Point ID#	Source Name	Design Capacity	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Carbon Dioxide	731.11	3202.2474	40 CFR 98 Subpart C - Eq.C-1
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Carbon Monoxide	0.51	2.25	R13-2501A Permit
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Formaldehyde	0.46	2.01	R13-2501A Permit
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Methane	0.01	0.0603515	R13-2501A Permit
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Methanol	0.436	1.91	R13-2501A Permit
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		N2O	0.00	0.00603	40 CFR 98 Subpart C - Eq.C-1
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Nitrogen Oxides	2.48	10.86	Stack Test results increased by 10%
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Particulate Matter-10	0.06	0.27	R13-2501A Permit
EP-1 (Oven-1 and CD-1)	Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		Sulfur Dioxide	0.01	0.03	R13-2501A Permit
EP-1 (Oven-1 and CD-1)	Curing Oven (Oven-1) and Regenerative Thermal Oxidizer (CD- 5 MM Btu/hr oven + 1.25 MM Btu/hr RTO		VOC	0.48	2.1	Stack Test results increased by 10%
EP-3 (Boiler-1)	Natural Gas Fired Boiler	3 MM Btu/hr	Carbon Dioxide	350.93	1537.081	40 CFR 98 Subpart C - Eq.C-1

Emission Point ID# (Source ID #)	Source Name	Design Capacity	Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source
EP-3 (Boiler-1)	Natural Gas Fired Boiler	3 MM Btu/hr	Methane	0.007	0.029	40 CFR 98 Subpart C - Eq.C-8
EP-3 (Boiler-1)	Natural Gas Fired Boiler	3 MM Btu/hr	N2O	0.0007	0.0029	40 CFR 98 Subpart C - Eq.C-8
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	4.2 MM Btu/hr	Carbon Dioxide	491.3	2151.89	40 CFR 98 Subpart C - Eq.C-1
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Production Rate	Carbon Monoxide	0.68425	2.997015	
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	4.2 MM Btu/hr	Methane	0.009	0.04	40 CFR 98 Subpart C - Eq.C-8
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	4.2 MM Btu/hr	N2O	0.0009	0.0004	40 CFR 98 Subpart C - Eq.C-8
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Production Rate	Nitrogen Oxides	10.70075	46.87	
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Production Rate	Particulate Matter-10	3.23725	14.18	
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Production Rate	Sulfur Dioxide	1.61115	0.01	
None (GMF-1 - GMF-28)	Total Glass Furnace Melting Emissions	Production Rate	VOC	0.1725	0.09	
TV-1	Forming Mold Oil Storage Tank		VOC	1	0.1	R13-2501A Permit
TV-2	Bulk Resin Storage Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-2	Bulk Resin Storage Tank		VOC	0.01	0.045	R13-2501A Permit
TV-3	Bulk Resin Storage Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-3	Bulk Resin Storage Tank		VOC	0.01	0.045	R13-2501A Permit

Emission Point ID# (Source ID #)	Source Name	Design Capacity	Pollutant	Hourly	Annual	Source
				Emissions (lb/hr)	Emissions (ton/year)	
TV-4	Bulk Resin Storage Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-4	Bulk Resin Storage Tank		VOC	0.01	0.045	R13-2501A Permit
TV-5	Ethylene Glycol Storage Tank		VOC	1	0.1	R13-2501A Permit
TV-6	Adhesive Oil Storage Tank		VOC	1	0.1	R13-2501A Permit
TV-7	Adhesive Oil Storage Tank		VOC	1	0.1	R13-2501A Permit
TV-8	Waste Oil Storage Tank		VOC	1	0.1	R13-2501A Permit
TV-9	Binder Mix Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-9	Binder Mix Tank		VOC	0.01	0.045	R13-2501A Permit
TV-10	Binder Mix Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-10	Binder Mix Tank		VOC	0.01	0.045	R13-2501A Permit
TV-11	Binder Mix Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-11	Binder Mix Tank		VOC	0.01	0.045	R13-2501A Permit
TV-12	Binder Mix Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-12	Binder Mix Tank		VOC	0.01	0.045	R13-2501A Permit
TV-13	Binder Mix Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-13	Binder Mix Tank		VOC	0.01	0.045	R13-2501A Permit
TV-14	Binder Mix Tank		Formaldehyde	0.002	0.009	R13-2501A Permit
TV-14	Binder Mix Tank		VOC	0.01	0.045	R13-2501A Permit

Emission Point	Source ID #	Source Name	Design		Pollutant	Emission Factor <sup>1</sup>	Emission Factor Units (lb/10 <sup>6</sup> SCF)	Hourly Emissions (lb/hr) <sup>2</sup>	Annual Emissions (ton/year) <sup>3</sup>	New Source or Modified Calculations	Source
			Capacity	Units							
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		Carbon Dioxide	53.06		584.89	2561.82	No	40 CFR 98 Subpart C - Eq.C-1
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		Carbon Monoxide	84 lb/10 <sup>6</sup> SCF		0.41	1.8	No	AP 42 Natural Gas Combustion Table 1.4-1
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		Methane	0.001		0.01	0.04	No	40 CFR 98 Subpart C - Eq.C-8
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		N2O	0.0001		0.0011	0.005	No	40 CFR 98 Subpart C - Eq.C-8
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		Nitrogen Oxides	100 lb/10 <sup>6</sup> SCF		0	0	Yes	Included in RTO stack test value
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		Particulate Matter-10	7.6 lb/10 <sup>6</sup> SCF		0.04	0.18	No	AP 42 Natural Gas Combustion Table 1.4-1
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		Sulfur Dioxide	0.6 lb/10 <sup>6</sup> SCF		0.003	0.01	No	AP 42 Natural Gas Combustion Table 1.4-1
EP-1	Oven-1	Curing Oven	5 MM Btu/hr		VOC	5.5 lb/10 <sup>6</sup> SCF		0	0	Yes	Included in Process source emissions
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		Carbon Dioxide	53.06		336.08	1472.03	No	40 CFR 98 Subpart C - Eq.C-1
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		Carbon Monoxide	0.1 lb/10 <sup>6</sup> SCF		0.1	0.44	No	Stack Test Results
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		Methane	0.001		0.0063	0.03	No	40 CFR 98 Subpart C - Eq.C-8
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		N2O	0.0001		0.0006	0.003	No	40 CFR 98 Subpart C - Eq.C-8
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		Nitrogen Oxides	2.48		2.48	10.86	No	Stack Test Results
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		Particulate Matter-10	7.6 lb/10 <sup>6</sup> SCF		0.02	0.09	No	R13-2501A Permit
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		Sulfur Dioxide	0.6 lb/10 <sup>6</sup> SCF		0.002	0.01	No	R13-2501A Permit
EP-1	CD-1	Regenerative Thermal Oxidizer	2.873 MM Btu/hr		VOC	5.5 lb/10 <sup>6</sup> SCF		0	0	No	R13-2501A Permit
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		Carbon Dioxide	53.06		350.93	1537.07	No	Included in Process source emissions
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		Carbon Monoxide	84 lb/10 <sup>6</sup> SCF		0.25	1.1	No	40 CFR 98 Subpart C - Eq.C-1
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		Methane	0.001		0.0066	0.03	No	R13-2501A Permit
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		N2O	0.0001		0.0007	0.003	No	40 CFR 98 Subpart C - Eq.C-8
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		Nitrogen Oxides	100 lb/10 <sup>6</sup> SCF		0.29	1.27	No	R13-2501A Permit
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		Particulate Matter-10	7.6 lb/10 <sup>6</sup> SCF		0.02	0.09	No	R13-2501A Permit
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		Sulfur Dioxide	0.6 lb/10 <sup>6</sup> SCF		0.002	0.01	No	R13-2501A Permit
EP-3	Boiler-1	Natural Gas Fired Boiler	3 MM Btu/hr		VOC	5.5 lb/10 <sup>6</sup> SCF		0.02	0.09	No	R13-2501A Permit
None	GMF-28	Total Glass Furnace Melting Emissions	4.2 MM Btu/hr		Carbon Dioxide	53.06		491.3	2151.89	Yes	40 CFR 98 Subpart C - Eq.C-1
None	GMF-28	Total Glass Furnace Melting Emissions	1.04 tons/hr		Carbon Monoxide	0.66		0.68	2.98	Yes	[CO <sub>2</sub> = 1 x 10 <sup>3</sup> x Fuel x HHV x EF]
None	GMF-28	Total Glass Furnace Melting Emissions	4.2 MM Btu/hr		Methane	0.001		0.0093	0.04	Yes	AP42 Emission factors for Natural Gas Combustion
None	GMF-28	Total Glass Furnace Melting Emissions	4.2 MM Btu/hr		N2O	0.0001		0.0009	0.004	Yes	[CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]
None	GMF-28	Total Glass Furnace Melting Emissions	1.04 tons/hr		Nitrogen Oxides	10.29		10.7	46.87	Yes	40 CFR 98 Subpart C - Eq.C-8
None	GMF-28	Total Glass Furnace Melting Emissions	1.04 tons/hr		Particulate Matter-10	3.11		3.24	14.19	Yes	
None	GMF-28	Total Glass Furnace Melting Emissions	1.04 tons/hr		Sulfur Dioxide	1.55		1.611	7.06	Yes	AP42 Emission factors for Natural Gas Combustion
None	GMF-28	Total Glass Furnace Melting Emissions	1.04 tons/hr		VOC	0.17		0.17	0.74	Yes	AP42 Emission factors for Natural Gas Combustion

Emission Point	Source ID #	Source Name	Design Capacity	Design Capacity Units	Pollutant	Emission Factor <sup>1</sup>	Emission Factor Units (lb/hr) <sup>2</sup>	Hourly Emissions (lb/hr) <sup>2</sup>	Annual Emissions (ton/year) <sup>3</sup>	New Source or Modified Calculations	Source
None	GMF-29 -	Total Glass Furnace Melting	0.53314 MM Btu/hr	MM Btu/hr	Carbon Dioxide	53.06	62.37	273.18	Yes	40 CFR 98 Subpart C - Eq.C-1 [CO <sub>2</sub> = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
None	GMF-29 -	Total Glass Furnace Melting	0.82 tons/hr	tons/hr	Carbon Monoxide	0.66	0.54	2.37	Yes	AP42 Emission factors for Natural Gas Combustion 40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
None	GMF-44	Emissions	3.3 MM Btu/hr	MM Btu/hr	Methane	0.001	0.0073	0.03	Yes	40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
None	GMF-29 -	Total Glass Furnace Melting	3.3 MM Btu/hr	MM Btu/hr	N <sub>2</sub> O	0.0001	0.0007	0.003	Yes	AP42 Emission factors for Natural Gas Combustion	
None	GMF-29 -	Total Glass Furnace Melting	0.59 tons/hr	tons/hr	Nitrogen Oxides	10.29	6.07	26.59	Yes	Ratio of old Glass furnace Melting emissions	
None	GMF-44	Emissions	0.59 tons/hr	tons/hr	Particulate Matter-10	3.11	1.84	8.06	Yes	Ratio of old Glass furnace Melting emissions	
None	GMF-29 -	Total Glass Furnace Melting	0.59 tons/hr	tons/hr	Sulfur Dioxide	1.55	0.91	3.99	Yes	Ratio of old Glass furnace Melting emissions	
None	GMF-44	Emissions	0.59 tons/hr	tons/hr	Sulfur Dioxide	0.17	0.1	0.44	Yes	AP42 Emission factors for Natural Gas Combustion 40 CFR 98 Subpart C - Eq.C-1 [CO <sub>2</sub> = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
None	GMF-29 -	Total Glass Furnace Melting	0.59 tons/hr	tons/hr	VOC	0.17	0.1	0.44	Yes	AP42 Emission Factors 40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	Oven-2	Curing Oven	5 MM Btu/hr	MM Btu/hr	Carbon Dioxide	53.06	584.89	2561.82	Yes	40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	Oven-2	Curing Oven	5 MM Btu/hr	MM Btu/hr	Carbon Monoxide	0.1	0.1	0.44	Yes	40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	Oven-2	Curing Oven	5 MM Btu/hr	MM Btu/hr	Methane	0.001	0.011	0.05	Yes	40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	Oven-2	Curing Oven	2.48 test result lb/hr stack	lb/hr stack	Nitrogen Oxides	2.48	2.48	10.86	Yes	Based on current RTO emissions	
EP-6	Oven-2	Curing Oven	5 MM Btu/hr	MM Btu/hr	Particulate Matter-10	7.6	0.04	0.18	Yes	AP42 Emission factors for Natural Gas Combustion	
EP-6	Oven-2	Curing Oven	5 MM Btu/hr	MM Btu/hr	Sulfur Dioxide	0.6	0.003	0.01	Yes	AP42 Emission factors for Natural Gas Combustion	
EP-6	Oven-2	Curing Oven	5 MM Btu/hr	MM Btu/hr	VOC	5.5	0	0	Yes	Included in Process source emissions	
EP-6	CD-3	Regenerative Thermal Oxidizer	2.8 MM Btu/hr	MM Btu/hr	Carbon Dioxide	53.06	327.54	1434.63	Yes	40 CFR 98 Subpart C - Eq.C-1 [CO <sub>2</sub> = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	CD-3	Regenerative Thermal Oxidizer	2.8 MM Btu/hr	MM Btu/hr	Carbon Monoxide	84	0.23	1.01	Yes	AP-42 Emission Factors 40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	CD-3	Regenerative Thermal Oxidizer	2.8 MM Btu/hr	MM Btu/hr	Methane	0.001	0.0062	0.03	Yes	40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	CD-3	Regenerative Thermal Oxidizer	2.8 MM Btu/hr	MM Btu/hr	N <sub>2</sub> O	0.0001	0.0006	0.003	Yes	40 CFR 98 Subpart C - Eq.C-8 [CH <sub>4</sub> or N <sub>2</sub> O = 1 x 10 <sup>-3</sup> x Fuel x HHV x EF]	
EP-6	CD-3	Regenerative Thermal Oxidizer	2.8 MM Btu/hr	MM Btu/hr	Particulate Matter-10	7.6	0.02	0.09	Yes	AP42 Emission factors for Natural Gas Combustion	
EP-6	CD-3	Regenerative Thermal Oxidizer	2.8 MM Btu/hr	MM Btu/hr	Sulfur Dioxide	0.6	0.002	0.01	Yes	AP42 Emission factors for Natural Gas Combustion	

Emission Point	Source ID #	Source Name	Design Capacity	Design Capacity Units	Pollutant	Emission Factor <sup>1</sup>	Emission Factor Units (lb/hr) <sup>2</sup>	Hourly Emissions (ton/year) <sup>3</sup>	Annual Emissions (ton/year) <sup>3</sup>	New Source or Modified Calculations	Source Included in Process source emissions
EP-6	CD-3	Regenerative Thermal Oxidizer	2.8	MM Btu/hr	VOC	5.5	0	0	0	Yes	Included in Process source emissions

