John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

10/29/2014

Certified Mail

Mr. Noah McManus
Johns Manville
925 Carpenter Rd
Defiance, OH 43512

Facility ID: 0320010005
Permit Number: P0117221
County: Defiance

RE: DRAFT AIR POLLUTION TITLE V PERMIT
Permit Type: Renewal

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, Crescent-News. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on processing the Title V permit will be made after consideration of comments received and oral testimony if a public hearing is conducted. You will then be provided with a Preliminary Proposed Title V permit and another opportunity to comment prior to the 45-day Proposed Title V permit submittal to U.S. EPA Region 5. The permit will be issued final after U.S. EPA review is completed and no objections to the final issuance have been received. If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461.

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-NWDO; Michigan; Indiana

PUBLIC NOTICE
10/29/2014 Issuance of Draft Air Pollution Title V Permit

Johns Manville
925 Carpenter Road,
Defiance, OH 43512
Defiance County
FACILITY DESC.: Mineral Wool Manufacturing
PERMIT #: P0117221
PERMIT TYPE: Renewal
PERMIT DESC: Renewal TV operating permit for a fiberglass manufacturing facility.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: http://epa.ohio.gov/dapc/permitsonline.aspx by entering the permit # or: Alyse Johnson, Ohio EPA DAPC, Northwest District Office, 347 North Dunbridge Road, Bowling Green, OH 43402. Ph: (419)352-8461

Statement of Basis For Air Pollution Title V Permit

Facility ID:	0320010005
Facility Name:	Johns Manville
Facility Description:	Fiberglass manufacturing
Facility Address:	925 Carpenter Road, Defiance, OH 43512
Permit #:	P0117221, Renewal

This facility is subject to Title V because it is major for:
☐ Lead ☒ Sulfur Dioxide ☒ Carbon Monoxide ☒ Volatile Organic Compounds ☒ Nitrogen Oxides
☒ Particulate Matter ≤ 10 microns ☒ Single Hazardous Air Pollutant ☒ Combined Hazardous Air Pollutants
☒ Maximum Available Control Technology Standard(s) ☐ GHG ☐ Title IV

A. Standard Terms and Conditions

Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(U)?	YES
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	NO
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	PTI P0115992, issued 2/25/2014 - P048 through P051 - Chapter 31 modification to allow for the use of an ultra-low emitting formaldehyde binder. PTI P0116575, issued 4/2/2014 - P064, P065, P067, P068, P070, P071, P073, P074, P076, P077, P079, P080, P082, P083 and P085 - Administrative modification to remove 40 CFR, Part 63, Subpart NNN applicability from Pipe Insulation Units 800-807.
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	N/A

Please identify the affected unit(s)and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	N/A
Please identify the affected unit(s) and pollutant(s) for which a Compliance Assurance Monitoring (CAM) Plan is required per 40 CFR 64. Provide more emissions unit specific detail in Section C.	P066, P069, P072, P075, P076, P078, P079, P081, P082 and P084

B. Facility-Wide Terms and Conditions

Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
B.1			Lists terms and conditions that are state enforceable only.
B.2	77-07(A(13) 17, 18, 19, 21	40 CFR Parts 60 and 63	Lists insignificant emissions unit subject to one or more SIP approved requirements and/or federal rules.
B.3	77-07(A)(13)	31-03(A)(4)(b)	Lists insignificant emissions units that are subject to applicable requirements outlined in OAC rule 3745-31-03(A)(4)(b).
B.4	N	40 CFR Part 64	Lists significant emissions units subject to CAM applicable requirements.
B.5	77-07(A)(13)	40 CFR, Part 63, Subpart JJJJ	Lists the applicable requirements of 40 CFR, Part 60, Subpart JJJJ for insignificant emissions unit P098.
B.6	77-07(A)(13)	40 CFR, Part 63, Subpart ZZZZ	Lists the applicable requirements of 40 CFR, Part 63, Subpart ZZZZ for insignificant emissions units P096 and P097.
B.7	77-07(A)(13)	40 CFR, Part 63, Subpart	Lists the applicable requirements of 40 CFR, Part 63, Subpart ZZZZ for insignificant emissions unit P329.

		ZZZZ	

C. Emissions Unit Terms and Conditions

Key:
EU = emissions unit ID
ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit)
OR = operational restriction
M = monitoring requirements
ENF = did noncompliance issues drive the monitoring requirements?
R = record keeping requirements
Rp = reporting requirements
ET = emission testing requirements (not including compliance method terms)
St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement
Misc = miscellaneous requirements

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P001 P008 P301 P310	PE shall be less than 10 lbs/hr	17-11(B)(1)	N	Y	N	N	N	N	N	N	N	N	ND – The UMRE of PE form this emissions unit is less than 10 lbs/hr (the permittee has demonstrated this based on stack testing). Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, based on Table 1 of OAC rule 3745-17-11, the allowable PE limitation is greater than 10 lbs/hr. however, to ensure that Figure II will not be applicable, the permittee has agreed to accept the PE limitation of less than 10 lbs/hr.
P001 P008 P012 P013 P015 P029 P043 P044 P048-P052 P064 P065 P067 P068 P070 P071 P073 P074 P076	Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule	17-07(A)	N	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.

P077 P079 P080 P082 P083 P085 P092 P093 P301 P303 P307-P310 P316-P318													
P012	PE shall not exceed 8.10 lbs/hr	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp – BAT limit is based on emissions unit's PTE. ET- Previous stack testing showed compliance with the emission limitation. Additional testing is only if required.
P012 P015 P029 P044 P047-P052 P054 P055 P060-P086 P092 P093 P308 P309 P326 P327	None	17-11(B)	N	Y	N	N	N	N	N	N	N	N	ND – The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
P012 P013 P015 P029 [P048-P050] P051 P061-P065 P067 P068 P070	None	18-06(E)	N	Y	N	N	N	N	N	N	N	N	ND - The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3) [or (F)].

P071 P073 P074 P076 P077 P079 P080 P082 P083 P085 P093													
P043 P044 P308 P309 P316 P317 P318 P325	None	18-06(E)	N	Y	N	N	N	N	N	N	N	N	ND – This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate is less than 1,000 pounds per hour.
P013 P015 P029 P044 P092 P093 P308 P309	None	N	40 CFR, Part 63, Subpart NNN	Y	N	N	N	N	N	N	N	N	ND - 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product.
P013	PM10: 10.32 lbs/hr and 45.20 tpy CO: 31.37 lbs/hr and 137.4 tpy OC: 3.20 lbs/hr and 14.02 tpy NOx: 1.23 lbs/hr and 55.39 tpy SO2: 0.20 lb/hr and 0.88 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp – BAT limits are based on emissions unit's PTE. ET- Previous stack testing showed compliance with the emission limitation. Additional testing is only if required.

	Formaldehyde: 0.81 lb/hr and 3.55 tpy												
P015	PM10: 9.28 lbs/hr and 40.65 tpy CO: 9.64 lbs/hr and 42.22 tpy OC: 5.63 lbs/hr and 24.66 tpy NOx: 1.57 lbs/hr and 6.88 tpy SO2: 0.09 lb/hr and 0.39 tpy Formaldehyde: 1.42 lb/hr and 6.22 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp – BAT limits are based on emissions unit's PTE. ET- Previous stack testing showed compliance with the emission limitation. Additional testing is only if required.
P029	PM10: 1.07 lbs/hr and 4.69 tpy CO: 3.27 lbs/hr and 14.32 tpy OC: 2.47 lbs/hr and 10.82 tpy NOx: 0.57 lbs/hr and 2.50 tpy SO2: 0.07 lb/hr and 0.31 tpy Formaldehyde: 0.62 lb/hr and 2.72 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp – BAT limits are based on emissions unit's PTE. ET- Previous stack testing showed compliance with the emission limitation. Additional testing is only if required.

P029 P051 P052 P065 P068 P071 P074 P082 P083 P085 P093 P325 P327	None	21-07(M)(4)	N	Y	Y	Y	N	Y	Y	N	N	N	ND –Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii) OR – The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than 20 percent, by volume, is prohibited.
P043	PE shall not exceed 2.79 lbs/hr	17-11(B)(1)	N	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – Emissions testing on similar units has shown the UMRE is less than 10 lbs/hr.
P044	PM10: 1.78 lbs/hr and 7.80 tpy CO: 5.00 lbs/hr and 21.90 tpy. OC: 4.11 lbs/hr and 18.00 tpy. NOx: 4.57 lbs/hr and 20.02 tpy. SO2: 0.12 lb/hr and 0.53 tpy Formaldehyde: 1.03 lbs/hr and 4.51 tpy.	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P047-P052 P054 P055	PE shall not exceed 66.80 tons per rolling, 365-day period	N	OAC rule 3745-31-05(D)	N	Y	Y	N	Y	Y	N	N	Y	ET – M/R/Rp are sufficient to show compliance. OR – Operational restrictions of 8600 hours per rolling, 12-month period. Misc – M/R/Rp requirements associated with the rolling, 365-day limit as established in PTI 03-10931.

P047	PE: 1.00 lbs/hr and 4.38 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.
P047	Visible PE shall not exceed 0% opacity	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.
P047	None	17-07(A)	N	Y	N	N	N	N	N	N	N	N	ND – The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
P047 P061-P063 P303 P307	0.5 lb PE/ton glass pulled	N	40 CFR, Part 63, Subpart NNN	N	Y	Y	N	Y	Y	N	N	N	OR – Continuously operate BLDS and initiate corrective action within 1 hr of exceeding established average glass pull rate, implemented QIP consistent with CAM when glass pull rate is exceeded by 20%, operate furnace so glass pull rate is not exceeded by 20% of average glass pull rate. Appropriate M/R/Rp requirements have been specified. ET – Compliance will be based upon the monitoring requirements specified in the O&M plans.
P047-P052 P061-P063 P301 P303 P307 P325 P327	None	N	40 CFR, Part 63, Subpart A General Provisions	N	N	Y	N	Y	Y	N	N	N	Table 1 to Subpart NNN of 40 CFR, Part 63 – Applicability of General Provisions – shows which parts of the General Provisions in 40 CFR 63.1-15 apply.
P051	PM10/PM2.5: 1.63 lbs/hr and 7.01 tpy VOC: 1.21 lbs/hr and 5.20 tpy CO: 2.01 lbs/hr and 8.64 tpy SO2: 0.50 lb/hr and 2.15 tpy	N	OAC rule 3745-31-05(F)	N	Y	Y	N	Y	Y	Y	N	N	OR – The permittee shall operate the incinerator at all times when the emissions unit is in operation.
P051	3.78 ton NOx per month averaged over a 12-month	N	ORC 3704.03(T)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.

	rolling period												
P051	0.50 lb SO2/hr 1.63 lbs PM10/PM2.5/hr 1.21 lbs VOC/hr 1.97 lbs CO/hr	N	OAC rule 3745-31-05(A)(3), as effective 11/30/01	N	Y	Y	N	Y	Y	Y	N	N	OR – The permittee shall operate the incinerator at all times when the emissions unit is in operation.
P051	None	N	OAC rule 3745-31-05(A)(3), as effective 12/01/06	Y	N	N	N	N	N	N	N	N	ND – BAT requirements under OAC rule 3745-31-05(A)(3) are not applicable to PM10/PM2.5. VOC and CO emissions from this air contaminant source since the potential to emit is less than 10 tons per year.
P048-P052	1.2 lb formaldehyde/ton	N	40 CFR, Part 63, Subpart NNN	N	Y	Y	N	Y	Y	N	N	Y	OR-The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test, The permittee must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test P051 - The permittee must operate the incinerator such that any3-hour block average temperature in the firebox does not fall below the average established during the performance test. Appropriate monitoring, record keeping, and reporting requirements have been specified. P048-P050 and P052 - The permittee must initiate corrective action within 1 hr when an average pressure drop, liquid flow rate, or chemical feed rate for any 3-hr block period is outside the limits established during the performance test. The permittee must implement QIP consistent with CAM when a parameter is outside the limit established for more than 5% of the total operating time in a 6-month block, the permittee must operate each scrubber so that no parameter is outside the established limits for more than 10% of the total operating time in a 6-month block.

													Misc – All control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that they comply with the applicable emission limits.
P048-P052	11 lbs PE/ton glass pulled	N	40 CFR, Part 60, Subpart PPP	N	Y	Y	N	Y	Y	Y	N	N	OR - maintain scrubber water flow rate and pressure drop. Appropriate monitoring, record keeping, and reporting requirements have been specified.
P052	PE: 1.53 lbs/hr and 6.58 tpy OC: 0.66 lb/hr and 2.84 tpy Formaldehyde: 0.35 lb/hr and 1.51 tpy	N	OAC rule 3745-31-05(A)(3)	N	Y	Y	N	Y	Y	N	N	N	OR – The maximum number of operating hours for this emissions unit shall not exceed 8600 based upon a rolling, 12-month summation of the monthly numbers of operating hours. ET – M/R/Rp are sufficient to show compliance.
P060	0.04 lb PE/hr and 0.18 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limit is based on emissions unit's PTE.
P060-P063 P066 P069 P072 P075 P078 P081 P084 P086	Visible PE shall not exceed 5% opacity, as a six-minute average	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.
P054 P055 P060-P063 P066 P069 P072 P075 P078	None	17-07(A)	N	Y	N	N	N	N	N	N	N	N	ND – The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

P081 P084 P086													
P082	PE: 6.05 lbs/hr and 26.50 tpy CO: 2.02 lbs/hr and 8.85 tpy OC: 1.87 lb/hr and 8.19 tpy SO2: 0.21 lb/hr and 0.92 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE. St – M/R/Rp have been modified to require visible emission checks daily and flow rate to be monitored continuously on the wet scrubber due to CAM applicability.
P083	PE: 1.25 lbs/hr and 5.48 tpy CO: 2.79 lbs/hr and 12.22 tpy OC: 1.14 lbs/hr and 4.99 tpy NOx: 1.09 lbs/hr and 4.77 tpy SO2: 0.30 lb/hr and 1.31 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limit are based on emissions unit's PTE.
P084	PE: 0.59 lb/hr and 2.58 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	Y	N	ET – M/R/Rp are sufficient to show compliance. St – M/R/Rp have been modified to require visible emission checks daily on the baghouse due to CAM applicability.
P085	PE: 0.14 lb/hr and 0.61 tpy CO: 0.31 lb/hr and 1.36 tpy SO2: 0.03 lb/hr and 0.13 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.

P086	PE: 0.07 lb/hr and 0.31 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	N	N	M/R/Rp/ET – BAT limit is based on emissions unit's PTE.
P013 P092	CO emissions shall not exceed 60 lbs/hr and 262.8 tons per rolling, 12-month period	N	OAC rule 3745-31-10 through 20	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – The BACT limits are based on the emissions unit's PTE. No control technologies were cost effective for the control of CO.
P013 P092	None*	N	OAC rule 3745-31-05(A)(3)(b)	Y	N	N	N	N	N	N	N	N	ND – BAT does not apply to NOx and SO2 as the uncontrolled PTE is less than 10 tpy. *PTE for NOx is 1.23 lb/hr and 5.39 tpy. PTE for SO2 is 0.20 lb/hr and 0.88 tpy.
P013 P092	PM10: 9.99 lbs/hr and 43.76 tpy VOC: 3.20 lbs/hr and 14.02 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P013 P092	None	N	OAC rule 3745-114-01 and ORC 3704.03(F)	Y	N	N	N	N	N	N	N	N	ND – Modeling to demonstrate compliance with the "Air Toxics Policy" was not required because the emissions unit's maximum annual emissions for each toxic air contaminant were less than 1 tpy.
P013 P092	None	18-06(E)	N	Y	N	N	N	N	N	N	N	N	ND – the PTE for SO2 is less than the allowable emission limitation established pursuant to this rule.
P093	PM10: 1. 78 lbs/hr and 7.80 tpy CO: 4.37 lbs/hr and 19.14 tpy OC: 2.88 lbs/hr and 12.61 tpy NOx: 3.66 lbs/hr and 16.03 tpy SO2: 0.09 lb/hr and 0.39 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.

	Formaldehyde: 0.82 lb/hr and 3.59 tpy												
P077 P080 P301 P325 P327	6.8 lbs formaldehyde/ton glass pulled	N	40 CFR, Part 63, Subpart NNN	N	Y	Y	N	Y	Y	N	N	N	OR – Initiate corrective action within 1 hr when the monitor process parameter level(s) is outside the established limit(s), implemented QIP consistent with CAM when the parameters are outside the limits by more than 5%, operate process modifications to show parameters are not outside the limits established for more than 10% of the total operating time in a 6-month period, use a binder formulation that does not vary from the specification and that the free-formaldehyde content and operating range established during the performance test. Appropriate M/R/Rp requirements have been specified. ET – Compliance will be based upon the monitoring requirements specified in the O&M plans.
P308	CO emissions shall not exceed 74.73 lbs/hr	N	OAC rule 3745-31-10 through 20	N	N	N	N	N	N	Y	N	N	M/R/Rp – The BACT limits are based on the emissions unit's PTE. No control technologies were cost effective for the control of CO. Compliance shall be demonstrated through emissions testing.
P308	CO: 262.87 tons per rolling, 12-month period PE: 29.73 tons per rolling, 12-month period OC: 21.41 tons per rolling, 12-month period NOx: 16.84 tons per rolling, 12-month period Fluoride: 1.04 tons per rolling, 12-month period	N	OAC rule 3745-31-05(D)	N	Y	Y	N	Y	Y	N	N	N	OR – The maximum annual glass pull rate for low-medium efficiency products shall not exceed 780,000 lbs, based upon a rolling, 12-month summation of the monthly low-medium efficiency products glass pull rates. The maximum annual glass pull rate for high efficiency products shall not exceed 813,120 lbs, based upon a rolling, 12-month summation of the monthly high efficiency products glass pull rates. ET – M/R/Rp are sufficient to show compliance.