Emission Point	Source ID #	Source Name	Pollutant	Emission Factor <sup>1</sup>	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source
EP-6	Oven-2	Curing Oven	Formaldehyde	NA	0.46	2.01	Based on Curing Oven 1 Stack Test Results
EP-6	Oven-2	Curing Oven	Methanol	NA	0.44	1.93	Based on Curing Oven 1 Stack Test Results
EP-6	Oven-2	Curing Oven	VOC	NA	0.48	2.1	Based on 10% increase of stack test results
EP-7	Spray-2	Adhesive Oil Spraying Station	Particulate Matter-10	NA	2.5	4.56	Engineering Estimate based on Spray-1
EP-7	Spray-2	Adhesive Oil Spraying Station	VOC	NA	5	9.13	Engineering Estimate based on Spray-1
EP-8	Hood-3	Mat Let-Off Table	Formaldehyde	NA	0.01	0.044	Based on Hood-1: Hourly emission estimates of formaldehyde are based upon 1993 ambient and emission point air sampling conducted by ERM using NIOSH Method #2532, and then increased by an order of magnitude. Annual emission estimated are based upon hourly emissions at 8,760 hr/yr. To account for a 50% increase in production. The hourly value was doubled.
EP-8	Hood-3	Mat Let-Off Table	VOC	NA	0.05	0.22	Based on Hood-1: Hourly emission estimates are based upon an engineering estimate of five times the estimated formaldehyde emission rate.
EP-9	Hood -4	Pulling & Expanding Station	Formaldehyde	NA	0.01	0.04	Based on Mat-Let Off Table
EP-9	Hood -4	Pulling & Expanding Station	VOC	NA	0.05	0.22	Based on Mat-Let Off Table
None	Drum-50	Total Glass Fiber Forming Emissions	Formaldehyde	NA	0.001	0.004	Based on 10% of Mat-Let Off Table
None	Drum-50	Total Glass Fiber Forming Emissions	Particulate Matter-10	1	1.446	5.56	Based on AP-42 Chapter 11.13 Glass Fiber Manufacturing Table 11.13-2 [Forming -textile]
None	Drum-29	Total Glass Fiber Forming Emissions	VOC	NA	0.005	0.022	Based on 10% of Mat-Let Off Table
TV-1	T-1	Forming Mold Oil Storage Tank	VOC	NA	2	0.2	Emissions doubled to account for increased through put. Emissions doubled to account for increased through put. Original hourly emission - assume same estimates as Binder Mix Tank T-9, even though the 1993 ambient and emission point air sampling conducted by ERM using NIOSH Method #2532 did not detect any formaldehyde at this
TV-2	T-2	Bulk Resin Storage Tank	Formaldehyde	NA	0.004	0.02	vent point. Previous emission doubled to account for increased
TV-2	T-2	Bulk Resin Storage Tank	VOC	NA	0.02	0.09	production.
TV-3	T-3	Bulk Resin Storage Tank	Formaldehyde	NA	0.004	0.02	Same as T-2
TV-3	T-3	Bulk Resin Storage Tank	VOC	NA	0.02	0.09	Same as T-2

Emission Point	Source ID #	Source Name	Pollutant	Emission Factor <sup>1</sup>	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source
TV-4	T-4	Bulk Resin Storage Tank	Formaldehyde	NA	0.004	0.02	0.02 Same as T-2
TV-4	T-4	Bulk Resin Storage Tank	VOC	NA	0.02	0.09	Same as T-2
TV-5	T-5	Ethylene Glycol Storage Tank	VOC	NA	1	1	Worst-case engineering estimate of storage tank emissions based upon glycol MSDS statement of negligible volatility
TV-6	T-6	Adhesive Oil Storage Tank	VOC	NA	1	1	Worst-case engineering estimate of storage tank emissions based upon adhesive oil MSDS statement of negligible volatility
TV-7	T-7	Adhesive Oil Storage Tank	VOC	NA	1	1	Worst-case engineering estimate of storage tank emissions based upon adhesive oil MSDS statement of negligible volatility
TV-8	T-8	Waste Oil Storage Tank	VOC	NA	1	1	Worst-case engineering estimate of storage tank emissions based upon waste oil MSDS statement of negligible volatility
TV-9	T-9	Binder Mix Tank	Formaldehyde	NA	0.004	0.02	Hourly emission estimates of formaldehyde are based upon 1993 ambient and emission point air sampling conducted by ERM using NIOSH Method #2532, and then increased by an order of magnitude. Annual emission estimated are based upon hourly emissions at 8,760 hr/yr. To account for a 50% increase in production. The hourly value was 0.02 doubled.
TV-9	T-9	Binder Mix Tank	VOC	NA	0.02	0.09	Hourly emissions of total VOC are based upon an engineering estimate of five times the estimated formaldehyde emission rate. Annual emission estimated
TV-10	T-10	Binder Mix Tank	Formaldehyde	NA	0.004	0.02	0.02 Same as T-9 Binder Mix Tank
TV-10	T-10	Binder Mix Tank	VOC	NA	0.02	0.09	Same as T-9 Binder Mix Tank
TV-11	T-11	Binder Mix Tank	Formaldehyde	NA	0.004	0.02	0.02 Same as T-9 Binder Mix Tank
TV-11	T-11	Binder Mix Tank	VOC	NA	0.02	0.09	Same as T-9 Binder Mix Tank
TV-12	T-12	Binder Mix Tank	Formaldehyde	NA	0.004	0.02	0.02 Same as T-9 Binder Mix Tank
TV-12	T-12	Binder Mix Tank	VOC	NA	0.02	0.09	Same as T-9 Binder Mix Tank
TV-13	T-13	Binder Mix Tank	Formaldehyde	NA	0.004	0.02	0.02 Same as T-9 Binder Mix Tank
TV-13	T-13	Binder Mix Tank	VOC	NA	0.02	0.09	Same as T-9 Binder Mix Tank
TV-14	T-14	Binder Mix Tank	Formaldehyde	NA	0.004	0.02	0.02 Same as T-9 Binder Mix Tank

Emission Point	Source ID #	Source Name	Pollutant	Emission Factor <sup>1</sup>	Hourly Emissions (lb/hr)	Annual Emissions (ton/year)	Source
TV-14	T-14	Binder Mix Tank	VOC	NA	0.02	0.09	Same as T-9 Binder Mix Tank

Note 1 lb/ton of material processed

Pollutant	Current Permit		Revised Current PTE <sup>1</sup>		After Expansion		Change between permitted emission and expansion		Change between Current PTE (with EF changes) and expansion project	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Carbon Dioxide	1573.33855	6891.219	1573.339	6891.219	2738	11992.44	1164.66	5101.22	1164.66	5101.22
Carbon Monoxide	1.6	7.012	1.44425	6.329015	2.31	10.14	0.71	3.13	0.87	3.81
Formaldehyde	0.499	2.18	0.499	2.18	0.994	4.356	0.50	2.18	0.50	2.18
Methane	0.02939276	0.12932	0.029393	0.12932	0.0567	0.25	0.03	0.12	0.03	0.12
Methanol	0.436	1.91	0.436	1.91	0.88	3.86	0.44	1.95	0.44	1.95
N2O	0.00293881	0.01293	0.002939	0.00933	0.0057	0.0260	0.003	0.013	0.00	0.02
Nitrogen Oxides	21.49	94.108	13.47075	59.0204	22.02	96.45	0.53	2.34	8.55	37.43
Particulate Matter-10	9.45	35.021	7.08725	24.671	10.612	38.56	1.16	3.54	3.52	13.89
Sulfur Dioxide	2.812	12.298	1.62315	0.048	2.533	11.1	-0.28	-1.20	0.91	11.05
VOC	17.46	31.971	17.3525	30.831	24.13	44.164	6.67	12.19	6.78	13.33

1 - Emissions from the Glass Melt Furnaces were revised to reflect the true operation of the units

**Andrews, Edward S**

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**From:** Rod Wilkins <rwilkins@superiorfibers.com>  
**Sent:** Thursday, April 14, 2016 10:42 AM  
**To:** Joyce Gentry; Andrews, Edward S  
**Subject:** RE: Superior Filtration R13 Questions  
**Attachments:** Free Formaldehyde Data for Superior Fibers RB 1172.pdf

Edward,

Also, attached is lab quality control free formaldehyde lab testing that our resin supplier performs on our resin. This data is for 10 loads produced in February.

Are you available next Monday April 18 at 2:30 for a conference call with Joyce and I to review ?

Thanks,

Rod

ID # 27-15  
Reg R13-2501B  
Comp: Superior  
Facility: Reedsville initials SK

Rod Wilkins  
Chief Technical Officer  
Superior Fibers LLC  
456 Robert Stone Way  
Reedsville, WV 26547  
Cell 740-398-3809  
rwilkins@superiorfibers.com

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**From:** Joyce Gentry [mailto:Joyce.gentry@sj-environmental.com]  
**Sent:** Thursday, April 14, 2016 9:20 AM  
**To:** Andrews, Edward S  
**Cc:** Rod Wilkins  
**Subject:** Superior Filtration R13 Questions

I spent some time researching energy/emission reductions associated with glass cullet use versus virgin glass manufacturing. I found references between 25% to 30% for energy saving and up to 50% for CO2 equivalents. All the references were for container glass manufacturing. Container glass manufacturing utilizes a different type of furnace in the manufacturing process.

Both the Ohio and Kentucky Superior Filtration air permits utilize the natural gas combustion factors.

Superior is proposing that average between the natural gas combustion factors and previous emission factors be used as a compromise. I have attached a table with the differences. I have also attached copies of the Ohio and Kentucky facility permits.

It should be noted that the SOx was based on Table 11.13-2 glass furnace – textile gas – recuperative since the glass furnace – textile, gas unit melter was Non Detect and VOC factors in the previous application was based on Table 11.15-2 (pressed and blown – uncontrolled) since the glass furnace – textile, gas unit melter was Non Detect.

I spent some time on the NAICS website. Below is a screen shot with what I believe is the appropriate NAICS code.

## SIC Code 3296 Mineral Wool

### Description

Establishments primarily engaged in manufacturing mineral wool and mineral wool insulation products made of such siliceous materials as rock, slag, and glass, or combinations thereof.

### Cross References

Establishments primarily engaged in manufacturing asbestos insulation products are classified in [Industry 3292](#), and manufacturing textile glass fibers are classified in [Industry 3229](#).

### Illustrated Examples

Acoustical board and tile, mineral wool

Fiberglass insulation

Glass wool

Insulation: rock wool, fiberglass, slag, and silica minerals

Mineral wool roofing mats

## SIC/NAICS Codes

### SIC CODES

3296 Mineral Wool

### NAICS CODES

327993 Mineral Wool Manufacturing

Based on the Stack Test of the RTO I propose to use 110% of the highest value for both NO<sub>x</sub> and VOC during the stack testing to account for any difference during production.

NO<sub>x</sub> 2.48 lb/hr and VOC 0.48 lb/hr.

### Joyce Gentry, P.E.

#### Senior Engineer

S&J Environmental Services LLC

P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

707 Virginia Street, East, Charleston, WV 25301

O: 304-556-8215 F: 304-353-8180 C: 304-541-6315

[joyce.gentry@sj-environmental.com](mailto:joyce.gentry@sj-environmental.com)

 S&J ENVIRONMENTAL  
SERVICES, LLC

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**Step toe & Johnson PLLC Note:**

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## Andrews, Edward S

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**From:** Andrews, Edward S  
**Sent:** Wednesday, May 04, 2016 10:54 AM  
**To:** 'Rod Wilkins'  
**Subject:** RE: Superior Reedsville Expansion Permit

Rod,

Your timing could be any better. I was getting ready to start back on your application this morning. I have a question about the process from the glass melters to the forming drums. Is it a continuous process or can you operation both independent of each other?

Is the expansion going in a new building or existing one?

I don't like how the existing permit is set up plus there might be an issue meeting the Rule 7 limit. I will be contacting Joyce in the near future about specifics on the Rule 7 limits and some ideas about how to address it in the permit.

If you want to give me a call on Wednesday afternoon or Thursday morning would be fine.

Ed

Sincerely,

Edward S. Andrews, P.E.  
Engineer  
West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304  
304.926.0499 ext. 1214

**From:** Rod Wilkins [mailto:rwilkins@superiorfibers.com]  
**Sent:** Wednesday, May 04, 2016 10:06 AM  
**To:** Andrews, Edward S <Edward.S.Andrews@wv.gov>  
**Cc:** Joyce Gentry <Joyce.gentry@sj-environmental.com>  
**Subject:** Superior Reedsville Expansion Permit

Ed,

Please find attached the revised calculations for the Superior Reedsville Facility. As was discussed the average between the natural gas combustion factors and the previous emission factor with a 15% increase were used. The changes based on the stack test results for the NOx and VOC for the RTO were also incorporated. There has been some business market changes since the original plan for the expansion was developed. Instead of the installation of 22 new melters and drums, business conditions only warrant the installation of 16 new

melters and drums. One of our large customers has recently vertically integrated which caused us to decrease our needed capacity for the expansion.

If you should have any questions, you can contact myself on the business conditions or Joyce Gentry on the calculations.

I would like to schedule a call with yourself and Joyce early next week to review the permit status.

Thanks,

Rod

Rod Wilkins  
CTO Superior Fibers  
456 Robert Stone Way  
Reedsville, WV 26547  
Phone: 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

DATE: 3/7/2016

RESINBOND 1172 FREE FORMALDEHYDE DATA FOR SUPERIOR FIBERS

MANUFACTURING DATE	LOAD NO.	% FREE FORMALDEHYDE*	% FREE FORMALDEHYDE ON COA**
2/1/2016	14	0.05	<0.1
2/2/2016	15	0.05	<0.1
2/3/2016	16	0.05	<0.1
2/7/2016	17	0.05	<0.1
2/9/2016	18	0.05	<0.1
2/10/2016	19	0.05	<0.1
2/11/2016	20	0.05	<0.1
2/15/2016	21	0.05	<0.1
2/16/2016	22	0.05	<0.1
2/18/2016	23	0.05	<0.1

\* Free formaldehyde level for load as determined by Southern Resin's QC lab on load.

\*\* Free formaldehyde is determined using the ASTM sodium sulfite method which is not accurate below 0.1%. Southern Resin reports the data as < 0.1% on the COA if their analysis detects formaldehyde below the 0.1% value since the test indicates the presence of formaldehyde but may not be a true representation of the amount present in that range.