P308	PE: 9.92 lbs/hr OC: 5.12 lbs/hr NOx: 6.32 lbs/hr Fluoride: 0.39 lb/hr	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P309	CO emissions shall not exceed 99.63 lbs/hr	N	OAC rule 3745-31-10 through 20	N	N	N	N	N	N	Y	N	N	M/R/Rp – The BACT limits are based on the emissions unit's PTE. No control technologies were cost effective for the control of CO. Compliance shall be demonstrated through emissions testing.
P309	CO: 246.69 tons per rolling, 12-month period PE: 34.89 tons per rolling, 12-month period OC: 26.29 tons per rolling, 12-month period NOx: 17.56 tons per rolling, 12-month period Fluoride: 1.10 tons per rolling, 12-month period	N	OAC rule 3745-31-05(D)	N	Y	Y	N	Y	Y	N	N	N	OR – The maximum annual glass pull rate for AA products shall not exceed 1,120,000 lbs, based upon a rolling, 12-month summation of the monthly low-medium efficiency products glass pull rates. The maximum annual glass pull rate for high efficiency products shall not exceed 485,760 lbs, based upon a rolling, 12-month summation of the monthly high efficiency products glass pull rates. ET – M/R/Rp are sufficient to show compliance.
P309	PE: 8.28 lbs/hr OC: 6.82 lbs/hr NOx: 4.14 lbs/hr Fluoride: 0.26 lb/hr	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P317	PE shall not exceed 1.3 lbs/hr	17-11(B)(1)	N	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – Emissions testing on similar units has shown the UMRE is less than 10 lbs/hr.

P325	PE: 6.22 tpy SO2: 1.52 lbs/hr and 6.70 tpy CO: 1.87 lbs/hr and 8.20 tpy NOx: 1.16 lbs/hr and 5.10 tpy OC: 2.99 lbs/hr and 13.10 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P325	PE shall not exceed 1.42 lbs/hr	17-11(B)(1)	N	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – Emissions testing on similar units has shown the UMRE is less than 10 lbs/hr.
P325 P326 P327	Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule	17-07(A)	N	N	N	Y	N	Y	Y	N	Y	N	ET – M/R/Rp are sufficient to show compliance. St – parametric monitoring was changed from HEAF unit inspections to daily visible emission checks.
P326	Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule	17-07(A)	N	N	N	Y	N	Y	Y	N	Y	N	ET – M/R/Rp are sufficient to show compliance. St – parametric monitoring was changed from pressure drop readings to daily visible emission checks.
P326	PE shall not exceed 1 lb/hr and 4.40 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P327	PE: 0.75 lb/hr and 3.30 tpy SO2: 0.15 lb/hr and 0.70 tpy NOx: 0.12 lb/hr and 0.50 tpy CO: 0.19 lb/hr	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.

	and 0.80 tpy OC: 0.31 lb/hr and 1.4 tpy												
P801	VOC shall not exceed 18.61 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.
P061 P062 P063	From each EU individually: PE: 0.34 lb/hr and 1.49 tpy SO2: 0.45 lb/hr and 1.97 tpy CO: 0.89 lb/hr and 3.90 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P048-P050	PM10/PM2.5: 9.99 lbs/hr and 42.96 tpy for P048 PM10/PM2.5: 9.02 lbs/hr and 38.79 tpy for P049 PM10/PM2.5: 7.76 lbs/hr and 33.37 tpy for P050 From each EU individually: VOC: 3.00 lbs/hr and 12.90 tpy SO2: 1.0 lb/hr and 4.30 tpy	N	OAC rule 3745-31-05(F)	N	Y	Y	N	Y	Y	Y	N	N	OR – The permittee shall operate the venturi scrubbers at all times when the emissions unit is in operation.
P048-P050	From each EU	N	ORC 3704.03(T)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.

	individually: CO emissions shall not exceed 3.26 tons per month averaged over a 12-month rolling period												
P048-P050	From each EU individually: 0.69 tons per month averaged over a 12-month rolling period	N	OAC rule 3745-31-05(A)(3), as effective 11/30/01	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.
P048-P050	None	N	OAC rule 3745-31-05(A)(3), as effective 12/01/06	Y	N	N	N	N	N	N	N	N	ND – BAT requirements under OAC rule 3745-31-05(A)(3) are not applicable to PM10/PM2.5. NOx and SO2 emissions from this air contaminant source since the potential to emit is less than 10 tons per year.
P048-P050	None	21-07(M)(4)	N	Y	N	N	N	N	N	N	N	N	ND – This emissions unit is not subject to the requirements of this rule as it does not meet all the conditions specified in OAC rule 3745-21-07(M)(3)(a).
P303 P307	PE shall not exceed 8.70 lbs/hr (from P303 and P307 combined)	17-11(B)(1)	N	N	N	N	N	N	Y	N	N	N	M/R/Rp/ET – Compliance has been demonstrated through stack testing.
P303 P307	SO2 emission shall not exceed 72 lbs/hr from each EU individually	18-06(E)(2)	N	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – Emission limitation is based on emissions unit's PTE.
P064 P067 P070 P073	From each EU individually: PE: 2.69 lb/hr and 11.78 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.

	CO: 2.02 lb/hr and 8.85 tpy OC: 0.83 lb/hr and 3.64 tpy SO2: 0.09 lb/hr and 0.39 tpy												
P076 P079	From each EU individually: PE: 4.03 lb/hr and 17.65 tpy CO: 2.02 lb/hr and 8.85 tpy OC: 1.25 lb/hr and 5.48 tpy SO2: 0.14 lb/hr and 0.61 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	Y	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE. St – M/R/Rp have been modified to require visible emission checks daily and flow rate to be monitored continuously on the wet scrubber due to CAM applicability.
P066 P069 P072 P075	From each EU individually: PE shall not exceed 0.26 lb/hr and 1.14 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	Y	N	ET – M/R/Rp are sufficient to show compliance. St – M/R/Rp have been modified to require visible emission checks daily on the baghouse due to CAM applicability.
P078 P081	From each EU individually: PE shall not exceed 0.39 lb/hr and 1.71 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	Y	N	ET – M/R/Rp are sufficient to show compliance. St – M/R/Rp have been modified to require visible emission checks daily on the baghouse due to CAM applicability.
P065 P068 P071 P074	From each EU individually: PE: 0.56 lb/hr and 2.45 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.

	CO: 1.24 lbs/hr and 5.43 tpy OC: 0.51 lb/hr and 2.23 tpy NOx: 0.49 lb/hr and 2.15 tpy SO2: 0.13 lb/hr and 0.57 tpy												
P077 P080	From each EU individually: PE: 0.83 lb/hr and 3.64 tpy CO: 1.86 lbs/hr and 8.15 tpy OC: 0.76 lb/hr and 3.33 tpy NOx: 0.73 lb/hr and 3.20 tpy SO2: 0.20 lb/hr and 0.88 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – BAT limits are based on emissions unit's PTE.
P054 P055	From each emissions unit individually: PE: 0.10 lb/hr and 0.44 tpy	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.
P054 P055	Visible PE from the stacks servicing this emissions unit shall not exceed 0% opacity	N	OAC rule 3745-31-05(A)(3)	N	N	Y	N	Y	Y	N	N	N	ET – M/R/Rp are sufficient to show compliance.
P316	PE shall not	17-11(B)(1)	N	N	N	N	N	N	N	N	N	N	M/R/Rp/ET – Emissions testing on similar units has

P318	exceed 1.66 lbs/hr												shown the UMRE is less than 10 lbs/hr.
P066 P069 P072 P075 P076 P078 P079 P081 P082 P084		N	40 CFR Part 64	N	N	Y	N	Y	Y	N	Y	N	ET – No emission limitations were established pursuant to this rule. St – M/R/Rp have been modified to require daily visible emission checks and to continuously monitor flow rate (when applicable) on the cyclones, baghouses and wet scrubbers due to CAM applicability.

DRAFT

Division of Air Pollution Control
Title V Permit
for
Johns Manville

Facility ID:	0320010005
Permit Number:	P0117221
Permit Type:	Renewal
Issued:	10/29/2014
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Title V Permit
for
Johns Manville

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Authorization

Facility ID:	0320010005
Facility Description:	Fiberglass manufacturing
Application Number(s):	A0050123, A0050331
Permit Number:	P0117221
Permit Description:	Renewal TV operating permit for a fiberglass manufacturing facility.
Permit Type:	Renewal
Issue Date:	10/29/2014
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0086884

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

Johns Manville
925 Carpenter Road
Defiance, OH 43512

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

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

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, Northwest 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

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 recordingsfor 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 submittedscheduled maintenancerequests, 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, Northwest 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, Northwest 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, Northwest 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 permitexcept 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

Officialthat, 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, Northwest 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, Northwest 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 intermittentconsistent 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, Northwest 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, Northwest 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, noemissions unit identified in this permit that has beencertified 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 theOhio EPA DAPC, Northwest 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, Northwest 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, Northwest 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, Northwest 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.

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 ofan 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, Northwest 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.

B. Facility-Wide Terms and Conditions

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.

2. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit-to-install for the emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirements contained in a permit-to-install or in the SIP approved versions of OAC Chapters 3745-17, 3745-18, 3745-21, and 3745-31, and/or 40 CFR Part 60 or 63:

EU ID	Operations, Property and/or Equipment Description
B003	Boiler – Fire Protection (9.99 mmBtu/hr)
B004	Boiler – West Binder Room (9.99 mmBtu/hr)
B007	Air Make-Up Unit #8 (11.5 mmBtu/hr Rheem)
P096	Unit 89 Emergency Generator (PBR01764)
P097	Pipe Emergency Generator (PBR01765)
P098	Unit 89 Web Coating
P116	Pipe Process Area Heaters (4 heaters each rated at 6.163 mmBtu/hr)
P329	Plant 2 Emergency Generator (PBR01766)
P901	Air Make-Up Unit #1 (9.0 mmBtu/hr Aerovent)
P902	Air Make-Up Unit #2 (9.0 mmBtu/hr Aerovent)
P903	Air Make-Up Unit #3 (9.0 mmBtu/hr Aerovent)
P904	Air Make-Up Unit #4 (4.875 mmBtu/hr Aerovent)
P907	Air Make-Up Unit #7 (4.875 mmBtu/hr Aerovent)
P909	Air Make-Up Unit #9 (7.425 mmBtu/hr Dravo)
P910	Air Make-Up Unit #10 (5.0 mmBtu/hr Dravo)
P911	Air Make-Up Unit #11 (9.75 mmBtu/hr Aerovent)
P912	Air Make-Up Unit #12 (10 mmBtu/hr Aerovent)
P913	Air Make-Up Unit #13 (7.5 mmBtu/hr Aerovent)

   [Authority for term: OAC rule 3745-77-07(A)(13)]

3. The following emissions unit located at this facility is subject to all applicable requirements as outlined in OAC rule 3745-31-03(A)(4)(b):

EU ID	Operations, Property and/or Equipment Description
P096	Unit 89 Emergency Generator (PBR01764)
P097	Pipe Emergency Generator (PBR01765)
P329	Plant 2 Emergency Generator (PBR01766)

   [Authority for term: OAC rule 3745-77-07(A)(13) and OAC rule 3745-31-03(A)(4)(b)]

4. Pursuant to 40 CFR Part 64, the permittee has submitted, and the Ohio EPA has approved a compliance assurance monitoring plan for emissions units P066, P069, P072, P075, P076, P078, P079, P081, P082 and P084 at this facility. The permittee shall comply with the provisions of the plan during any operation of the aforementioned emissions units.

   [Authority for term: 40 CFR Part 64]

5. The permittee is subject to the applicable emission limitation(s) and/or control measures, operational restrictions, monitoring and/or record keeping requirements, reporting requirements, testing requirements and the general and/or other requirements specified in 40 CFR, Part 63, Subpart JJJJ, in accordance with 40 CFR Parts 63.3280 through 63.3420 [including the Table(s) and Appendix(ices) referenced in Subpart JJJJ]. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

In accordance with 40 CFR 63.3300 the following insignificant emissions unit is a web coating line engaged in the coating of a web substrate and is subject to the aforementioned requirements**: EU# P098**.

The permittee shall comply with the applicable restrictions required under 40 CFR, Part 63, Subpart JJJJ, including the following sections:

<u>40 CFR, Part 63, Subpart JJJJ requirements [40 CFR 63.3280-3420]</u>

a) In accordance with 40 CFR 63.3300(f) emissions unit P098 is an existing web coating line engaged in the coating of a web substrate.

b) Organic HAP emissions shall not exceed 4% of the mass coating materials applied for the month.

c) 40 CFR Part 63.1-15 - Table 2 of Subpart JJJJ of 40 CFR Part 63 – Applicability of General Provisions to Subpart JJJJ shows which parts of the general provisions in 40 CFR 63.1-15 apply.

d) The permittee shall employ as-purchased “compliant” coating materials in this emissions unit and shall be applied as-purchased.

e) The permittee shall maintain the following monthly records for this emissions unit:

(1) Organic HAP content data for each coating employed, for the purpose of demonstrating compliance in accordance with the requirements of 40 CFR 63.3360(c).

f) The permittee shall submit semiannual written reports that identify any month during which a non-compliant coating was employed. If there are no deviations from the emissions limitation, a statement that there were no deviations from the emissions limitations must be submitted. 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.

g) The permittee shall use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the permittee by the manufacturer of the material. In the event of an inconsistency between Method 311 (Appendix A of 40 CFR part 63) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA-defined

carcinogens as specified in 29 CFR 1910.1200(d)(4) and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used.

[Authority for term: OAC rule 3745-77-07(A)(13) and 40 CFR, Part 63, Subpart JJJJ]

6. Pursuant to 40 CFR 63.6590(b)(3), the existing emergency or limited use compression ignition (CI) reciprocating internal combustion engine(s) (RICE), **EU#P096 and P097**, installed before 12/19/02, greater than 500 brake horse power, and located at a major source for hazardous air pollutants (HAPs), is not subject to the General Provisions to Part 63, Subpart A, the National Emission Standards for Hazardous Air Pollutants (NESHAP) or its Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines, and no initial notification is required.

   [Authority for term: OAC rule 3745-77-07(A)(13) and 40 CFR, Part 63, Subpart ZZZZ]

7. The existing emergency or limited use spark ignition (II) reciprocating internal combustion engine(s) (RICE), **EU#P329**, installed before 06/12/06, less than 500 brake horse power, and located at a major source for hazardous air pollutants (HAPs), is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines, Part 63, Subpart ZZZZ and shall meet the requirements no later than 10/19/13.

General Compliance Requirements	63.6602, 63.6605. 63.6640(f)(1) and Table 2c
Monitoring, Installation, Collection, Operation and Maintenance Requirements	63.6625(e), (f), (h) and (j)
Reporting Requirements	63.6650(f)
Record Keeping Requirements	63.6655(a), (b), (d), (e), (f), 63.6660(a), (b), (c) and Table 6
General Provisions	63.6665 and Table 8
Implementation and Enforcement	63.6670

[Authority for term: OAC rule 3745-77-07(A)(13) and 40 CFR, Part 63, Subpart ZZZZ]

C. Emissions Unit Terms and Conditions

1. P008, Unit 88 - Forming and Collection

Operations, Property and/or Equipment Description:

Melts glass using natural gas to make glass fibers

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.	OAC rule 3745-17-11(B)(1)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. PE from this emissions unit shall be less than 10 pounds per hour (lbs/hr)*.

*The uncontrolled mass rate of PE from this emissions unit is less than 10 pounds/hour (the permittee has demonstrated this based on stack testing). Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, based on Table I of OAC rule 3745-17-11, the allowable PE limitation is greater than 10 lbs PE/hr. However, to ensure that Figure II will not be applicable, the permittee has agreed to accept the PE limitation stated above (less than 10 lbs/hr).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any

visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[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. Emission Limitation:

PE shall be less than 10 lbs/hr

Applicable Compliance Method:

If required, compliance shall be based on the results of stack testing conducted pursuant to the methods in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(10)]

b. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated in accordance with the methods in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

2. P012, Unit 82 - Forming and Collection

Operations, Property and/or Equipment Description:

line 82 forming and collection

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.	OAC rule 3745-31-05(A)(3) [PTI 03-8472, issued 03/15/1995]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 8.10 pounds per hour (lbs/hr).
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)c.

(2) Additional Terms and Conditions

a. The PE limitation for this emissions unit was established in PTI 03-8472 as a special condition to avoid PSD review due to the increased PE resulting from the installation of a new fiberglass forming line at the facility.

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate (natural gas) is less than 1,000 pounds per hour.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[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. Emission Limitation:

PE shall not exceed 8.10 lbs/hr.

Applicable Compliance Method:

If required, compliance with the hourly allowable PE limitation above shall be based on the results of stack testing conducted in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

[PTI 03-8472 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated in accordance with the methods in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

3. P013, Unit 84 - Forming and Collection

Operations, Property and/or Equipment Description:

line 84 forming and collection

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) b)(1)g. and g)(1).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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 3745-31-10 through 20 [PTI 03-17389, issued 05/22/2008]	Carbon monoxide (CO) emissions shall not exceed 60.0 pounds per hour (lbs/hr) and 262.80 tons per rolling, 12-month period.
b.	OAC rule 3745-31-05(A)(3)(b) [PTI 03-17389, issued 05/22/2008]	See b)(2)b.
c.	OAC rule 3745-31-05(A)(3) [PTI 03-17389, issued 05/22/2008]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate matter equal to or less than 10 microns in size (PM10) emissions shall not exceed 9.99 pounds per hour (lbs/hr) and 43.76 tons per year (tpy). [See b)(2)c.] Volatile organic compounds (VOC) emissions shall not exceed 7.51 lbs/hr and 32.89 tpy.
d.	OAC rule 3745-17-07(A)	Visible Particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
e.	40 CFR, Part 63, Subpart NNN	See b)(2)d.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-17-11(B)	The emission limitations specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
g.	OAC rule 3745-114-01 ORC 3704.03(F)	See g)(1)
h.	OAC rule 3745-18-06(E)	See b)(2)e.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for CO were cost effective.

b. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the nitrogen oxides (NOx) and sulfur dioxide (SO2) emissions from this air contaminant source since the uncontrolled potential to emit for each pollutant is less than ten tons per year.