**Andrews, Edward S**

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**From:** Joyce Gentry <Joyce.gentry@sj-environmental.com>  
**Sent:** Thursday, April 14, 2016 9:20 AM  
**To:** Andrews, Edward S  
**Cc:** Rod Wilkins  
**Subject:** Superior Filtration R13 Questions  
**Attachments:** V-11-061 R1 Final.pdf; V-11-061 R1 Executive Summary.pdf; Superior Fibers NOx stack test results.pdf; Superior VOC HAP stack test results.pdf; Superior Fiber Ohio Title V permit.pdf; SJDOCS-#7158773-v1-Proposed\_Superior\_Emission\_Factors.XLSX

I spent some time researching energy/emission reductions associated with glass cullet use versus virgin glass manufacturing. I found references between 25% to 30% for energy saving and up to 50% for CO2 equivalents. All the references were for container glass manufacturing. Container glass manufacturing utilizes a different type of furnace in the manufacturing process.

Both the Ohio and Kentucky Superior Filtration air permits utilize the natural gas combustion factors.

Superior is proposing that average between the natural gas combustion factors and previous emission factors be used as a compromise. I have attached a table with the differences. I have also attached copies of the Ohio and Kentucky facility permits.

It should be noted that the SOx was based on Table 11.13-2 glass furnace – textile gas – recuperative since the glass furnace – textile, gas unit melter was Non Detect and VOC factors in the previous application was based on Table 11.15-2 (pressed and blown – uncontrolled) since the glass furnace – textile, gas unit melter was Non Detect.

I spent some time on the NAICS website. Below is a screen shot with what I believe is the appropriate NAICS code.

<http://siccocode.com/en/siccodes/3296/mineral-wool>

ID # 77-00015  
Reg R13-2501B  
Company Superior Reedsville  
Facility Reedsville Initials EA

*Entire Document*  
**NON-CONFIDENTIAL**

# SIC Code 3296 Mineral Wool

## Description

Establishments primarily engaged in manufacturing mineral wool and mineral wool insulation products made of such siliceous materials as rock, slag, and glass, or combinations thereof.

## Cross References

Establishments primarily engaged in manufacturing asbestos insulation products are classified in [industry 3292](#), and manufacturing textile glass fibers are classified in [Industry 3229](#).

## Illustrated Examples

Acoustical board and tile, mineral wool

Fiberglass insulation

Glass wool

Insulation: rock wool, fiberglass, slag, and silica minerals

Mineral wool roofing mats

## SIC/NAICS Codes

### SIC CODES

3296 Mineral Wool

### NAICS CODES

327993 Mineral Wool Manufacturing

Based on the Stack Test of the RTO I propose to use 110% of the highest value for both NOx and VOC during the stack testing to account for any difference during production.

NOx 2.48 lb/hr and VOC 0.48 lb/hr.

### Joyce Gentry, P.E.

#### Senior Engineer

S&J Environmental Services LLC

P.O. Box 1588, Charleston, WV 25326-1588

Overnight

Chase Tower, 17th Floor

707 Virginia Street, East, Charleston, WV 25301

O: 304-556-8215 F: 304-353-8180 C: 304-541-6315

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Step toe & Johnson PLLC Note:

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**Commonwealth of Kentucky  
Energy and Environment Cabinet  
Department for Environmental Protection  
Division for Air Quality  
200 Fair Oaks Lane, 1<sup>st</sup> Floor  
Frankfort, Kentucky 40601  
(502) 564-3999**

**Final**

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

**Permittee Name:** Superior Composites Co., LLC  
**Mailing Address:** 209 4th Avenue, Pittsburgh, PA 15222

**Source Name:** Superior Composites Co., LLC  
**Mailing Address:** 294 Industrial Park, Vanceburg, KY 41179

**Source Location:** 294 Industrial Park, Vanceburg, KY

**Permit:** V-11-061 R1  
**Agency Interest:** 2701  
**Activity:** APE20150002  
**Review Type:** Title V / Synthetic Minor, Construction / Operating  
**Source ID:** 21-135-00018

**Regional Office:** Ashland Regional Office  
1550 Wolohan Drive, Suite 1  
Ashland, KY 41102  
(606) 929-5285

**County:** Lewis

**Application**  
**Complete Date:** December 1, 2011  
**Issuance Date:** August 28, 2012  
**Revision Date:** February 16, 2016  
**Expiration Date:** August 28, 2017



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**Sean Alteri, Director  
Division for Air Quality**

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Permit Number	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action
V-11-061	Renewal	APE20110001	01/20/12	08/28/12	Permit Renewal
V-11-061 R1	Significant Revision	APE20150002	08/25/15	2/16/16	New Construction

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Division for Air Quality (Division) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

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

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

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

### EMISSION UNIT 001 (001): 22 Glass-melting Furnaces and Binder Spray Applicators

#### Description:

Construction Date: 1995 (16 glass-melting furnaces and applicators)  
2005 (6 glass-melting furnaces and applicators)  
Control: None

#### **Emission Point 001**

Equipment: 22 glass-melting furnaces rated at 3.30 million British thermal units/hour (MMBtu/hour)\*  
Glass Capacity: 0.52635 tons/hr\*  
Fuel Capacity: 0.00324 million cubic feet/hour (mmcf/hr)\*  
Fuel: Natural gas

#### **Emission Point 002**

Equipment: 22 spray applicators  
Polyester Binder: Regular binder  
Binder Capacity: 0.07865 tons/hr binder\*

#### **Emission Point 003**

Equipment: 22 spray applicators  
Polyester Binder: "A" binder  
Binder Capacity: 0.07865 tons/hr binder\*

#### **Emission Point 004**

Equipment: 22 spray applicators  
Polyester Binder: 176A-C binder  
Binder Capacity: 0.07865 tons/hr binder\*

#### **Emission Point 005**

Equipment: 22 spray applicators  
Polyester Binder: 176A binder  
Binder Capacity: 0.07865 tons/hr binder\*

\* Total for all 22 units

### EMISSION UNIT 002 (003): 22 Glass-melting Furnaces and Binder Spray Applicators

#### Description:

Construction Date: 1972 Ohio facility construction  
2015 Relocation to Kentucky facility  
Control: None

#### **Emission Point 001**

Equipment: 22 glass-melting furnaces rated at 3.30 MMBtu/hour\*  
Glass Capacity: 0.52635 tons/hr\*  
Fuel Capacity: 0.00324 mmcf/hr\*

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

Fuel:	Natural gas
<b>Emission Point 002</b>	
Equipment:	22 spray applicators
Polyester Binder:	Regular binder
Binder Capacity:	0.07865 tons/hr binder*
<b>Emission Point 003</b>	
Equipment:	22 spray applicators
Polyester Binder:	“A” binder
Binder Capacity:	0.07865 tons/hr binder*
<b>Emission Point 004</b>	
Equipment:	22 spray applicators
Polyester Binder:	176A-C binder
Binder Capacity:	0.07865 tons/hr binder*
<b>Emission Point 005</b>	
Equipment:	22 spray applicators
Polyester Binder:	176A binder
Binder Capacity:	0.07865 tons/hr binder*

\* Total for all 22 units

**APPLICABLE REGULATIONS:**

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

**STATE ORIGIN REQUIREMENTS:**

**401 KAR 63:020, Potentially hazardous matter or toxic substances.**

**NON-APPLICABLE REGULATIONS:**

**401 KAR 60:005, 40 C.F.R. Part 60 standards of performance for new stationary sources, incorporating by reference, 40 CFR 60, Subpart CC, Standards of Performance for Glass Manufacturing Plants.**

**401 KAR 60:005, 40 C.F.R. Part 60 standards of performance for new stationary sources, incorporating by reference, 40 CFR 60, Subpart PPP, Standard of Performance for Wool Fiberglass Insulation Manufacturing Plant.**

**401 KAR 63:002, 40 C.F.R. Part 63 national emission standards for hazardous air pollutants, incorporating by reference 40 CFR 63, Subpart DD, National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production.**

**401 KAR 63:002, 40 C.F.R. Part 63 national emission standards for hazardous air pollutants, incorporating by reference 40 CFR 63, Subpart NNN, National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing.**

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

**401 KAR 63:002, 40 C.F.R. Part 63 national emission standards for hazardous air pollutants**, incorporating by reference 40 CFR 63, Subpart HHHH, National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production.

**401 KAR 63:002, 40 C.F.R. Part 63 national emission standards for hazardous air pollutants**, incorporating by reference 40 CFR 63, Subpart WWWW, National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.

**1. Operating Limitations:**

- a. To preclude PSD major source status, the permittee shall not exceed the following production limits for condensed mats (uncured fiberglass mats) for emission unit 001 and emission unit 002, in tons per year. The limits are for the total production of condensed mats for each listed binder for each emission units, based on a 12-month rolling total [synthetic minor limit]. The production limits listed below for “A” binder in paragraphs (1)(ii) and (2)(ii) are also required to comply with 401 KAR 63:020, for emissions of ethylbenzene:

(1) Emission Unit 001

- (i) Regular binder 1,841.6
- (ii) “A” binder 1,843.5
- (iii) 176A-C binder 2,522.2
- (iv) 176A binder 3,310.3

(2) Emission Unit 002

- (i) Regular binder 1,841.6
- (ii) “A” binder 1,437.9
- (iii) 176A-C binder 2,522.2
- (iv) 176A binder 3,310.3

**Compliance Demonstration Method:**

- a. Compliance with Operating Limitations paragraph a, shall be demonstrated by:
  - (1) Specific Monitoring Requirements, paragraph b; and
  - (2) Specific Recordkeeping Requirements, paragraph d(3).

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

### 2. Emission Limitations:

- a. No person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity [401 KAR 59:010, Section 3(1)(a)].
- b. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility (each single forming drum), with a processing rates up to 1,000 pounds per hour, which is in excess of 2.34 pounds per hour [401 KAR 59:010, Section 3(2)].

### Compliance Demonstration Method:

- a. The permittee shall demonstrate compliance with Emission Limitations, paragraph a, by complying with Specific Monitoring Requirements, paragraph a.
- b. The permittee is in compliance with Emission Limitations, paragraph b, for emission unit 001 and emission unit 002, based on the maximum process rate and emission factors provided in the permit. If the permittee alters processes, emission factors, process rates, or any other factor that would increase the potential to emit, the permittee shall submit the appropriate application forms pursuant to 401 KAR 52:020, Section 4.

<b>Polyester Binder</b>	<b>Binder Process Weight Rate <i>ton binder/hr-drum</i></b>	<b>Particulate Emission Factor <i>lb/ton binder</i></b>	<b>Potential To Emit <i>lb/hr</i></b>
Regular	0.003575	181.188	0.648
"A"	0.003575	181.188	0.642
176A-C	0.003575	185.192	0.662
176A	0.003575	185.192	0.662

### 3. Testing Requirements:

The permittee shall determine the VOC and individual HAP emission factors for emission unit 001 and emission unit 002 by conducting a process evaluation for each binder in. The process evaluation shall be completed within sixty (60) days after achieving the maximum production rate at which the unit will be operated use but not later than 180 days after initial startup of such facility. The permittee shall use process knowledge and material balance methods, the solvent and particulate concentrations in each binder, weight of binder and glass used, percent particulate lost during the binder spraying operation, weight of the condensed mats produced, and any other applicable process knowledge, to determine an accurate emission factor in pounds of particulate matter (PM<sub>10</sub>/PM<sub>2.5</sub>), VOC and individual HAP emissions per ton of condensed mat produced.

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

- a. The permittee shall conduct the following opacity monitoring of both emission units [401 KAR 52:020, Section 26]:
  - (1) Perform a qualitative visible observation of the opacity emissions from each roof vent on a weekly basis and maintain a log of the observation.
  - (2) If visible emissions from a roof vent are seen, then U.S. E.P.A. Reference Method 9 shall be used to determine the opacity.
  - (3) If the opacity exceeds the 20 percent limitations, an inspection shall be initiated and required corrective action shall be taken.
- b. After production of the condensed mat on the forming drums, the permittee shall measure the weight of the condensed mat produced using load cells on the forming drums [401 KAR 52:020, Section 26].

**5. Specific Recordkeeping Requirements:**

- a. To preclude PSD major source status, on a monthly basis, and a 12-month rolling total, the permittee shall calculate and maintain records, of the following emissions from emission unit 001 and emission unit 002, using the weight of condensed mat and cured fiberglass product produced, emission factors, raw materials used, engineering and process knowledge, results from performance test, and any other applicable methods [401 KAR 52:020, Section 26]:
  - (1) VOC emissions from the solvents in the polyester binders used to produce the condensed mat; and
  - (2) VOC emissions from the combustion of natural gas used in the glass-melting furnaces.
- b. To ensure compliance with 401 KAR 63:020, *Potentially hazardous matter or toxic substances*, on a monthly basis, and a 12-month rolling total, the permittee shall calculate and maintain records of the ethylbenzene emissions from emission unit 001 and emission unit 002, when producing condensed mat using regular binder and “A” binder. The permittee shall use the weight of condensed mat and cured fiberglass product produced, emission factors, raw materials used, engineering and process knowledge, results from performance test, and any other applicable methods [401 KAR 52:020, Section 26].
- c. The permittee shall maintain the following records according to Specific Monitoring Requirements, paragraph a [401 KAR 52:020, Section 26]:

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

**5. Specific Recordkeeping Requirements (Continued):**

- (1) The permittee shall maintain a log of the dates and times of each qualitative visible observation (noting color, duration, and density).
  - (2) The permittee shall maintain a log of the dates and times of each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test; and
  - (3) The results of any inspection and the resulting corrective action taken.
- d. The permittee shall maintain the following records for emission unit 001 and emission unit 002 [401 KAR 52:020, Section 26]:
- (1) Polyester binder for each binder type used (weight);
  - (2) Crushed glass cullet (weight);
  - (3) Condensed mat produced, by binder type (weight);
  - (4) Natural gas usage (mmcf); and
  - (5) Hours of operation.