The potential to emit for NOx emissions for this emissions unit is 5.39 tpy; determined by multiplying the maximum hourly emission rate of 1.23 lbs/hr (as determined by stack testing) by the maximum operating schedule of 8760 hours per year.

The potential to emit for SO2 emissions for this emissions unit is 0.88 tpy; determined by multiplying the maximum hourly emission rate of 0.20 lbs/hr (as determined by stack testing) by the maximum operating schedule of 8760 hours per year.

c. All particulate matter emissions are PM10 (filterable only).

d. 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR, Part 63, Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)

e. The potential to emit for SO2 from this emissions unit [see b)(2)b.] is less than the allowable emission limitation established pursuant to this rule.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate

emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-17389 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-17389 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-17389 and 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. Emission Limitations:

PM10 shall not exceed 9.99 lbs/hr and 43.76 tpy.

Applicable Compliance Method:

The hourly allowable PM10 limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17389 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 60.0 lbs/hr and 262.80 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17389 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

VOC emissions shall not exceed 7.51 lbs/hr and 32.89 tons VOC/yr.

Applicable Compliance Method:

The hourly allowable VOC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17389 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI 03-17389; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) Modeling to demonstrate compliance with ORC 3704.03(F)(4)(b) ["Review of New Sources of Air Toxics Emissions, Option A."] 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. OAC Chapter 3745-31 requires permittees to

apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. 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 permit to install.

[PTI 03-17389]

4. P015, Unit 86 - Forming and Collection

Operations, Property and/or Equipment Description:

line 86 forming and collection

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 3745-31-05(A)(3) [PTI 03-17015, issued 01/10/2006]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate matter less than 10 microns in size (PM10) shall not exceed 9.28 lbs/hr and 40.65 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emission shall not exceed 9.64 lbs/hr and 42.22 tpy. Organic compound (OC) emissions shall not exceed 5.63 lbs/hr and 24.66 tpy. [See b)(2)d.] Nitrogen oxides (NOx) emissions shall not exceed 1.57 lbs/hr and 6.88 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.09 lb/hr and 0.39 tpy. Formaldehyde emissions shall not exceed 1.42 lbs/hr and 6.22 tpy.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	40 CFR, Part 63, Subpart NNN	See b)(2)c.

(2) Additional Terms and Conditions

a. All particulate emissions are PM10 (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR, Part 63, Subpart NNN, this modified emissions unit is still considered an existing emissions unit (the modifications performed do not constitute reconstruction as defined in 40 CFR 63.2).

d. All OC are volatile organic compounds (VOC).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer

may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-17015 and 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. Emission Limitations:

PM10 shall not exceed 9.28 lbs/hr and 40.65 tpy.

Applicable Compliance Method:

The hourly allowable PM10 limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emission shall not exceed 9.64 lbs/hr and 42.22 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 5.63 lbs/hr and 24.66 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

NOx emissions shall not exceed 1.57 lbs/hr and 6.88 tpy.

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 0.09 lb/hr and 0.39 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

Formaldehyde emissions shall not exceed 1.42 lbs/hr and 6.22 tpy.

Applicable Compliance Method:

The hourly allowable formaldehyde emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated in accordance with the methods in OAC rule 3745-17-03(B)(1).

[PTI 03-17015; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) Modeling to demonstrate compliance with ORC 3704.03(F)(4)(b) ["Review of New Sources of Air Toxics Emissions, Option A."] 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. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. 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 permit to install.

[PTI 03-17015]

5. P029, Unit 86 - Curing Oven

Operations, Property and/or Equipment Description:

line 86 curing operation

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 3745-31-05(A)(3) [PTI 03-17015, issued 01/10/2006]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate matter of 10 microns or less (PM10) shall not exceed 1.07 pounds per hour (lbs/hr) and 4.69 tons per year (tpy). [See b)(2)a.] Organic compound (OC) emissions shall not exceed 2.47 lbs/hr and 10.82 tpy. [See b)(2)d.] Carbon monoxide (CO) emissions shall not exceed 3.27 lbs /hr and 14.32 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.07 lb/hr and 0.31 tpy. Nitrogen oxide (NOx) emissions shall not exceed 0.57 lb/hr and 2.50 tpy. Formaldehyde emissions shall not exceed 0.62 lb/hr and 2.72 tpy.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).
f.	40 CFR, Part 63, Subpart NNN	See b)(2)c.

(2) Additional Terms and Conditions

a. All particulate emissions are PM10 (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR, Part 63, Subpart NNN, this modified emissions unit is still considered an existing emissions unit (the modifications performed do not constitute reconstruction as defined in 40 CFR 63.2).

d. All OC are volatile organic compounds (VOC).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI 03-17015 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(2)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(3) Notwithstanding the frequency of reporting requirements specified in e)(2), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(2).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material [as specified in c)(1) was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-17015 and 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. Emission Limitations:

PM10 shall not exceed 1.07 lbs/hr and 4.69 tpy.

Applicable Compliance Method:

The hourly allowable PM10 limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 3.27 lbs/hr and 14.32 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 2.47 lbs/hr and 10.82 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

NOx emissions shall not exceed 0.57 lb/hr and 2.50 tpy.

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 0.07 lb/hr and 0.31 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

Formaldehyde emissions shall not exceed 0.62 lb/hr and 2.72 tpy.

Applicable Compliance Method:

The hourly allowable formaldehyde emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated in accordance with the methods in OAC rule 3745-17-03(B)(1).

[PTI 03-17015; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) Modeling to demonstrate compliance with ORC 3704.03(F)(4)(b) ["Review of New Sources of Air Toxics Emissions, Option A."] 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. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. 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 permit to install.

[PTI 03-17015]

6. P043, Unit 81 - Curing Oven

Operations, Property and/or Equipment Description:

line 81 curing operation

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 operations(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. 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 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 2.79 pounds per hour (lbs/hr).
b.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-18-06(E)	Exempt [See b)(2)a.]

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate (natural gas) is less than 1,000 pounds per hour.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations long:

a. The color of the emissions;

b. Whether the emissions are representative of normal operations;

c. If the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. The total duration of any visible emission incident; and

e. Any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[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. Emission Limitation:

PE shall not exceed 2.79 lbs/hr

Applicable Compliance Method:

If required, compliance with the emission limitation above shall be conducted in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(10)]

b. Emission Limitation:

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

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

7. P044, Unit 82 - Curing Oven

Operations, Property and/or Equipment Description:

line 82 curing operation

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 operations(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. 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) [PTI 03-17015, issued 01/10/2006]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate matter less than 10 microns in size (PM10) shall not exceed 1.78 lbs/hr and 7.80 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emission shall not exceed 5.00 lbs/hr and 21.90 tpy. Organic compound (OC) emissions shall not exceed 4.11 lbs/hr and 18.00 tpy. [See b)(2)e.] Nitrogen oxides (NOx) emissions shall not exceed 4.57 lbs/hr and 20.02 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.12 lb/hr and 0.53 tpy. Formaldehyde emissions shall not exceed 1.03 lbs/hr and 4.51 tpy.
b.	OAC rule 3745-17-11(B)(1)	See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-18-06(E)	Exempt [See b)(2)c.]
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).
	40 CFR, Part 63, Subpart NNN	See b)(2)d.

(2) Additional Terms and Conditions

a. All particulate matter emissions are PM10 (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate (natural gas) is less than 1,000 pounds per hour.

d. 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR, Part 63, Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)

e. All OC are volatile organic compounds (VOC).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI 03-17015 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations long:

a. The color of the emissions;

b. Whether the emissions are representative of normal operations;

c. If the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. The total duration of any visible emission incident; and

e. Any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(2)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(3) Notwithstanding the frequency of reporting requirements specified in e)(2), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(2).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material [as specified in c)(1) was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-17015 and 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. Emission Limitations:

PM10 shall not exceed 1.78 lbs/hr and 7.80 tpy.

Applicable Compliance Method:

The hourly allowable PM10 limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitationx:

CO emission shall not exceed 5.00 lbs/hr and 21.90 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitationx:

OC emissions shall not exceed 4.11 lbs/hr and 18.00 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitationx:

NOx emissions shall not exceed 4.57 lbs/hr and 20.02 tpy.

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitationx:

SO2 emissions shall not exceed 0.12 lb/hr and 0.53 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

Formaldehyde emissions shall not exceed 1.03 lbs/hr and 4.51 tpy.

Applicable Compliance Method:

The hourly allowable formaldehyde emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 316 or 318 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated in accordance with the methods in OAC rule 3745-17-03(B)(1).

[PTI 03-17015; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) Modeling to demonstrate compliance with ORC 3704.03(F)(4)(b) ["Review of New Sources of Air Toxics Emissions, Option A."] 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. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. 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 permit to install.

[PTI 03-17015]

8. P047, Unit 89 – Electric Melter

Operations, Property and/or Equipment Description:

Line 89 Hot End Batch Melter w/dual baghouses

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.	OAC rule 3745-31-05(D) [PTI 03-10931, issued 12/06/2001]	Particulate emissions (PE) shall not exceed 66.80 tons per rolling, 365-day period. [See b)(2)a.]
b.	OAC rule 3745-31-05(A)(3) [PTI 03-10931, issued 12/06/2001]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D). PE shall not exceed 1.00 pound per hour (lb/hr) and 4.38 tons per year (tpy). [See b)(2)c.] Visible PE from the stacks servicing this emissions unit shall not exceed 0% opacity, as a six-minute average. See b)(2)b.
c.	OAC rule 3745-17-11(B)	See b)(2)d.
d.	OAC rule 3745-17-07(A)	See b)(2)d.
e.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380-1399] [In accordance with 40 CFR 63.1380(b)(1), this emissions unit is an existing glass melting furnace located at a wool fiberglass manufacturing facility.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.25 kg of particulate matter (PM) (0.5 lb of PM per ton) of glass pulled for each existing glass melting furnace.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR 63.1 – 15 [40 CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which part of the general provisions in 40 CFR 63.1 – 15 apply.

(2) Additional Terms and Conditions

a. The permittee has requested federally enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD.

The combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of the monthly PE rates.

b. The “Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of three baghouse dust collectors, operated in parallel to provide full time control of PE during individual baghouse cleaning cycles.

c. All PE is assumed to be in the form of PM10 (filterable only).

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The permittee must initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The permittee must implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors, or daily glass pull rate for glass melting furnaces not so equipped, exceeds the average glass pull rate established during the performance test

as specified in 40 CFR Part 63.1384(a)(3), by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384(a)(3) for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384(a)(3) for more than 10 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse(s) is between 0.5 to 10 inches of water.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse(s) when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on once per shift 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 the pressure drop deviates from the limit or range 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 operation of the control equipment within the acceptable range 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 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. the pressure drop 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.

This range or limit on the pressure drop across the baghouse is 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 limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled 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.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain the following daily records for this emissions unit:

a. the company identification for each product group manufactured;

b. the numbers of hours of production for each product group manufactured;

c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve*, for each product group manufactured; and

d. the total PE rate (lbs/day) for all the product groups manufactured [summation of (c x b) for all product groups].

* The permittee calculates the hourly PE by employing a pac factor. The pac factor is the design density of each product produced multiplied by the design thickness of the same product. This resultant value is used to determine the PE rate (lbs/hr) from the emission factor curve. The emission factor curve is a

second degree polynomial and was derived from multiple stack tests conducted for this emissions unit. The hourly PE calculated from the polynomial is then multiplied by the number of hours of production of the product for which the pac factor was calculated.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(4) The permittee shall calculate and maintain dailyrecords of the particulateemissions and the rolling 365-dayemissions of particulates, in tons, for emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055, combined.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(5) The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system as follows.

a. The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grain per actual cubic foot) or less.

b. The bag leak detection system sensor must produce output of relative particulate emissions.

c. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative particulate emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

d. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

e. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

f. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

g. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm set-points, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under monitoring recordkeeping and reporting requirement 3(a) or 40 CFR Part

63.1383(a). In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in 40 CFR Part 63.2 of the general provisions in Subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]]

(6) The operations, maintenance, and monitoring plan required by monitoring, record keeping, and reporting requirement of 40 CFR, Part 63.1383(a) must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example of corrective actions that may be included in the plan include the following:

a. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.

b. Sealing off defective bags or filter media.

c. Replacing defective bags or filter media, or otherwise repairing the control device.

d. Sealing off a defective baghouse compartment.

e. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

f. Shutting down the process producing the particulate emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) The permittee of an existing glass-melting furnace equipped with continuous glass pull rate monitors must monitor and record the glass pull rate on an hourly basis.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee shall develop and implement a written plan as described in 40 CFR Part 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR Part 63.6(e)(3), the plan shall include:

a. procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. a maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee shall keep records of each event as required by 40 CFR Part 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR Part 63.10(e)(3)(iv).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) As required by 40 CFR Part 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) In addition to the general records required by 40 CFR Part 63.10(b)(2), the permittee shall maintain records of the following information:

a. any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

b. the formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation; and

c. glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all exceedances of the rolling, 365-day PE limitation of 68.8 tons (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined);

b. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

c. 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 baghouse;

d. each incident of deviation described in "b" (above) where a prompt investigation was not conducted;

e. each incident of deviation described in "b" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

f. each incident of deviation described in "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 (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI 03-10931]

(2) As required by 40 CFR Part 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR Part 63.10(c) as well as the additional records required by the record keeping requirements of 40 CFR Part 63.1386(d). When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

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. Emission Limitation:

PM shall not exceed 0.5 lb per ton of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

b. Emission Limitation:

66.80 tons PE per rolling, 365-day period (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined)

Applicable Compliance Method:

Compliance with the rolling, 365-day PE limitation shall be demonstrated by the record keeping requirements specified in d) of this permit.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

PE shall not exceed 1.00 lb/hr and 4.38 tpy.

Applicable Compliance Method:

The hourly emission limitation represents the emissions unit's potential to emit determined by multiplying the maximum process rate as indicated in the permit application by an emission factor derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance with the hourly PE limitation by testing in accordance with Methods 1- 5, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Visible PE shall not exceed 0% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(2) Unless disapproved by the Director, the permittee of a rotary spin manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance tests without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of intent to perform an experimental short-term production run shall include the following information:

a. The purpose of the experimental production run;

b. The affected line;

c. How the established process parameters will deviate from previously approved levels;

d. The duration of the experimental production run;

e. The date and time of the experimental production run; and

f. A description of any emission testing to be performed during the experimental production run.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR Part 63.1384.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

9. P051, Unit 89 - Curing Oven

Operations, Property and/or Equipment Description:

Line 89 Curing Oven w/thermal oxidizer

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.	OAC rule 3745-31-05(F) [PTI P0115992, issued 02/25/2014]	Particulate matter 10 microns or less in size/particulate matter 2.5 microns or less than 2.5 microns in size (PM10/PM2.5) emissions shall not exceed 1.63 pounds per hour (lbs/hr) and 7.01 tons per year (tpy). Volatile organic compounds (VOC) emissions shall not exceed 1.21 lbs/hr and 5.20 tpy. Carbon monoxide (CO) emissions shall not exceed 2.01 lbs/hr and 8.64 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.50 lb/hr and 2.15 tpy. [see b)(2)b.] See b)(2)a.
b.	OAC rule 3745-31-05(D) [PTI P0115992, issued 02/25/2014]	Particulate emissions (PE) shall not exceed 66.80 tons per rolling, 365-day period. [see b)(2)c.]
c.	ORC 3704.03(T) [PTI P0115992, issued 02/25/2014]	Nitrogen oxides (NOx) emissions shall not exceed 3.78 tons per month averaged over a 12-month rolling period. See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/01 [PTI P0115992, issued 02/25/2014]	See b)(2)f.
e.	OAC rule 3745-31-05(A)(3), as effective 12/01/06 [PTI P0115992, issued 02/25/2014]	See b)(2)h.
f.	40 CFR, Part 63, Subpart NNN [In accordance with 40 CFR 63.1380(b)(2), this emissions unit is an existing rotary spin wool fiberglass manufacturing line producing a bonded wool fiberglass building insulation product.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.6 kg of formaldehyde per mega gram (1.2 lb of formaldehyde per ton) of glass pulled.
g.	40 CFR 63.1 – 15 [40 CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 – 15 apply.
h.	40 CFR, Part 60, Subpart PPP [In accordance with 40 CFR 60.680, this emissions unit is a rotary spin wool fiberglass manufacturing line that commenced construction, modification or reconstruction after February 7, 1984.]	The permittee shall not cause to be discharged into the atmosphere from this emissions unit any gases which contain PE in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
i.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
j.	OAC rule 3745-17-11(B)	See b)(2)d.
k.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii) [see c)(2), d)(1) and e)(1)f.]
l.	OAC rule 3745-18-06(E)	See b)(2)d.

(2) Additional Terms and Conditions

a. This permit establishes the following legally and practically enforceable emission limitations. The legally and practically enforceable emission limitations are voluntary and are based on the operational restrictions contained in c)(1):

i. PM10/PM2.5* emissions shall not exceed 1.63 pounds per hour and 7.01 tons per year;

ii. VOC emissions shall not exceed 1.21 pounds per hour and 5.20 tons per year; and

iii. CO emissions shall not exceed 1.97 pounds per hour and 8.62 tons per year.

* All emissions of particulate matter are considered to be PM2.5.

b. The permittee has requested the following legally and practically enforceable emission limitations.

i. SO2 emission shall not exceed 0.50 pound per hour and 2.15 tons per year.

It should be noted that the SO2 emissions are considered to be uncontrolled.

c. The following federally enforceable limitation and operational restriction was established under the authority of OAC rule 3745-31-05(D) within PTI 03-10931, issued December 6, 2001 for purposes of avoiding Prevention of Significant Deterioration (PSD) permitting:

The combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

The maximum number of operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the monthly numbers of operating hours.