**6. Specific Reporting Requirements:**

None

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

**EMISSION UNIT 023 (023): Anderson #1 Fiberglass Curing Oven**

**Description:**

Production Capacity: 2 tons/hr uncured mat (condensed mat)  
Construction Date: 1995

**Emission Point 001**

Equipment: 7.3 MMBtu/hr curing oven  
Fuel Capacity: 0.00716 mmcf/hr  
Fuel: Natural gas  
Control: None

**Emission Point 002**

Polyester Binder: Regular binder  
Control: Wet scrubber with indexing filter (particulate)

**Emission Point 003**

Polyester Binder: "A" binder  
Control: Wet scrubber with indexing filter (particulate)

**Emission Point 004**

Polyester Binder: 176A-C binder  
Control: Wet scrubber with indexing filter (particulate)

**Emission Point 005**

Polyester Binder: 176A binder  
Control: Wet scrubber with indexing filter (particulate)

**EMISSION UNIT 024 (024): Anderson #2 Fiberglass Curing Oven**

**Description:**

Production Capacity: 2 tons/hr uncured mat (condensed mat)  
Construction Date: 2005

**Emission Point 001**

Equipment: 7.3 MMBtu/hr curing oven  
Fuel Capacity: 0.00716 mmcf/hr  
Fuel: Natural gas  
Control: None

**Emission Point 002**

Polyester Binder: Regular binder  
Control: Wet scrubber with indexing filter (particulate)

**Emission Point 003**

Polyester Binder: "A" binder  
Control: Wet scrubber with indexing filter (particulate)

## **SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **Emission Point 004**

Polyester Binder: 176A-C binder  
Control: Wet scrubber with indexing filter (particulate)

### **Emission Point 005**

Polyester Binder: 176A binder  
Control: Wet scrubber with indexing filter (particulate)

### **APPLICABLE REGULATIONS:**

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

**40 CFR 64, Compliance Assurance Monitoring.**

### **STATE ORIGIN REQUIREMENTS:**

**401 KAR 63:020, Potentially hazardous matter or toxic substances.**

### **NON-APPLICABLE REGULATIONS:**

**401 KAR 63:002, 40 C.F.R. Part 63 national emission standards for hazardous air pollutants, incorporating by reference 40 CFR 63, Subpart HHHH, National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production.**

**401 KAR 63:002, 40 C.F.R. Part 63 national emission standards for hazardous air pollutants, incorporating by reference 40 CFR 63, Subpart WWWW, National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.**

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

None.

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

- a. No person shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility, which is equal to or greater than twenty (20) percent opacity [401 KAR 59:010, Section 3(a)].
- b. For emissions from a control device or stack, the permittee shall not cause, suffer, allow or permit the emission into the open air of particulate matter from any affected facility, with a processing rates greater than 1,000 pounds per hour, which is in excess of the particulate emissions rate calculated by the following equation [401 KAR 59:010, Section 3(2)]:

$$\text{Emissions} = 3.59 P^{0.62} \frac{\text{lb}}{\text{hr}} \quad \text{for } P \text{ greater than } 0.5 \frac{\text{ton}}{\text{hr}} \text{ but less than or equal to } 30 \frac{\text{ton}}{\text{hr}}$$

Where: P = Process weight rate  $\frac{\text{ton}}{\text{hr}}$

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

### 2. Emission Limitations (Continued):

#### Compliance Demonstration Method:

- a. Compliance with Emission Limitations a, shall be demonstrated by:
- (1) Specific Monitoring Requirements a; and
  - (2) Specific Recordkeeping Requirements c.
- b. The permittee is in compliance with Emission Limitations, paragraph b, for emission unit 023 and emission unit 024, based on the maximum process rate and emission factors provided in the permit. If the permittee alters processes, emission factors, process rates, or any other factor that would increase the potential to emit, the permittee shall submit the appropriate application forms pursuant to 401 KAR 52:020, Section 4.

Fiberglass Product ton/hr	Controlled Particulate Emission Factor lb/ton product	Potential To Emit lb/hr	Emission Limitation lb/hr
2.0	0.142	0.284	5.517

### 3. Testing Requirements:

- a. The permittee shall demonstrate compliance with the particulate emission limitations for emission unit 023 and emission unit 024 by conducting a performance test using U.S. E.P.A. Method 5, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, in accordance with 401 KAR 50:055, *General compliance requirements*. During the test one oven shall be tested using condensed mat produced with either regular binder or "A" binder, and the other oven shall be tested with 176A-C binder. The performance test shall be conducted in accordance with 401 KAR 50:045 and the following conditions [40 CFR 64]:
- (1) The inlet and outlet concentrations of the particulate emission shall be determined to establish a controlled and uncontrolled emission factor.
  - (2) During the test, operating parameters of the control device shall be monitored and maintained between the parameters specified by the control device manufacture and the Compliance Assurance Monitoring (CAM) Plan.

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

### 3. Testing Requirements:

- b. The permittee shall determine the VOC and individual HAP emission factors for emission unit 023 and emission unit 024 by conducting a performance test using U.S. E.P.A. Method 25 within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, in accordance with 401 KAR 50:055, *General compliance requirements*. During the test one oven shall be tested using condensed mat produced with either regular binder or “A” binder, and the other oven shall be tested using condensed mat produced with 176A-C binder. The performance test shall measure the emissions prior to the particulate scrubber. The performance test shall be conducted in accordance with 401 KAR 50:045 [401 KAR 50:045 Section 1].

### 4. Specific Monitoring Requirements:

- a. The permittee shall conduct the following opacity monitoring of both emission units [401 KAR 52:020, Section 26]:
- (1) Perform a qualitative visible observation of the opacity emissions from each stack on a weekly basis and maintain a log of the observation.
  - (2) If visible emissions from a stack are seen, then U.S E.P.A. Reference Method 9 shall be used to determine the opacity.
  - (3) If the opacity exceeds the 20 percent limitations, an inspection shall be initiated and required corrective action shall be taken.
- b. The permittee has provided the following CAM plan for control of particulate emissions [40 CFR 64]:
- (1) The permittee proposes to continuously monitor and record for each curing oven scrubber the following operating parameters in the table.

Operating Parameter	Operating Range
pH	6-9
Pressure drop across the filter bed	20-30 inches of water
Pressure drop across the mist eliminator	< 1.00 inches of water
Scrubber water pump #1 pressure	65-100 psia
Scrubber water pump #2 pressure	65-100 psia
Exhaust gas temperature	<120°F *

\* When the ambient temperature is less than 90°F and no more than 30°F over the ambient temperature when the ambient temperature is greater than 90°F.

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

- (2) The permittee shall maintain each operating parameter within the operating ranges specified above on an hourly average basis and submit semi-annual deviation reports identifying each hourly reading outside of the specified operating ranges.
- (3) The permittee shall have management implement corrective actions for any operating values outside of the acceptable ranges.
- (4) The permittee shall inspect all monitoring and recordkeeping equipment on a weekly basis.
- (5) The permittee shall maintain each hourly reading in a computerized monitoring/recordkeeping system for at least five (5) years.

**5. Specific Recordkeeping Requirements:**

- a. To preclude PSD major source status, on a monthly basis, and a 12-month rolling total, the permittee shall calculate and maintain records, of the following emissions from emission unit 023 and emission unit 024, using the weight of condensed mat and cured fiberglass product produced, emission factors, raw materials used, engineering and process knowledge, results from performance test, and any other applicable methods [401 KAR 52:020, Section 26]:
  - (1) VOC and styrene emissions emitted from the fiberglass mat cured in the ovens; and
  - (2) VOC emissions from the combustion of natural gas fired in the ovens.
- b. To ensure compliance with 401 KAR 63:020, *Potentially hazardous matter or toxic substances*, on a monthly basis, and a 12-month rolling total, the permittee shall calculate and maintain records of the ethylbenzene emissions from emission unit 023 and emission unit 024, when curing condensed mat produced using regular binder and “A” binder. The permittee shall use the weight of condensed mat and cured fiberglass product produced, emission factors, raw materials used, engineering and process knowledge, results from performance test, and any other applicable methods [401 KAR 52:020, Section 26].
- c. The permittee shall maintain the following records according to Specific Monitoring Requirements, paragraph a [401 KAR 52:020, Section 26]:
  - (1) The permittee shall maintain a log of the dates and times of each qualitative visible observation (noting color, duration, and density).
  - (2) The permittee shall maintain a log of the dates and times of each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test; and

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

**5. Specific Recordkeeping Requirements (Continued):**

- (3) The results of any inspection and the resulting corrective action taken.
- d. The permittee shall maintain the following records of the tons of condensed mat cured:
  - (1) Total condensed mat produced at the facility and cured in each curing oven by binder type on a monthly basis;
  - (2) Total condensed mat produced at other facilities and cured in each curing oven by binder type on a monthly basis; and
  - (3) The total condensed mat cured in both ovens combined on a 12-month rolling total.
- e. The permittee shall maintain the following records for emission unit 023 and emission unit 024 [401 KAR 52:020, Section 26]:
  - (1) Hours of operation of each curing oven; and
  - (2) Natural gas usage each curing oven (mmscf).

**6. Specific Reporting Requirements:**

None

**SECTION C – INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:030, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

	<u>Description</u>	<u>Generally Applicable Regulation</u>
1.	5,000 gallon xylene storage tank	401 KAR 63:020
2.	5,000 gallon polyester resin (Stypol 5030) tank	None
3.	5,000 gallon polyester resin (Aropol Q-6650A) tank	None
4.	Maintenance welding	401 KAR 63:020
5.	Stypol 6082 tank	None
6.	Aropol 6065 tank	None
7.	Stypol 5041 tank	None
8.	5090 tank	None
9.	Letoff table 1 heater	None
10.	Letoff table 2 heater	None
11.	Mix room	401 KAR 63:020
12.	Plant Heaters	None

## SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. Particulate and VOC emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. **Source Wide VOC Emission Limitations:**
  - a. To preclude the applicability of 401 KAR 51:017, Prevention of significant deterioration of air quality, the source wide VOC emissions shall not equal or exceed of 225 tons based on a 12-month rolling total [synthetic minor limit].

### **Compliance Demonstration Method:**

Each month the permittee shall calculate the total VOC emissions from the following emission sources. The plant-wide 12-month rolling total VOC emissions shall then be calculated by adding the current month totals to the previous 11 month totals:

- (1) VOC emissions calculated in Section B – Emission Points, Emissions Units, Applicable Regulations, and Operating Conditions, emission unit 001 and emission unit 002, Specific Recordkeeping Requirements, paragraph a;
- (2) VOC emissions calculated in Section B – Emission Points, Emissions Units, Applicable Regulations, and Operating Conditions, for emission unit 023 and emission unit 024, Specific Recordkeeping Requirements, paragraph a; and
- (3) VOC emissions from processes listed in Section C - Insignificant Activities.

### **4. Source Wide Ethylbenzene Emission Limitations:**

- a. To ensure compliance with 401 KAR 63:020, *Potentially hazardous matter or toxic substances*, the source wide ethylbenzene emissions shall not equal or exceed of 14.25 tons based on a 12-month rolling total.

### **Compliance Demonstration Method:**

Each month the permittee shall calculate the total ethylbenzene emissions from the following emission sources. The plant-wide 12-month rolling total ethylbenzene emissions shall then be calculated by adding the current month totals to the previous 11 month totals:

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

**4. Source Wide Ethylbenzene Emission Limitations (Continued):**

- (1) Ethylbenzene emissions calculated in Section B – Emission Points, Emissions Units, Applicable Regulations, and Operating Conditions, emission unit 001 and emission unit 002, Specific Recordkeeping Requirements, paragraph b; and
- (2) Ethylbenzene emissions calculated in Section B – Emission Points, Emissions Units, Applicable Regulations, and Operating Conditions, for emission unit 023 and emission unit 024, Specific Recordkeeping Requirements, paragraph b.

## **SECTION E – SOURCE CONTROL EQUIPMENT REQUIREMENTS**

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

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

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
  - a. Date, place (as defined in this permit), and time of sampling or measurements;
  - b. Analyses performance dates;
  - c. Company or entity that performed analyses;
  - d. Analytical techniques or methods used;
  - e. Analyses results; and
  - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
  - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
  - b. To access and copy any records required by the permit;
  - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.  
Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

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

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
  - a. Identification of the term or condition

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

- b. Compliance status of each term or condition of the permit;
- c. Whether compliance was continuous or intermittent;
- d. The method used for determining the compliance status for the source, currently and over the reporting period.
- e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
- f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality  
Ashland Regional Office  
1550 Wolohan Drive Suite 1  
Ashland, KY 41102

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

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

## SECTION G - GENERAL PROVISIONS

### 1. General Compliance Requirements

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

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

**SECTION G - GENERAL PROVISIONS (CONTINUED)****1. General Compliance Requirements (Continued)**

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].
- f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
- g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) 2].
- l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

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

### **1. General Compliance Requirements (Continued)**

- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 4.].
- o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) 1.].
- p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
- q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
  - (1) Applicable requirements that are included and specifically identified in this permit;  
and
  - (2) Non-applicable requirements expressly identified in this permit.

### **2. Permit Expiration and Reapplication Requirements**

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

**SECTION G - GENERAL PROVISIONS (CONTINUED)****3. Permit Revisions**

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

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

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission units 002 in accordance with the terms and conditions of this permit.

- a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Field Office Branch of the Frankfort Central Office, notification of the following:
  - (1) The date when construction commenced.
  - (2) The date of start-up of the affected facilities listed in this permit.
  - (3) The date when the maximum production rate specified in the permit application was achieved.
- c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the proposed permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

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

### **4. Construction, Start-Up, and Initial Compliance Demonstration Requirements (Continued)**

- d. Pursuant to 401 KAR 50:055, Section 2(1)(a), an owner or operator of any affected facility subject to any standard within the administrative regulations of the Division for Air Quality shall demonstrate compliance with the applicable standard(s) within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility. Pursuant to 401 KAR 52:020, Section 3(3)(c), sources that have not demonstrated compliance within the timeframes prescribed in 401 KAR 50:055, Section 2(1)(a), shall operate the affected facility only for purposes of demonstrating compliance unless authorized under an approved compliance plan or an order of the cabinet.
- e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.
- f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

### **5. Testing Requirements**

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

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

- c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

**6. Acid Rain Program Requirements**

- a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
- b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

**7. Emergency Provisions**

- a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
  - (1) An emergency occurred and the permittee can identify the cause of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
  - (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.1-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
  - (5) This requirement does not relieve the source of other local, state or federal notification requirements.
- b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

**SECTION G - GENERAL PROVISIONS (CONTINUED)****7. Emergency Provisions (Continued)**

- c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

**8. Ozone Depleting Substances**

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

**9. Risk Management Provisions**

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center  
P.O. Box 10162  
Fairfax, VA 22038

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

**9. Risk Management Provisions (Continued)**

- b. If requested, submit additional relevant information to the Division or the U.S. EPA.

**SECTION H - ALTERNATE OPERATING SCENARIOS**

None

**SECTION I - COMPLIANCE SCHEDULE**

None



3/5/2015

Don Hock  
Superior Fibers Shawnee LLC  
P.O. Box 141  
9702 Ironpoint Road  
Shawnee, OH 43782

Certified Mail

Facility ID: 0664000067  
Permit Number: P0090271  
County: Perry

RE: FINAL AIR POLLUTION CONTROL TITLE V PERMIT  
Permit Type: Renewal

Dear Permit Holder:

Enclosed is a final Ohio Environmental Protection Agency (EPA) Air Pollution Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

**How to appeal this permit**

The issuance of this Title V permit is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
77 South High Street, 17th Floor  
Columbus, OH 43215

### **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

### **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

### **How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Southeast District Office as indicated on page one of your permit.

Sincerely,



Erica R. Enge-Hshida, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 Via E-Mail Notification  
Ohio EPA DAPC, Southeast District Office



**FINAL**

**Division of Air Pollution Control  
Title V Permit  
for  
Superior Fibers Shawnee LLC**

Facility ID:	0664000067
Permit Number:	P0090271
Permit Type:	Renewal
Issued:	3/5/2015
Effective:	3/26/2015
Expiration:	3/26/2020





**Division of Air Pollution Control  
Title V Permit  
for  
Superior Fibers Shawnee LLC**

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**Final Title V Permit**  
Superior Fibers Shawnee LLC  
**Permit Number:** P0090271  
**Facility ID:** 0664000067  
**Effective Date:** 3/26/2015

## Authorization

Facility ID: 0664000067  
Facility Description: Glass Fiber Mats.  
Application Number(s): A0021568, A0050358  
Permit Number: P0090271  
Permit Description: Title V renewal permit for one curing oven, 42 forming drums and unpaved roadways and parking areas.  
Permit Type: Renewal  
Issue Date: 3/5/2015  
Effective Date: 3/26/2015  
Expiration Date: 3/26/2020  
Superseded Permit Number: P0090270

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Superior Fibers Shawnee LLC  
9702 Ironpoint Road  
PO Box 141  
Shawnee, OH 43782

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office  
2195 Front Street  
Logan, OH 43138  
(740)385-8501

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Southeast District Office. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



**Final Title V Permit**  
**Superior Fibers Shawnee LLC**  
**Permit Number: P0090271**  
**Facility ID: 0664000067**  
**Effective Date: 3/26/2015**

## **A. Standard Terms and Conditions**



**1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
- (1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
  - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
  - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements
  - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (5) Standard Term and Condition A. 30.

*(Authority for term: ORC 3704.036(A))*

**2. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
- (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))*

- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))*



c) The permittee shall submit required reports in the following manner:

- (1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submitted scheduled maintenance requests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- (2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:



Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Ohio EPA DAPC, Southeast District Office. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- (3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Ohio EPA DAPC, Southeast District Office by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from



federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))*

- (4) Each written report shall be signed by a Responsible Official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))*

- (5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Ohio EPA DAPC, Southeast District Office unless otherwise specified.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

### **3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.



*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

#### **4. Risk Management Plans**

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

*(Authority for term: OAC rule 3745-77-07(A)(4))*

#### **5. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

*(Authority for term: OAC rule 3745-77-07(A)(5))*

#### **6. Severability Clause**

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

*(Authority for term: OAC rule 3745-77-07(A)(6))*

#### **7. General Requirements**

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit except as provided pursuant to A.16 below.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.



- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.
- f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:
  - (1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
  - (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
  - (3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

*(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))*

## 8. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

*(Authority for term: OAC rule 3745-77-07(A)(8))*

## 9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(9))*



**10. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(10))*

**11. Reopening for Cause**

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

*(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))*

**12. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

*(Authority for term: OAC rule 3745-77-07(B))*

**13. Compliance Requirements**

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible



Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Southeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Ohio EPA DAPC, Southeast District Office) and the Administrator of the U.S. EPA in the following manner and with the following content:
- (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
  - (2) Compliance certifications shall include the following:
    - a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.



- b. The permittee's current compliance status.
  - c. Whether compliance was continuous or intermittent consistent with A.13.d.2.a above.
  - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.
  - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
- (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

*(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))*

#### **14. Permit Shield**

- a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

*(Authority for term: OAC rule 3745-77-07(F))*

#### **15. Operational Flexibility**

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Ohio EPA DAPC, Southeast District Office with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Ohio EPA DAPC, Southeast District Office as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

*(Authority for term: OAC rules 3745-77-07(H)(1) and (2))*

#### **16. Emergencies**

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met.



This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

*(Authority for term: OAC rule 3745-77-07(G))*

#### **17. Off-Permit Changes**

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

*(Authority for term: OAC rule 3745-77-07(I))*

#### **18. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

*(This term is provided for informational purposes only.)*



**19. Insignificant Activities or Emissions Levels**

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**20. Permit to Install Requirement**

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**21. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**22. Permanent Shutdown of an Emissions Unit**

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the Responsible Official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the Responsible Official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

Unless otherwise exempted, no emissions unit identified in this permit that has been certified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

*(Authority for term: OAC rule 3745-77-01)*

**23. Title VI Provisions**

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:



- a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

*(Authority for term: OAC rule 3745-77-01(H)(11))*

**24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**25. Records Retention Requirements Under State Law Only**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

**26. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine



whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

*(Authority for term: OAC rule 3745-77-07(C))*

**27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Southeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**28. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Southeast District Office must be notified in writing of any transfer of this permit.

*(Authority for term: OAC rule 3745-77-01(C))*

**29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or
- b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or
- c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.



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**30. Submitting Documents Required by this Permit**

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Ohio EPA DAPC, Southeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.



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## **B. Facility-Wide Terms and Conditions**



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1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.



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## **C. Emissions Unit Terms and Conditions**



**1. F012, Unpaved Roadways and Parking Areas**

**Operations, Property and/or Equipment Description:**

Unpaved Roadways and Parking Areas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	None	

(2) Additional Terms and Conditions

a. As defined in OAC rule 3745-31-01, this emissions unit is an existing fugitive source of particulate emissions (PE). As such, there are no requirements in the federal or state rules applicable to this emissions unit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.



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- g) Miscellaneous Requirements
  - (1) None.



2. P001, Curing Oven

Operations, Property and/or Equipment Description:

Process Curing Oven for polyester resin coated glass fiber mats, with a maximum production rate of 4,000 pounds per hour (includes a natural gas-fired curing drum with a rated maximum capacity of 7.3 mmBtu/hr).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) g)(1).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	PE shall not exceed 6.52 pounds per hour.
c.	OAC rule 3745-21-07(M)(4)	Organic compound (OC) emissions shall not exceed 3.0 pounds per hour and 15 pounds per day unless said emissions are reduced by at least 85% by weight.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to the wet scrubber at all times the emissions unit is in operation.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

b. The diatomaceous earth filter is to be employed at all times when this emissions unit is in operation.

*(Authority for term: OAC rule 3745-77-07(C)(1))*



c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop across the Anderson Unit's wet scrubber demister, that must be maintained in order to demonstrate compliance, shall not exceed 0.75 inch of water.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop range for the Anderson Unit's cabinet, that must be maintained in order to demonstrate compliance, shall not exceed 2.5 inches of water.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable Anderson Unit's gas temperature, that must be maintained in order to demonstrate compliance, shall not exceed 110 degrees Fahrenheit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pH of the Anderson Unit's wet scrubber demister fluid, that shall be maintained in order to demonstrate compliance, shall be between 4.5 to 7.5.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop across the demister (in inch of water), the Anderson Unit's cabinet pressure (in inches of water), the Anderson Unit's exhaust gas temperature (in degrees Fahrenheit), and the pH of scrubber fluid while the emissions unit is in operation. The permittee shall record this information on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;



- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. pressure drop across the demister, cabinet pressure, exhaust gas temperature and pH of the scrubber fluid readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the pressure drop across the wet scrubber demister, the cabinet pressure, the exhaust gas temperature and the pH of the wet scrubber demister fluid are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (6) The permittee shall collect and record the following information for each day for the oven:
  - a. the total potential (prior to applying the booth/oven "split") uncontrolled daily organic compound emission rate for all resins employed in the forming operations associated with this emissions unit, multiplied by the maximum



percentage of the emissions associated with this emissions unit (as defined in condition d)(8) of this permit), in pounds per day; and

- b. the total number of hours this emissions unit was in operation (this number should be the same as the number of hours the associated forming operations were in operation); and
- c. the average hourly OC emission rate, i.e., (a)/(b), in lbs/hr (average).

- (7) For purposes of calculating the organic compound emission rates for this emissions unit (P001) and the associated forming drums (P002, P003, P005, P007-P045), the permittee shall utilize a value of 94.1% as the maximum percentage of the organic compounds employed in the forming drums that are emitted uncontrolled from the forming drums. The remaining 5.9% of the organic compounds employed in the forming drums shall be considered to be the uncontrolled emissions for this emissions unit. This "split" of organic compound emissions between this emissions unit and the associated forming drums is based upon the material balance information provided by the company (January 2006 compliance stack test conducted on Curing Oven #2 at Vanceburg, KY).

*(Authority for term: OAC rule 3745-77-07(C)(1))*

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) The permittee shall submit quarterly deviation (excursion) reports that include the following information:

- a. an identification of each hour during which the organic compound emissions exceeded 3 pounds per hour, and the actual organic compound emissions for each such hour; and
- b. an identification of each day during which the organic compound emissions exceeded 15 pounds per day, and the actual organic compound emissions for each such day.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permittee shall submit quarterly deviation (excursion) reports that include the following information:

- a. each period of time (start time and date, and end time and date) when the pressure drop across the demister, cabinet pressure, exhaust gas temperature and/or the pH of the scrubber fluid readings was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;



- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
- c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop and/or liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) The permittee shall submit annual reports that specify the total organic compound emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

*(Authority for term: OAC rule 3745-17-07(A) and OAC rule 3745-77-07(C)(1))*

- b. Emissions Limitation:

PE shall not exceed 6.52 pounds per hour.



**Applicable Compliance Method:**

The hourly PEmissions limitation is a rule based limit established under OAC rule 3745-17-11(B), Table I, based on a process weight at maximum capacity of 4,000 lbs/hr. Compliance with the pounds per hour shall be demonstrated based upon the emission testing requirements specified in f)(2).

Particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

*(Authority for term: OAC rule 3745-17-11(B) and OAC rule 3745-77-07(C)(1))*

**c. Emissions Limitation:**

Organic compound (OC) emissions shall not exceed 3.0 pounds per hour and 15 pounds per day unless said emissions are reduced by at least 85% by weight.

**Applicable Compliance Method:**

Compliance with the pounds per hour and pounds per day emission limitation is based upon the recordkeeping requirements under d)(7) and the emission testing requirements specified in f)(2).

Organic compound emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

*(Authority for term: OAC rule 3745-21-07(M)(4) and OAC rule 3745-77-07(C)(1))*

**(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:**

- a. The emission testing shall be conducted within 30 days after start-up and approximately 2.5 years after issuance of the permit (following the effective date for the Title V permit), within 6 months prior to the permit expiration, and as required by the Director.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission limitations for particulates and OC.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

The mass emissions of OC shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". The mass



emissions of PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources".

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

**g) Miscellaneous Requirements**

- (1) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year and per Ohio EPA's Engineering Guide #69, the pollutants are subject to MACT. OAC Chapter 3745 31 requires permittees to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01.



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The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.



3. **Emissions Unit Group - 12-foot Forming Drums: P002, P003, P005, P008, P009, P010, P011, P012, P013, P014, P015, P016, P017, P018, P019, P020, P021, P022, P023, P024, P025 and P026.**  
 Each has a maximum resin usage of 7.15 pounds per hour and all are enclosed in a building.

EU ID	Operations, Property and/or Equipment Description
P002	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P003	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P005	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P008	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P009	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P010	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P011	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P012	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P013	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P014	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P015	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P016	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P017	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P018	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P019	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P020	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P021	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P022	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P023	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P024	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P025	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P026	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
- (1) d)(3), d)(4), d)(5), d)(6) and e)(5).
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (established in PTI P0112342, issued 9/25/13)	Organic compound (OC) emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Particulate emissions (PE) shall not exceed 0.66 pound per hour and 2.9 tons per year.  There shall be no visible PE from this emissions unit.
b.	OAC rule 3745-17-07(B) and 3745-17-08(B)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. This facility is located in Perry County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks, when the emissions unit is in operation and, when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed from any points of capture and/or the stack, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. the total duration of any visible emissions incident; and
- c. any corrective actions taken to eliminate the visible emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

(2) The permittee shall collect and record the following information each day for each emissions unit:

- a. the company name and identification number of each resin employed;
- b. the number of gallons of each resin employed;
- c. the OC content of each resin employed, in pounds per gallon, as applied;



- d. the total potential (prior to applying the forming operations /oven "split") daily OC emissions rate for all resins, in pounds;
  - i. For purposes of calculating the organic compound emission rates for these emissions units (P002, P003, P005, P007-P045) and the associated oven (P001), the permittee shall utilize a value of 94.1% as the maximum percentage of the organic compounds employed in this emissions unit that are emitted uncontrolled from the emissions unit. The remaining 5.9% of the organic compounds employed in this emissions unit shall be considered to be the uncontrolled emissions for the associated oven. This "split" of organic compound emissions between this emissions unit and the associated oven is based upon the material balance information provided by the company (January 2006 compliance stack test conducted on Curing Oven #2 at Vanceburg, KY).
- e. the total daily emissions attributed to this emissions unit;
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly OC emissions rate for all resins, i.e., the sum of d)(2)(e) divided by d)(2)(f), in pounds per hour (average).

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permit-to-install (PTI) application for these emissions units was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Ohio's Air Toxic Policy" was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold



Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Styrene

TLV (mg/m<sup>3</sup>): 85.20

Maximum Hourly Emission Rate (lbs/hr): 1.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 271.3

MAGLC (ug/m<sup>3</sup>): 2,028.63

The permittee, has demonstrated that emissions of Styrene, from emissions units P002, P003, P005, P007-P045, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (4) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;



- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Ohio's Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Ohio's Air Toxic Policy", has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (5) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Ohio's Air Toxic Policy":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Ohio's Air Toxic Policy";
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Ohio's Air Toxic Policy", initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Ohio's Air Toxic Policy", and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Ohio's Air Toxic Policy", through the predicted 1-hour maximum ground-level concentration. The record



shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) The permittee shall submit semiannual written reports that identify:
- a. all days during which any visible emissions of fugitive dust were observed from this emissions unit; and
  - b. any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. an identification of each hour during which the organic compound emissions exceeded 2.79 pounds per hour, and the actual organic compound emissions for each such hour.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) The permittee shall also submit annual reports that specify the total organic compound emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (5) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:



- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

f) **Testing Requirements**

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. **Emissions Limitation:**

OC emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.

**Applicable Compliance Method:**

Compliance with the pounds per hour emissions limitation shall be demonstrated by the recordkeeping in d)(2).

The hourly OC limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

Emission factor: 830.299 lbs OC/ton binder

$(830.299 \text{ lbs OCs/ton of binder})(7.15 \text{ lbs/hr max binder feed rate})(94.1\% \text{ split of OCs emitted from forming drums}) / 2,000 \text{ lbs/ton} = 2.79 \text{ lbs OC/hr}$

[Note that the 5.9% emissions split for the oven and 94.1% emissions split for the forming drums comes from the January 26, 2006 stack test at the Vanceburg, KY plant]

If required, organic compound emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.