The federally enforceable limitation and associated monitoring, recordkeeping, reporting, and demonstration of compliance have been included in this permit action to preserve and maintain the requirements associated with the avoidance of PSD permitting contained in PTI 03-10931 [see b)(1)b., b)(2)b., g)(3), g)(4), g)(5), g)(6), g)(7)].

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).

e. The Best Available Technology ("BAT") requirement established under ORC rule 3704.03(T) has been determined to be monthly allowable emissions of NOx not to exceed 3.78 tons per month averaged over a 12-month rolling period.

f. The Best Available Technology ("BAT") requirement established under OAC rule 3745-31-05(A)(3), as effective November 30, 2001, has been determined to be the following:

i. SO2 emissions shall not exceed 0.50 pound per hour.

ii. use of a thermal oxidizer meeting the following maximum mass emission rates:

(a) 1.63 pounds PM10/PM2.5 per hour [as established under OAC rule 3745-31-05(F)];

(b) 1.21 pounds VOC per hour; and

(c) 1.97 pounds of CO per hour.

g. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 Changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, the requirements of 3745-31-05(A)(3) as effective on November 30, 2001 will no longer apply.

It should be noted that the emission limitations and control requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

h. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), as effective December 1, 2006 do not apply to the emissions of PM10/PM2.5, VOC, CO since the potential to emit, taking into account the practically enforceable restrictions established under OAC rule 3745-31-05(F), is less than ten tons per year. BAT requirements do not apply to SO2 emissions since the uncontrolled potential to emit is less than 10 tons per year.

c) Operational Restrictions

(1) The following operational restrictions are being established for the purpose of establishing the following legally and practically enforceable requirements:

a. The permittee shall operate the thermal incinerator at all times when the emissions unit is in operation.

[PTI P0115992 and OAC rule 3745-77-07(A)(1)]

(2) The use of any liquid organic material or substance containing organic material with a volatile organic greater than twenty percent, by volume, is prohibited.

[PTI P0115992 and OAC rule 3745-77-07(A)(1)]

(3) The permittee must operate each incinerator used to control formaldehyde emissions such that any 3-hour block average temperature in the firebox does not fall below the average established during the performance test as specified in 40 CFR 63.1384.

[PTI P0115992; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification of the resin used during the performance test as specified in 40 CFR 63.1384.

[PTI P0115992; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384. For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

[PTI P0115992; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. The composition of the volatile content of each material employed; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall properly install, operate, and maintain a monitoring device that continuously measures and records the operating temperature in the firebox of each incinerator when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the firebox of each incinerator fell below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(3) Whenever the monitored average combustion temperature within the thermal oxidizer/incinerator deviates from the range or limit 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 operation of the control equipment within the acceptable range/limit 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 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. the temperature 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.

The temperature range/limit is 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 temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not

constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative permit modification.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(4) The permittee must inspect each incinerator at least once per year according to the procedures in the operations, maintenance, and monitoring plan. At a minimum, an inspection must include the following:

a. Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor, as necessary;

b. Ensure proper adjustment of combustion air and adjust, as necessary;

c. Inspect, when possible, internal structures, for example, baffles, to ensure structural integrity per the design specifications;

d. Inspect dampers, fans, and blowers for proper operation;

e. Inspect for proper sealing;

f. Inspect motors for proper operation;

g. Inspect combustion chamber refractory lining and clean and repair/replace lining, as necessary;

h. Inspect incinerator shell for corrosion and/or hot spots;

i. For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments;

j. Generally observe that the equipment is maintained in good operating condition; and

k. Complete all necessary repairs as soon as practicable.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee must monitor and record the formulation of each batch of binder used.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) The permittee must monitor and record at least once every 8 hours, the product (LOI) and product density of each bonded wool fiberglass product manufactured.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee shall develop and implement a written plan as described in 40 CFR Part 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR Part 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee shall also keep records of each event as required by 40 CFR Part 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR Part 63.10(e)(3)(iv).

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) As required by 40 CFR Part 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) In addition to the general records required by 40 CFR Part 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a rotary spin manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Incinerator operating temperature and results of periodic inspection of incinerator components, including any period when the temperature fell below the established average or the inspection identified problems with the incinerator, the date and time of the problem, when corrective actions were initiated, the cause of the problem, an explanation of the corrective actions taken, and when the cause of the problem was corrected.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(12) The permittee shall maintain monthly records of the NOx emissions from this emissions unit; and at the end of 12 months of operation, the rolling 12-month summation of NOx emissions and the average calculated over each rolling 12-month period.

Note: The above records shall be determined in accordance with the emissions calculations presented to the Ohio EPA in the permit application submitted by the permittee.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the average combustion temperature within the firebox of each incinerator was outside of the acceptable range;

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 incinerator;

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 emissions unit(s) into compliance and/or the temperature within the firebox of the incinerator into compliance with the acceptable range, was determined to be necessary and was not taken;

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); and

f. eachmonth during which a non-complying material [see c)(2)] was employed.

These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) As required by 40 CFR Part 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR Part 63.10(c) as well as the additional records required by recordkeeping requirements d)(13) and d)(14). When no deviations have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

f) Testing Requirements

(1) 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 6 months prior to permit expiration date.

b. The emission testing shall be conducted to demonstrate compliance the mass emission rates (lb/hr) for PM10/PM2.5 and VOC.

c. The emission testing shall also include a determination of the control efficiency for VOC achieved by the thermal oxidizer.

d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. For PM10/PM2.5, Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M.

ii. For VOC, Methods 1-4 and 18, 25 or 25A, as appropriate of 40 CFR, Part 60, Appendix A.

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

iii. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

e. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it 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 at the MSOR is justification for not accepting the test results as a demonstration of compliance.

f. 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).

g. 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.

h. 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.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(2) 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. Emission Limitations:

PM10/PM2.5 emissions shall not exceed 1.63 lbs/hr and 7.01 tpy.

<u>Applicable Compliance Method</u>:

Compliance with the hourly emission limitation shall be determined based on the results of emission testing required in f)(1).

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600 hours, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance with the annual limitation shall also be demonstrated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

VOC emissions shall not exceed 1.21 lbs/hr and 5.20 tpy.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined based on the results of emission testing required in f)(1).

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600 hours, and the dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation and then restriction on the annual number of hours of operation of 8600, compliance with the annual limitation shall also be demonstrated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

NOx emissions shall not exceed 3.78 tons per month averaged over a 12-month rolling period.

Applicable Compliance Method:

Compliance with the NOx emission limitation shall be demonstrated by the record keeping requirements specified in d)(12) of this permit.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

CO emissions shall not exceed 2.01 lbs/hr and 8.64 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600 hours, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance with the annual limitation shall also be demonstrated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 0.50 lbs/hr and 2.15 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600 hours, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance with the annual limitation shall also be demonstrated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0115992;OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g. Emission Limitation:

PE shall not exceed 11.0 lbs/ton of glass pulled (5.5 kg/Mg).

Applicable Compliance Method:

If required, compliance with the allowable PE limitation above shall be determined based on the results of emission testing conducted in accordance with Methods 1 - 5E of 40 CFR, Part 60, Appendix A.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart PPP]

h. Emission Limitation:

Formaldehyde emissions shall not exceed 1.2 lbs per ton of glass pulled (0.6 kg/Mg).

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

i. Emission Limitation:

66.80 tons PE per rolling, 365-day period (from emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined)

Applicable Compliance Method:

Compliance with the rolling, 365-day PE limitation shall be demonstrated by the record keeping requirements specified in g)(6) below.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(3) Unless disapproved by the Director, the permittee of a rotary spin manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance tests without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of intent to perform an experimental short-term production run shall include the following information:

a. The purpose of the experimental production run;

b. The affected line;

c. How the established process parameters will deviate from previously approved levels;

d. The duration of the experimental production run;

e. The date and time of the experimental production run; and

f. A description of any emission testing to be performed during the experimental production run.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63,Subpart NNN]

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR Part 63.1384.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63,Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63,Subpart NNN]

(3) The permittee shall maintain the following daily records for this emissions unit:

a. the company identification for each product group manufactured;

b. the numbers of hours of production for each product group manufactured;

c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve*, for each product group manufactured; and

d. the total PE rate (lbs/day), for all the product groups manufactured [summation of (c x b) for all product groups].

* The permittee calculates the hourly PE by employing a pac factor. The pack factor is the design density of each product produced multiplied by the design thickness of the same product. This resultant value is used to figure out the PE (lbs/hr) from the emission factor curve. The emission factor curve is a statistical polynomial and was derived from multiple stack tests on this emissions unit. The hourly PE calculated from the polynomial is then multiplied by the number of hours of production of the product for which the pack factor was calculated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(4) The permittee shall calculate and maintain dailyrecords of the particulateemissions and the rolling 365-dayemissions of particulates, in tons, for emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055, combined.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(5) The permittee shall maintain monthly records of the following information:

a. the operating hours for each month; and

b. the rolling, 12-month summation of the operating hours.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(6) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all exceedances of the rolling, 12-month numbers of operating hours restriction of 8600; and

b. all exceedances of the rolling, 365-day PE limitation of 66.8 tons (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined).