Compliance with the annual emissions limitation shall be determined by adding the daily OC emissions, as recorded in d)(2)e., for each day in the calendar year, and divided by 2,000 lbs/ton.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

b. Emissions Limitation:

PE shall not exceed 0.66 pound per hour and 2.9 tons per year.

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be demonstrated based on the following calculations based on the information presented in the permittee's application:

The hourly PE limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

$$(66.14\% \text{ of solids content/ton of binder})(2,000 \text{ lbs/ton})(1-0.86 \text{ transfer efficiency}) = 185.192 \text{ lbs PE/ton of binder}$$

Emission factor: 185.192 lbs PE/ton of binder

$$(185.192 \text{ lbs PE/ton of binder})(7.15 \text{ lbs/hr max binder feed rate}) / 2,000 \text{ lbs/ton} = 0.66 \text{ lb PE/hr}$$

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the ton per year emission limitation shall be determined based on the following calculation:

$$\begin{aligned} \text{PE (tpy)} &= 0.66 \text{ lb PE/hr} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 2.9 \text{ tons per year} \end{aligned}$$

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

c. Emissions Limitation:

There shall be no visible PE from this emissions unit.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*



**Final Title V Permit**  
**Superior Fibers Shawnee LLC**  
**Permit Number: P0090271**  
**Facility ID: 0664000067**  
**Effective Date:3/26/2015**

- g) Miscellaneous Requirements
  - (1) None.



4. Emissions Unit Group - 18-foot Forming Drums: P007, P027, P028, P029, P030, P031, P032, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P043, P044 and P045. Each has a maximum resin usage of 7.15 pounds per hour and all are enclosed in a building.

EU ID	Operations, Property and/or Equipment Description
P007	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P027	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P028	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P029	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P030	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P031	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P032	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P033	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P034	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P035	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P036	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P037	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P038	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P039	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P040	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P041	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P042	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P043	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P044	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P045	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

- (1) d)(3), d)(4), d)(5), d)(6) and e)(5).

b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (established in PTI P0112342, issued 9/25/13)	Organic compound (OC) emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.  Particulate emissions (PE) shall not exceed 0.66 pound per hour and 2.9 tons per year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		There shall be no visible PE from this emissions unit.
b.	OAC rule 3745-17-07(B) and 3745-17-08(B)	See b)(2)a. below.

(2) **Additional Terms and Conditions**

a. This facility is located in Perry County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) **Operational Restrictions**

(1) None.

d) **Monitoring and/or Recordkeeping Requirements**

(1) The permittee shall perform weekly checks, when the emissions unit is in operation and, when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed from any points of capture and/or the stack, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. the total duration of any visible emissions incident; and
- c. any corrective actions taken to eliminate the visible emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

(2) The permittee shall collect and record the following information each day for each emissions unit:

- a. the company name and identification number of each resin employed;
- b. the number of gallons of each resin employed;
- c. the OC content of each resin employed, in pounds per gallon, as applied;
- d. the total potential (prior to applying the forming operations /oven "split") daily OC emissions rate for all resins, in pounds;



- i. For purposes of calculating the organic compound emission rates for these emissions units (P002, P003, P005, P007-P045) and the associated oven (P001), the permittee shall utilize a value of 94.1% as the maximum percentage of the organic compounds employed in this emissions unit that are emitted uncontrolled from the emissions unit. The remaining 5.9% of the organic compounds employed in this emissions unit shall be considered to be the uncontrolled emissions for the associated oven. This "split" of organic compound emissions between this emissions unit and the associated oven is based upon the material balance information provided by the company (January 2006 compliance stack test conducted on Curing Oven #2 at Vanceburg, KY).
- e. the total daily emissions attributed to this emissions unit;
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly OC emissions rate for all resins, i.e., the sum of d)(2)(e) divided by d)(2)(f), in pounds per hour (average).

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permit-to-install (PTI) application for these emissions units was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Ohio's Air Toxic Policy" was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.



- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Styrene

TLV (mg/m<sup>3</sup>): 85.20

Maximum Hourly Emission Rate (lbs/hr): 1.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 271.3

MAGLC (ug/m<sup>3</sup>): 2,028.63

The permittee, has demonstrated that emissions of Styrene, from emissions units P002, P003, P005, P007-P045, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (4) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and



- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Ohio's Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Ohio's Air Toxic Policy", has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (5) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Ohio's Air Toxic Policy":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Ohio's Air Toxic Policy";
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Ohio's Air Toxic Policy", initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Ohio's Air Toxic Policy", and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Ohio's Air Toxic Policy", through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.



*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) The permittee shall submit semiannual written reports that identify:
- a. all days during which any visible emissions of fugitive dust were observed from this emissions unit; and
  - b. any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. an identification of each hour during which the organic compound emissions exceeded 2.79 pounds per hour, and the actual organic compound emissions for each such hour.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) The permittee shall also submit annual reports that specify the total organic compound emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (5) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:



- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

OC emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.

Applicable Compliance Method:

Compliance with the pounds per hour emissions limitation shall be demonstrated by the recordkeeping in d)(2).

The hourly OC limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

Emission factor: 830.299 lbs OC/ton binder

$(830.299 \text{ lbs OCs/ton of binder})(7.15 \text{ lbs/hr max binder feed rate})(94.1\% \text{ split of OCs emitted from forming drums}) / 2,000 \text{ lbs/ton} = 2.79 \text{ lbs OC/hr}$

[Note that the 5.9% emissions split for the oven and 94.1% emissions split for the forming drums comes from the January 26, 2006 stack test at the Vanceburg, KY plant]

If required, organic compound emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.



Compliance with the annual emissions limitation shall be determined by adding the daily OC emissions, as recorded in d)(2)e., for each day in the calendar year, and divided by 2,000 lbs/ton.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

**b. Emissions Limitation:**

PE shall not exceed 0.66 pound per hour and 2.9 tons per year.

**Applicable Compliance Method:**

Compliance with the pound per hour emission limitation shall be demonstrated based on the following calculations based on the information presented in the permittee's application:

The hourly PE limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

$$(66.14\% \text{ of solids content/ton of binder})(2,000 \text{ lbs/ton})(1-0.86 \text{ transfer efficiency}) = 185.192 \text{ lbs PE/ton of binder}$$

Emission factor: 185.192 lbs PE/ton of binder

$$(185.192 \text{ lbs PE/ton of binder})(7.15 \text{ lbs/hr max binder feed rate}) / 2,000 \text{ lbs/ton} = 0.66 \text{ lb PE/hr}$$

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the ton per year emission limitation shall be determined based on the following calculation:

$$\begin{aligned} \text{PE (tpy)} &= 0.66 \text{ lb PE/hr} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 2.9 \text{ tons per year} \end{aligned}$$

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

**c. Emissions Limitation:**

There shall be no visible PE from this emissions unit.

**Applicable Compliance Method:**

If required, visible particulate emissions shall be determined according to USEPA Method 22.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*



**Final Title V Permit**  
**Superior Fibers Shawnee LLC**  
**Permit Number: P0090271**  
**Facility ID: 0664000067**  
**Effective Date: 3/26/2015**

- g) Miscellaneous Requirements
  - (1) None.

Table 1. Emissions Summary

FTIR Data Run Averages		Site: Hollince Reedsville		EMISSION DATA													
PPM values dry basis		EMISSION DATA BY SPECTRAL INSIGHTS SPECTROSCOPY												EMISSION DATA BY SPECTRAL INSIGHTS SPECTROSCOPY			
Start Time	Outlet/Inlet	#	Flow Rate (SCFM)	Stack Temp (°F)	O <sub>2</sub> (% dry)	CH <sub>3</sub> OH PPM	CH <sub>3</sub> OH lb/hr	CO PPM	CO lb/hr	VOC PPM	VOC lb/hr	H <sub>2</sub> CO PPM	H <sub>2</sub> CO lb/hr				
9:15	Outlet	1	20	369	7070	19.61	0.98	0.03	1.53	0.04	8.86	0.28	0.24				
10:39	Inlet	1	20	325	7070	20.15	116.65	3.87	39.20	1.14	1033.75	30.57	23.34				
10:59	Outlet	2	10	369	7169	19.45	1.08	0.04	2.21	0.06	14.59	0.41	0.32				
11:19	Inlet	2	21	366	7169	20.12	125.18	4.14	39.09	1.13	1106.39	32.85	25.25				
11:44	Outlet	3	25	364	7267	19.73	0.94	0.03	1.48	0.04	11.75	0.33	0.27				
12:18	Inlet	3	21	317	7267	20.12	124.33	4.12	38.02	1.10	1155.20	34.31	26.57				
12:46	Outlet	4	10	357	7127	19.68	1.38	0.05	1.49	0.04	14.79	0.44	0.36				
13:26	Inlet	4	18	334	7127	20.05	123.46	4.09	36.82	1.07	1064.84	31.41	23.83				
13:06	Outlet	5	20	360	6991	19.65	0.72	0.02	1.33	0.04	10.54	0.33	0.30				
13:46	Inlet	5	20	320	6991	20.05	124.96	4.13	37.34	1.08	1121.92	32.89	24.96				
Inlet Average				332	7125	20.10	122.92	4.07	38.09	1.10	1096.42	32.41	24.79				
Outlet Average				364	7125	19.62	1.02	0.03	1.51	0.05	12.11	0.36	0.30				
Destruction Efficiency (%)							99.17	99.17	95.78	95.79	98.90	98.90	98.80				

CO - Carbon monoxide O<sub>2</sub> - Oxygen  
 CH<sub>3</sub>OH - Methanol  
 H<sub>2</sub>CO - Formaldehyde  
 VOC - Volatile Organic Carbon (as C1)

Note: Differences in destruction efficiency calculated from ppm values versus pounds/hour are due to rounding # points: number of data points used in the run average calculation after discarding transient points and invalid points due to process interruption

**FTIR Data Run Averages**

Site: Hollisee Reedsville

FINAL

PPM values dry basis		EMISSION DATA							
Date	Start Time	Run	Stack Temp (F)	Flow Raig (SCFM)	O2 (% dry)	NOx PPM (dry)	NOx PPM (wet)	NOx lb/hr	NOx (ppb)
8/5/2005	9:15	1o	369	7070	19.61	67.62	63.43	2.10	9.22
8/5/2005	10:39	1i	325	7070	20.15	11.71	11.01	0.53	2.31
8/5/2005	10:59	2o	369	7169	19.45	72.51	67.70	2.25	9.85
8/5/2005	11:19	2i	366	7169	20.12	12.87	12.08	0.58	2.55
8/5/2005	11:44	3o	364	7267	19.73	66.33	62.37	2.07	9.06
8/5/2005	12:18	3i	317	7267	20.12	13.00	12.21	0.59	2.57
8/5/2005	12:46	4o	357	7127	19.68	68.45	64.02	2.12	9.30
8/5/2005	13:26	4i	334	7127	20.05	12.78	11.99	0.58	2.53
8/5/2005	13:06	5o	360	6991	19.65	62.32	58.22	1.93	8.46
8/5/2005	13:46	5i	320	6991	20.05	12.91	12.11	0.59	2.56
		Inlet Average				12.65	11.88	0.57	2.50
		Outlet Average				67.45	63.15	2.09	9.18

EMISSION DATA BY SPECTRAL INSIGHTS SPECTROSCOPY

i - inlet  
o - outlet

NOx is FTIR measured NO + NO2

Parameter	Existing Factor (lb/ton of material processed)	Source	Existing (lb/hr)	Existing (TPY)
CO	0.9	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-4 (Glass Furnace - Textile, Gas - melter) 0.9 lb/ton of material processed	0.84	3.68
NOx	20	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-4 (Glass Furnace - Textile, Gas - melter) 20 lb/ton of material processed	18.2	79.72
PM	6	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-2 (Glass Furnace - Textile, Gas - melter) 6 lb/ton of material processed	5.6	24.53
SOx	3	Emission Factor AP-42 Section 11.13 Glass Manufacturing Table 11.13-2 (Glass Furnace - textile Gas - recuperative) 3 lb/ton of material processed since Glass furnace - textile, Gas unit melter was ND	2.8	12.26
VOC	0.3	Emission Factor AP-42 Section 11.15 Glass Manufacturing Table 11.15-2 (pressed and blown - uncontrolled) 0.3 lb/ton of material processed since Glass Fiber furnace - textile, Gas unit melter was ND	0.28	1.23

Average of two rates

50% reduction of original factor

Natural Gas Combustion Factor (lb/10 <sup>6</sup> SCF)	Emissions (lb/hr)	Emissions (TPY)	Average of two rates		50% reduction of original factor	
			Proposed Factor (lb/hr)	Proposed Factor (TPY)	Proposed Factor (lb/hr)	Proposed Factor (TPY)
84	0.35	1.53	0.595	2.605	0.42	1.84
100	0.41	1.8	9.305	40.76	9.1	39.86
7.6	0.03	0.13	2.815	12.33	2.8	12.265
0.6	0.002	0.01	1.401	6.135	1.4	6.13
5.5	0.02	0.09	0.15	0.66	0.14	0.615

**Andrews, Edward S**

---

**From:** Joyce Gentry <Joyce.gentry@sj-environmental.com>  
**Sent:** Tuesday, March 15, 2016 11:57 AM  
**To:** Andrews, Edward S  
**Cc:** Rod Wilkins  
**Subject:** RE: Superior Fibers Reedsville, WV Permit Status  
**Attachments:** Superior Fiber Ohio Title V permit.pdf; COMICBIO-30 - cullet energy savings.pdf; Glass-Guide p.63.pdf; Glass-Guide p75-77.pdf; Glass-Guide p1-5.pdf; SJDOCS-#7131476-v1-Superior\_BAT\_Analysis.DOCX; SJDOCS-#7135191-v1-AP-42\_11-13\_Glass\_Fiber\_Manufacturing.PDF; SJDOCS-#6930609-v1-superior\_fibers\_WV\_DQA\_presentation.PPTX

Ed

Please find attached BAT Analysis along supporting documents. If should have any questions please contact me.

**Joyce Gentry, P.E.  
Senior Engineer**

S&J Environmental Services LLC  
P.O. Box 1588, Charleston, WV 25326-1588  
Overnight  
Chase Tower, 17th Floor  
707 Virginia Street, East, Charleston, WV 25301  
O: 304-556-8215 F: 304-353-8180 C: 304-541-6315

[joyce.gentry@sj-environmental.com](mailto:joyce.gentry@sj-environmental.com)



*Entire Document*  
**NON-CONFIDENTIAL**

ID # 77-15  
Reg R13-2501A  
Company Superior  
Facility Reedsville Initials ESJ

---

**From:** Andrews, Edward S [mailto:Edward.S.Andrews@wv.gov]  
**Sent:** Tuesday, February 16, 2016 8:28 AM  
**To:** Rod Wilkins  
**Cc:** Joyce Gentry  
**Subject:** RE: Superior Fibers Reedsville, WV Permit Status

Rod,

I am needing the affidavit of publication of your Class I legal Ad.

Should you have any questions, please contact me.

Sincerely,

Edward S. Andrews, P.E.  
Engineer  
West Virginia Department of Environmental Protection  
Division of Air Quality

601 57th Street, SE  
Charleston, WV 25304  
304.926.0499 ext. 1214

**From:** Rod Wilkins [<mailto:rwilkins@superiorfibers.com>]  
**Sent:** Monday, February 15, 2016 3:34 PM  
**To:** Andrews, Edward S <[Edward.S.Andrews@wv.gov](mailto:Edward.S.Andrews@wv.gov)>  
**Cc:** [Joyce.gentry@sj-environmental.com](mailto:Joyce.gentry@sj-environmental.com)  
**Subject:** Superior Fibers Reedsville, WV Permit Status

Edward,

It was nice talking with you last Thursday. My cell coverage was weak and I did not pick up everything you were communicating. I have copied Joyce Gentry who prepared our application. I know you mentioned some additional documents you still needed. Could you let us know what those documents are so we can get those submitted to you.

Thanks,

Rod

Rod Wilkins  
Chief Technical Officer  
Superior Fibers LLC  
456 Robert Stone Way  
Reedsville, WV 26547  
Cell 740-398-3809  
[rwilkins@superiorfibers.com](mailto:rwilkins@superiorfibers.com)

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**Steptoe & Johnson PLLC Note:**

This e-mail and any attachments are confidential and may be protected by legal privilege. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of this e-mail or any attachment is prohibited. If you have received this e-mail in error, please notify us immediately by returning it to the sender and delete this copy from your system. Thank you for your cooperation.

**Adjustable speed drives (ASDs)/ variable speed drives (VSDs).** ASDs better match speed to load requirements for motor operations. The power required to move material is set by the rate of flow of the material. Slowing the speed of the belt with an ASD to reduce the amount of material transported will reduce the energy consumption when compared to part-load operation. Hence, there is potential for saving energy by using ASDs for conveyors, however, this will be limited when compared to the savings typically found on pump and fan systems (Nadel et al. 2002). The installation of ASDs improves overall productivity, control and product quality, and reduces wear on equipment, thereby reducing future maintenance costs.

The typical energy savings from ASDs for conveyor belt systems are estimated at 8-15% (De Almeida et al. 2002). However, the cost-effective savings potential will differ from application to application.

A special system, attractive to conveyor systems, is the MagnaDrive system, in which a magnetic coupling between the motor and system allows the speed to vary (MagnaDrive 2005). The MagnaDrive is aimed at constant speed applications on 20-1000 hp motors that require overload and failure protection and reduced vibration and maintenance. The MagnaDrive system automatically disconnects at system overloads, reducing the risk of damage to the motor or other system parts. The system is currently typically used for large-scale conveyor systems. MagnaDrive ASDs has been used in various material conveying applications, e.g., a bucket elevator at a cement plant, and conveyor belts at a coal mine and a coal-fired power station. No MagnaDrive ASDs have yet been installed at glass plants.

**High efficiency belts (cog belts).** Belts make up a variable, but significant portion of the total motor drive in most plants. Standard vee belts tend to stretch, slip, bend, and compress, which leads to a loss of efficiency (CIPEC 2001b). Replacing standard vee belts with cog belts can save energy and money, even as a retrofit. Cog belts run cooler, last longer, require less maintenance and have an efficiency that is about 2% higher than standard vee belts (CIPEC 2001b). Upgrading to high-torque cog belts results in savings of up to 6% over standard vee belts (CIPEC 2001b). Motor load reductions of 2 to 10% have been shown from replacing vee belts with cog belts (Price and Ross 1989). CIPEC (2001b) estimates the payback for replacing standard belts with more efficient ones to be 6 months to 3 years. A case study in the corn wet milling industry (US) estimated the cost for using more efficient belts at \$29,660, savings of \$17,250 in electricity (or 1%) per year, and an average payback of about 1.7 years (IAC 2005). Another case study in the IAC database estimated a smaller system would cost \$1,406 and save \$709 annually in electricity (0.2%), but also have a payback of less than 2 years.

**Conveyor belt systems.** Sicon Roulunds (Sweden) claims to produce environmental friendly enclosed belt conveyors that transport bulk material, without transfers, spillage, or generation of dust. The flexibility of the system allows taking 90° corners without using multiple conveyors and the associated losses. The conveyor system is said to need less maintenance and have lower power consumption (Sicon 2005) when compared to pneumatic, screw, and chain conveyors, but similar to that of ordinary belt conveyors. For the glass industry systems have been sold to ACI (Australia), Glava A/S (Norway), Glasuld A/S (Denmark), Gullfiber AB (Sweden), G+H Isover, and Schott Glaswerke (Germany).

**Cullet separation and grinding.** Use of recycled glass (cullet) in the melt will reduce the energy intensity in glassmaking (see section 5.8 for a further discussion of increased cullet use in the glass tank). To control and guarantee the quality of the glass, companies often prefer the in-house cullet over contaminated and/or mixed post-consumer glass. To allow higher recycling rates,



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Director

3/5/2015

Certified Mail

Don Hock  
Superior Fibers Shawnee LLC  
P.O. Box 141  
9702 Ironpoint Road  
Shawnee, OH 43782

Facility ID: 0664000067  
Permit Number: P0090271  
County: Perry

RE: FINAL AIR POLLUTION CONTROL TITLE V PERMIT  
Permit Type: Renewal

Dear Permit Holder:

Enclosed is a final Ohio Environmental Protection Agency (EPA) Air Pollution Title V permit that allows you to operate the facility in the manner indicated in the permit. Because this permit may contain several conditions and restrictions, we urge you to read it carefully. In this letter you will find the information on the following topics:

- How to appeal this permit
- How to save money, reduce pollution and reduce energy consumption
- How to give us feedback on your permitting experience
- How to get an electronic copy of your permit

**How to appeal this permit**

The issuance of this Title V permit is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
77 South High Street, 17th Floor  
Columbus, OH 43215

### **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

### **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

### **How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Southeast District Office as indicated on page one of your permit.

Sincerely,



Erica R. Engel-Ishida, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 Via E-Mail Notification  
Ohio EPA DAPC, Southeast District Office



**FINAL**

**Division of Air Pollution Control  
Title V Permit  
for  
Superior Fibers Shawnee LLC**

Facility ID:	0664000067
Permit Number:	P0090271
Permit Type:	Renewal
Issued:	3/5/2015
Effective:	3/26/2015
Expiration:	3/26/2020





**Division of Air Pollution Control  
Title V Permit  
for  
Superior Fibers Shawnee LLC**

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**Final Title V Permit**  
Superior Fibers Shawnee LLC  
**Permit Number:** P0090271  
**Facility ID:** 0664000067  
**Effective Date:** 3/26/2015

## Authorization

Facility ID: 0664000067  
Facility Description: Glass Fiber Mats.  
Application Number(s): A0021568, A0050358  
Permit Number: P0090271  
Permit Description: Title V renewal permit for one curing oven, 42 forming drums and unpaved roadways and parking areas.  
Permit Type: Renewal  
Issue Date: 3/5/2015  
Effective Date: 3/26/2015  
Expiration Date: 3/26/2020  
Superseded Permit Number: P0090270

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Superior Fibers Shawnee LLC  
9702 Ironpoint Road  
PO Box 141  
Shawnee, OH 43782

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office  
2195 Front Street  
Logan, OH 43138  
(740)385-8501

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Southeast District Office. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



**Final Title V Permit**  
**Superior Fibers Shawnee LLC**  
**Permit Number: P0090271**  
**Facility ID: 0664000067**  
**Effective Date: 3/26/2015**

## **A. Standard Terms and Conditions**



**1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
- (1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
  - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
  - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements
  - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (5) Standard Term and Condition A. 30.

*(Authority for term: ORC 3704.036(A))*

**2. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
- (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))*

- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

*(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))*



c) The permittee shall submit required reports in the following manner:

- (1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submitted scheduled maintenance requests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- (2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:



Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Ohio EPA DAPC, Southeast District Office. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

- (3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Ohio EPA DAPC, Southeast District Office by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from



federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))*

- (4) Each written report shall be signed by a Responsible Official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))*

- (5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Ohio EPA DAPC, Southeast District Office unless otherwise specified.

*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

### **3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.



*(Authority for term: OAC rule 3745-77-07(A)(3)(c))*

#### **4. Risk Management Plans**

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

*(Authority for term: OAC rule 3745-77-07(A)(4))*

#### **5. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

*(Authority for term: OAC rule 3745-77-07(A)(5))*

#### **6. Severability Clause**

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

*(Authority for term: OAC rule 3745-77-07(A)(6))*

#### **7. General Requirements**

- a) Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit except as provided pursuant to A.16 below.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.



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- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.
- f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:
  - (1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
  - (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
  - (3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

*(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))*

## **8. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

*(Authority for term: OAC rule 3745-77-07(A)(8))*

## **9. Marketable Permit Programs**

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(9))*



**10. Reasonably Anticipated Operating Scenarios**

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

*(Authority for term: OAC rule 3745-77-07(A)(10))*

**11. Reopening for Cause**

This Title V permit will be reopened prior to its expiration date under the following conditions:

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

*(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))*

**12. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

*(Authority for term: OAC rule 3745-77-07(B))*

**13. Compliance Requirements**

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible



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Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the Ohio EPA DAPC, Southeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Ohio EPA DAPC, Southeast District Office) and the Administrator of the U.S. EPA in the following manner and with the following content:
- (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
  - (2) Compliance certifications shall include the following:
    - a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.



- b. The permittee's current compliance status.
  - c. Whether compliance was continuous or intermittent consistent with A.13.d.2.a above.
  - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.
  - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
- (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

*(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))*

#### **14. Permit Shield**

- a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

*(Authority for term: OAC rule 3745-77-07(F))*

#### **15. Operational Flexibility**

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Ohio EPA DAPC, Southeast District Office with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Ohio EPA DAPC, Southeast District Office as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

*(Authority for term: OAC rules 3745-77-07(H)(1) and (2))*

#### **16. Emergencies**

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met.



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This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

*(Authority for term: OAC rule 3745-77-07(G))*

#### **17. Off-Permit Changes**

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

- a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

*(Authority for term: OAC rule 3745-77-07(I))*

#### **18. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

*(This term is provided for informational purposes only.)*



**19. Insignificant Activities or Emissions Levels**

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**20. Permit to Install Requirement**

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**21. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

*(Authority for term: OAC rule 3745-77-07(A)(1))*

**22. Permanent Shutdown of an Emissions Unit**

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the Responsible Official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the Responsible Official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

Unless otherwise exempted, no emissions unit identified in this permit that has been certified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

*(Authority for term: OAC rule 3745-77-01)*

**23. Title VI Provisions**

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:



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- a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

*(Authority for term: OAC rule 3745-77-01(H)(11))*

**24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the Ohio EPA DAPC, Southeast District Office.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Southeast District Office. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**25. Records Retention Requirements Under State Law Only**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

**26. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine



whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

*(Authority for term: OAC rule 3745-77-07(C))*

**27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Southeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**28. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Southeast District Office must be notified in writing of any transfer of this permit.

*(Authority for term: OAC rule 3745-77-01(C))*

**29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

- a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or
- b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or
- c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.



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**30. Submitting Documents Required by this Permit**

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Ohio EPA DAPC, Southeast District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.



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## **B. Facility-Wide Terms and Conditions**



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1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.



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## **C. Emissions Unit Terms and Conditions**



**1. F012, Unpaved Roadways and Parking Areas**

**Operations, Property and/or Equipment Description:**

Unpaved Roadways and Parking Areas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	None	

(2) Additional Terms and Conditions

a. As defined in OAC rule 3745-31-01, this emissions unit is an existing fugitive source of particulate emissions (PE). As such, there are no requirements in the federal or state rules applicable to this emissions unit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. None.



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g) Miscellaneous Requirements

- (1) None.



2. P001, Curing Oven

**Operations, Property and/or Equipment Description:**

Process Curing Oven for polyester resin coated glass fiber mats, with a maximum production rate of 4,000 pounds per hour (includes a natural gas-fired curing drum with a rated maximum capacity of 7.3 mmBtu/hr).

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) g)(1).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	PE shall not exceed 6.52 pounds per hour.
c.	OAC rule 3745-21-07(M)(4)	Organic compound (OC) emissions shall not exceed 3.0 pounds per hour and 15 pounds per day unless said emissions are reduced by at least 85% by weight.

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to the wet scrubber at all times the emissions unit is in operation.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

b. The diatomaceous earth filter is to be employed at all times when this emissions unit is in operation.

*(Authority for term: OAC rule 3745-77-07(C)(1))*



c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop across the Anderson Unit's wet scrubber demister, that must be maintained in order to demonstrate compliance, shall not exceed 0.75 inch of water.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable pressure drop range for the Anderson Unit's cabinet, that must be maintained in order to demonstrate compliance, shall not exceed 2.5 inches of water.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable Anderson Unit's gas temperature, that must be maintained in order to demonstrate compliance, shall not exceed 110 degrees Fahrenheit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pH of the Anderson Unit's wet scrubber demister fluid, that shall be maintained in order to demonstrate compliance, shall be between 4.5 to 7.5.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor and record the pressure drop across the demister (in inch of water), the Anderson Unit's cabinet pressure (in inches of water), the Anderson Unit's exhaust gas temperature (in degrees Fahrenheit), and the pH of scrubber fluid while the emissions unit is in operation. The permittee shall record this information on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;



- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date the corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. pressure drop across the demister, cabinet pressure, exhaust gas temperature and pH of the scrubber fluid readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the pressure drop across the wet scrubber demister, the cabinet pressure, the exhaust gas temperature and the pH of the wet scrubber demister fluid are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (6) The permittee shall collect and record the following information for each day for the oven:
  - a. the total potential (prior to applying the booth/oven "split") uncontrolled daily organic compound emission rate for all resins employed in the forming operations associated with this emissions unit, multiplied by the maximum



- percentage of the emissions associated with this emissions unit (as defined in condition d)(8) of this permit), in pounds per day; and
- b. the total number of hours this emissions unit was in operation (this number should be the same as the number of hours the associated forming operations were in operation); and
  - c. the average hourly OC emission rate, i.e., (a)/(b), in lbs/hr (average).
- (7) For purposes of calculating the organic compound emission rates for this emissions unit (P001) and the associated forming drums (P002, P003, P005, P007-P045), the permittee shall utilize a value of 94.1% as the maximum percentage of the organic compounds employed in the forming drums that are emitted uncontrolled from the forming drums. The remaining 5.9% of the organic compounds employed in the forming drums shall be considered to be the uncontrolled emissions for this emissions unit. This "split" of organic compound emissions between this emissions unit and the associated forming drums is based upon the material balance information provided by the company (January 2006 compliance stack test conducted on Curing Oven #2 at Vanceburg, KY).

*(Authority for term: OAC rule 3745-77-07(C)(1))*

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. an identification of each hour during which the organic compound emissions exceeded 3 pounds per hour, and the actual organic compound emissions for each such hour; and
  - b. an identification of each day during which the organic compound emissions exceeded 15 pounds per day, and the actual organic compound emissions for each such day.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. each period of time (start time and date, and end time and date) when the pressure drop across the demister, cabinet pressure, exhaust gas temperature and/or the pH of the scrubber fluid readings was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;



- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
- c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop and/or liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) The permittee shall submit annual reports that specify the total organic compound emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

f) **Testing Requirements**

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. **Emissions Limitation:**

Visible PE from any stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

**Applicable Compliance Method:**

If required, visible particulate emissions shall be determined according to USEPA Method 9.

*(Authority for term: OAC rule 3745-17-07(A) and OAC rule 3745-77-07(C)(1))*

b. **Emissions Limitation:**

PE shall not exceed 6.52 pounds per hour.



**Applicable Compliance Method:**

The hourly PEmissions limitation is a rule based limit established under OAC rule 3745-17-11(B), Table I, based on a process weight at maximum capacity of 4,000 lbs/hr. Compliance with the pounds per hour shall be demonstrated based upon the emission testing requirements specified in f)(2).

Particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

*(Authority for term: OAC rule 3745-17-11(B) and OAC rule 3745-77-07(C)(1))*

**c. Emissions Limitation:**

Organic compound (OC) emissions shall not exceed 3.0 pounds per hour and 15 pounds per day unless said emissions are reduced by at least 85% by weight.

**Applicable Compliance Method:**

Compliance with the pounds per hour and pounds per day emission limitation is based upon the recordkeeping requirements under d)(7) and the emission testing requirements specified in f)(2).

Organic compound emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

*(Authority for term: OAC rule 3745-21-07(M)(4) and OAC rule 3745-77-07(C)(1))*

**(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:**

- a. The emission testing shall be conducted within 30 days after start-up and approximately 2.5 years after issuance of the permit (following the effective date for the Title V permit), within 6 months prior to the permit expiration, and as required by the Director.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission limitations for particulates and OC.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

The mass emissions of OC shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". The mass



emissions of PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources".

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
- f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

g) Miscellaneous Requirements

- (1) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year and per Ohio EPA's Engineering Guide #69, the pollutants are subject to MACT. OAC Chapter 3745 31 requires permittees to apply for and obtain a new or modified PTI prior to making a "modification" as defined by OAC rule 3745-31-01.



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The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.



3. **Emissions Unit Group - 12-foot Forming Drums: P002, P003, P005, P008, P009, P010, P011, P012, P013, P014, P015, P016, P017, P018, P019, P020, P021, P022, P023, P024, P025 and P026. Each has a maximum resin usage of 7.15 pounds per hour and all are enclosed in a building.**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P002	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P003	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P005	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P008	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P009	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P010	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P011	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P012	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P013	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P014	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P015	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P016	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P017	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P018	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P019	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P020	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P021	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P022	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P023	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P024	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P025	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.
P026	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 12-foot forming drum.

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) d)(3), d)(4), d)(5), d)(6) and e)(5).

- b) **Applicable Emissions Limitations and/or Control Requirements**

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
a.	OAC rule 3745-31-05(A)(3) (established in PTI P0112342, issued 9/25/13)	Organic compound (OC) emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Particulate emissions (PE) shall not exceed 0.66 pound per hour and 2.9 tons per year.  There shall be no visible PE from this emissions unit.
b.	OAC rule 3745-17-07(B) and 3745-17-08(B)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. This facility is located in Perry County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks, when the emissions unit is in operation and, when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed from any points of capture and/or the stack, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. the total duration of any visible emissions incident; and
- c. any corrective actions taken to eliminate the visible emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

(2) The permittee shall collect and record the following information each day for each emissions unit:

- a. the company name and identification number of each resin employed;
- b. the number of gallons of each resin employed;
- c. the OC content of each resin employed, in pounds per gallon, as applied;



- d. the total potential (prior to applying the forming operations /oven "split") daily OC emissions rate for all resins, in pounds;
  - i. For purposes of calculating the organic compound emission rates for these emissions units (P002, P003, P005, P007-P045) and the associated oven (P001), the permittee shall utilize a value of 94.1% as the maximum percentage of the organic compounds employed in this emissions unit that are emitted uncontrolled from the emissions unit. The remaining 5.9% of the organic compounds employed in this emissions unit shall be considered to be the uncontrolled emissions for the associated oven. This "split" of organic compound emissions between this emissions unit and the associated oven is based upon the material balance information provided by the company (January 2006 compliance stack test conducted on Curing Oven #2 at Vanceburg, KY).
- e. the total daily emissions attributed to this emissions unit;
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly OC emissions rate for all resins, i.e., the sum of d)(2)(e) divided by d)(2)(f), in pounds per hour (average).

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permit-to-install (PTI) application for these emissions units was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Ohio's Air Toxic Policy" was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
  - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
  - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold



Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Styrene

TLV (mg/m<sup>3</sup>): 85.20

Maximum Hourly Emission Rate (lbs/hr): 1.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 271.3

MAGLC (ug/m<sup>3</sup>): 2,028.63

The permittee, has demonstrated that emissions of Styrene, from emissions units P002, P003, P005, P007-P045, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (4) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;



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- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Ohio's Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Ohio's Air Toxic Policy", has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (5) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Ohio's Air Toxic Policy":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Ohio's Air Toxic Policy";
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Ohio's Air Toxic Policy", initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Ohio's Air Toxic Policy", and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Ohio's Air Toxic Policy", through the predicted 1-hour maximum ground-level concentration. The record



shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) The permittee shall submit semiannual written reports that identify:
- a. all days during which any visible emissions of fugitive dust were observed from this emissions unit; and
  - b. any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. an identification of each hour during which the organic compound emissions exceeded 2.79 pounds per hour, and the actual organic compound emissions for each such hour.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) The permittee shall also submit annual reports that specify the total organic compound emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (5) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:



- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

OC emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.

Applicable Compliance Method:

Compliance with the pounds per hour emissions limitation shall be demonstrated by the recordkeeping in d)(2).

The hourly OC limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

Emission factor: 830.299 lbs OC/ton binder

$(830.299 \text{ lbs OCs/ton of binder})(7.15 \text{ lbs/hr max binder feed rate})(94.1\% \text{ split of OCs emitted from forming drums}) / 2,000 \text{ lbs/ton} = 2.79 \text{ lbs OC/hr}$

[Note that the 5.9% emissions split for the oven and 94.1% emissions split for the forming drums comes from the January 26, 2006 stack test at the Vanceburg, KY plant]

If required, organic compound emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.



Compliance with the annual emissions limitation shall be determined by adding the daily OC emissions, as recorded in d)(2)e., for each day in the calendar year, and divided by 2,000 lbs/ton.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

b. Emissions Limitation:

PE shall not exceed 0.66 pound per hour and 2.9 tons per year.

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be demonstrated based on the following calculations based on the information presented in the permittee's application:

The hourly PE limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

$$(66.14\% \text{ of solids content/ton of binder})(2,000 \text{ lbs/ton})(1-0.86 \text{ transfer efficiency}) = 185.192 \text{ lbs PE/ton of binder}$$

Emission factor: 185.192 lbs PE/ton of binder

$$(185.192 \text{ lbs PE/ton of binder})(7.15 \text{ lbs/hr max binder feed rate}) / 2,000 \text{ lbs/ton} = 0.66 \text{ lb PE/hr}$$

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the ton per year emission limitation shall be determined based on the following calculation:

$$\begin{aligned} \text{PE (tpy)} &= 0.66 \text{ lb PE/hr} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 2.9 \text{ tons per year} \end{aligned}$$

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

c. Emissions Limitation:

There shall be no visible PE from this emissions unit.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*



**Final Title V Permit**  
**Superior Fibers Shawnee LLC**  
**Permit Number: P0090271**  
**Facility ID: 0664000067**  
**Effective Date: 3/26/2015**

g) **Miscellaneous Requirements**

(1) **None.**



**4. Emissions Unit Group - 18-foot Forming Drums: P007, P027, P028, P029, P030, P031, P032, P033, P034, P035, P036, P037, P038, P039, P040, P041, P042, P043, P044 and P045. Each has a maximum resin usage of 7.15 pounds per hour and all are enclosed in a building.**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P007	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P027	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P028	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P029	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P030	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P031	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P032	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P033	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P034	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P035	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P036	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P037	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P038	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P039	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P040	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P041	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P042	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P043	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P044	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.
P045	Glass fiber forming furnace rated at 0.15 mmBtu/hr and 18-foot forming drum.

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

- (1) d)(3), d)(4), d)(5), d)(6) and e)(5).

b) Applicable Emissions Limitations and/or Control Requirements

- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
a.	OAC rule 3745-31-05(A)(3) (established in PTI P0112342, issued 9/25/13)	Organic compound (OC) emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.  Particulate emissions (PE) shall not exceed 0.66 pound per hour and 2.9 tons per year.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		There shall be no visible PE from this emissions unit.
b.	OAC rule 3745-17-07(B) and 3745-17-08(B)	See b)(2)a. below.

(2) Additional Terms and Conditions

a. This facility is located in Perry County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks, when the emissions unit is in operation and, when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed from any points of capture and/or the stack, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. the total duration of any visible emissions incident; and
- c. any corrective actions taken to eliminate the visible emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

(2) The permittee shall collect and record the following information each day for each emissions unit:

- a. the company name and identification number of each resin employed;
- b. the number of gallons of each resin employed;
- c. the OC content of each resin employed, in pounds per gallon, as applied;
- d. the total potential (prior to applying the forming operations /oven "split") daily OC emissions rate for all resins, in pounds;



- i. For purposes of calculating the organic compound emission rates for these emissions units (P002, P003, P005, P007-P045) and the associated oven (P001), the permittee shall utilize a value of 94.1% as the maximum percentage of the organic compounds employed in this emissions unit that are emitted uncontrolled from the emissions unit. The remaining 5.9% of the organic compounds employed in this emissions unit shall be considered to be the uncontrolled emissions for the associated oven. This "split" of organic compound emissions between this emissions unit and the associated oven is based upon the material balance information provided by the company (January 2006 compliance stack test conducted on Curing Oven #2 at Vanceburg, KY).
- e. the total daily emissions attributed to this emissions unit;
- f. the total number of hours the emissions unit was in operation; and
- g. the average hourly OC emissions rate for all resins, i.e., the sum of d)(2)(e) divided by d)(2)(f), in pounds per hour (average).

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permit-to-install (PTI) application for these emissions units was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Ohio's Air Toxic Policy" was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.



- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: Styrene

TLV (mg/m<sup>3</sup>): 85.20

Maximum Hourly Emission Rate (lbs/hr): 1.67

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 271.3

MAGLC (ug/m<sup>3</sup>): 2,028.63

The permittee, has demonstrated that emissions of Styrene, from emissions units P002, P003, P005, P007-P045, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (4) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
  - a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and



- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Ohio's Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Ohio's Air Toxic Policy", has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (5) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Ohio's Air Toxic Policy":
  - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Ohio's Air Toxic Policy";
  - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Ohio's Air Toxic Policy", initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
  - d. the documentation of the initial evaluation of compliance with the "Ohio's Air Toxic Policy", and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

- (6) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Ohio's Air Toxic Policy", through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.



*(Authority for term: OAC rule 3745-77-07(C)(1), OAC rule 3745-114-01, and ORC 3704.03(F))*

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (2) The permittee shall submit semiannual written reports that identify:
- a. all days during which any visible emissions of fugitive dust were observed from this emissions unit; and
  - b. any corrective actions taken to eliminate the visible emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- a. an identification of each hour during which the organic compound emissions exceeded 2.79 pounds per hour, and the actual organic compound emissions for each such hour.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (4) The permittee shall also submit annual reports that specify the total organic compound emissions from this emissions unit for the previous calendar year. The reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data for this emissions unit in the annual Fee Emission Report.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

- (5) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:



- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

*(Authority for term: OAC rule 3745-77-07(C)(1))*

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions Limitation:

OC emissions shall not exceed 2.79 pounds per hour and 12.23 tons per year.

Applicable Compliance Method:

Compliance with the pounds per hour emissions limitation shall be demonstrated by the recordkeeping in d)(2).

The hourly OC limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

Emission factor: 830.299 lbs OC/ton binder

$(830.299 \text{ lbs OCs/ton of binder})(7.15 \text{ lbs/hr max binder feed rate})(94.1\% \text{ split of OCs emitted from forming drums}) / 2,000 \text{ lbs/ton} = 2.79 \text{ lbs OC/hr}$

[Note that the 5.9% emissions split for the oven and 94.1% emissions split for the forming drums comes from the January 26, 2006 stack test at the Vanceburg, KY plant]

If required, organic compound emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.



Compliance with the annual emissions limitation shall be determined by adding the daily OC emissions, as recorded in d)(2)e., for each day in the calendar year, and divided by 2,000 lbs/ton.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

b. Emissions Limitation:

PE shall not exceed 0.66 pound per hour and 2.9 tons per year.

Applicable Compliance Method:

Compliance with the pound per hour emission limitation shall be demonstrated based on the following calculations based on the information presented in the permittee's application:

The hourly PE limitation was established for PTI purposes to reflect the emissions unit's potential to emit using the following formula:

$$(66.14\% \text{ of solids content/ton of binder})(2,000 \text{ lbs/ton})(1-0.86 \text{ transfer efficiency}) = 185.192 \text{ lbs PE/ton of binder}$$

Emission factor: 185.192 lbs PE/ton of binder

$$(185.192 \text{ lbs PE/ton of binder})(7.15 \text{ lbs/hr max binder feed rate}) / 2,000 \text{ lbs/ton} = 0.66 \text{ lb PE/hr}$$

If required, particulate emissions shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the ton per year emission limitation shall be determined based on the following calculation:

$$\begin{aligned} \text{PE (tpy)} &= 0.66 \text{ lb PE/hr} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 2.9 \text{ tons per year} \end{aligned}$$

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*

c. Emissions Limitation:

There shall be no visible PE from this emissions unit.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.

*(Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1))*