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

10. P052, Unit 89 - Cooling Table

Operations, Property and/or Equipment Description:

Line 89 Cooling Table w/venturi scrubber

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 operations(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. 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(D) [PTI 03-10931, issued 12/06/2001]	66.80 tons particulate emissions (PE) per rolling, 365-day period [See b)(2)a.]
b.	OAC rule 3745-31-05(A)(3) [PTI 03-10931, issued 12/06/2001]	The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart PPP, 40 CFR, Part 63, Subpart NNN, OAC rule 3745-31-05(D) and OAC rule 3745-17-07(A). PE shall not exceed 1.53 pounds per hour (lbs/hr) and 6.58 tons per yr (tpy). [See b)(2)c.] Organic compound (OC) emissions shall not exceed 0.66 lb/hr and 2.84 tpy. Formaldehyde emissions shall not exceed 0.35 lb/hr and 1.51 tpy. See b)(2)b.
c.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380-1399] [In accordance with 40 CFR 63.1380(b)(2), this emissions unit is an existing rotary spin wool fiberglass manufacturing line producing a bonded wool fiberglass building insulation product.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.6 kg of formaldehyde per mega gram (1.2 lb of formaldehyde per ton) of glass pulled from each existing rotary spin manufacturing line.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR, Part 60, Subpart PPP	The permittee shall not cause to be discharged into the atmosphere from this emissions unit any gases which contain PE in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
e.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
f.	OAC rule 3745-17-11(B)	See b)(2)d.
g.	40 CFR 63.1-15 [40 CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN show which part of the general provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. The permittee has requested a federally enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD.

The combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

b. The "Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of a venturi scrubber.

c. All PE is assumed to be in the form of PM10 (filterable only).

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The maximum annual number of operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the monthly numbers of operating hours.

[PTI 03-10931 and OAC rule 3745-77-07(A)(1)]

(2) The permittee must initiate corrective action with 1 hour when the average pressure drop, liquid flow rate, or chemical feed rate for any 3-hour block period is outside the limits established during the performance test as specified in 40 CFR 63.1384 for each wet scrubbing control device and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when any scrubber parameter is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must operate each scrubber such that each monitored parameter is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR Part 63.1384(a)(9).

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR Part 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain the following daily records for this emissions unit:

a. the company identification for each product group manufactured;

b. the numbers of hours of production for each product group manufactured;

c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve*, for each product group manufactured; and

d. the total PE rate (lbs/day), for all the product groups manufactured [summation of (c x b) for all product groups].

* The permittee calculates the hourly PE by employing a pac factor. The pack factor is the design density of each product produced multiplied by the design thickness of the same product. This resultant value is used to figure out the PE (lbs/hr) from the emission factor curve. The emission factor curve is a statistical polynomial and was derived from multiple stack tests on this emissions unit. The hourly PE calculated from the polynomial is then multiplied by the number of hours of production of the product for which the pack factor was calculated.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall calculate and maintain dailyrecords of the particulateemissions and the rolling 365-dayemissions of particulates, in tons, for emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055, combined.

[PTI 03-10931 and 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 pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall not be less than8.4 inches w.c.

[PTI 03-10931 and 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 scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall not be less than 135 gallons per minute.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(5) The shall install, calibrate, maintain, and operate monitoring devices that continuously monitor and record the gas pressure drop across each scrubber and scrubbing liquid flow rate to each scrubber according to the procedures in the operations, maintenance, and monitoring plan. The pressure drop monitor is to be certified by its manufacturer to be accurate within 250 Pascal (1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within 5 percent over its operating range. The permittee must also continuously monitor and record the feed rate of any chemical(s) added to the scrubbing liquid.

[PTI 03-10931; OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart NNN and 40 CFR, Part 63, Subpart PPP]

(6) 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. the pressure drop and flow rate 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 and liquid flow rate 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.

[OAC rule 3745-77-07(C)(1)]

(7) All monitoring devices required under 40 CFR, Part 60, Subpart PPP shall be recalibrated quarterly in accordance with procedures under section 60.13(b).

[PTI03-10931; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart PPP]

(8) The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee must monitor and record the formulation of each batch of binder used.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) The permittee must monitor and record at least once every 8 hours, the product Loss on Ignition (LOI) and product density of each bonded wool fiberglass product manufactured.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) The permittee shall develop and implement a written plan as described in 40 CFR Part 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR Part 63.6(e)(3), the plan shall include:

a. procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. a maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(12) The permittee shall keep records of each event as required by 40 CFR Part 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR Part 63.10(e)(3)(iv).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(13) As required by 40 CFR Part 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(14) In addition to the general records required by 40 CFR Part 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a rotary spin manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Scrubber pressure drop, scrubbing liquid flow rate, and any chemical additive (including chemical feed rate to the scrubber), including any period when a parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

c. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or the liquid flow rate 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;

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.

f. all exceedances of the rolling, 12-month hours of operation restriction of 8600; and

g. all exceedances of the rolling, 365-day PE limitation of 68.8 tons (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined).

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(2) As required by 40 CFR Part 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR Part 63.10(c) as well as the additional records required by the record keeping requirements of 40 CFR part 63.1386(d). When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

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. Emission Limitation:

66.80 tons PE per rolling, 365-day period (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined)

<u>Applicable Compliance Method:</u>

Compliance with the rolling, 365-day PE limitation shall be demonstrated by the record keeping requirements specified in d) of this permit.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

PE shall not exceed 1.53 lbs/hr and 6.58 tpy.

<u>Applicable Compliance Method:</u>

If required, compliance with the hourly allowable PE limitation above shall be based on the results of stack testing conducted in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 0.66 lb/hr and 2.84 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Method 18, 25 or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

Formaldehyde emissions shall not exceed 0.35 lb/hr and 1.51 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Method 316 or 318 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03 (B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

f. Emission Limitations:

PE shall not exceed 11.0 lbs/ton of glass pulled (5.5 kg/Mg).

Applicable Compliance Method:

If required, compliance with the allowable PE limitation above shall be determined based on the results of emission testing conducted in accordance with Methods 1 - 5E of 40 CFR, Part 60, Appendix A.

[PTI 03-10931; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart PPP]

g. Emission Limitation:

Formaldehyde emissions shall not exceed 1.2 lbs per ton of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) Unless disapproved by the Director, the permittee of a rotary spin manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance tests without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of intent to perform an experimental short-term production run shall include the following information:

a. The purpose of the experimental production run;

b. The affected line;

c. How the established process parameters will deviate from previously approved levels;

d. The duration of the experimental production run;

e. The date and time of the experimental production run; and

f. A description of any emission testing to be performed during the experimental production run.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, part 63, Subpart A and in 40 CFR part 63.1384.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

11. P060, Batch Receiving

Operations, Property and/or Equipment Description:

batch receiving

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.	OAC rule 3745-31-05(A)(3) [PTI 03-16294, issued 07/06/2006]	Particulate emissions (PE) shall not exceed 0.04 pound per hour (lb/hr) and 0.18 ton per year (tpy). Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)	See b)(2)c.
c.	OAC rule 3745-17-11(B)	See b)(2)c.

(2) Additional Terms and Conditions

a. The "Best Available Technology" (BAT) requirements for this emissions unit have been determined to be the use of a baghouse (Daybin dust collector) with an overall control efficiency of 99%.

b. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-16294 and 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. Emission Limitation:

PE shall not exceed 0.04 lb/hr and 0.18 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum process weight rate (lbs/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible PE limitation shall be demonstrated in accordance with Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

12. P082, Unit 807 - Forming and Collection

Operations, Property and/or Equipment Description:

forming and collection unit 807

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.	OAC rule 3745-31-05(A)(3) [PTI P0116575, issued 04/02/2014]	The requirements of this rule also include compliance with the requirements OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 6.05 pounds per hour (lbs/hr) and 26.50 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 2.02 lbs/hr and 8.85 tpy. Organic compound (OC) emissions shall not exceed 1.87 lbs/hr and 8.19 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.21 lb/hr and 0.92 tpy.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).
f.	40 CFR Part 64 – Compliance Assurance Monitoring (CAM)	See d)(1) through d)(5) and e)(1).

(2) Additional Terms and Conditions

a. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the wet scrubber controlling this emissions unit is the pressure drop across the scrubber and the scrubber liquid flow rate. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The wet scrubber shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge) and the scrubber liquid flow rate (in gallons per minute) during operation of this/these emissions unit(s), including periods of startup and shutdown. The monitoring devices and any recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

a. The permittee shall record the following information on a continuous basis, during each day of operation:

i. the pressure drop across the scrubber, in inches of water; and

ii. the scrubber liquid flow rate, in gallons per minute.

b. Whenever the monitored values for the pressure drop and/or scrubber water flow rate deviate from the indicator range(s), the permittee shall restore operation of the emissions units and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

The permittee shall promptly investigate the cause of the deviation and shall maintain records of the following information for each investigation:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. the findings and recommendations.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the indicator range(s), unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each deviation when corrective action was taken:

(a) a description of the corrective action;

(b) the date it was completed;

(c) the date and time the deviation ended;

(d) the total period of time (in minutes) during which there was a deviation;

(e) the pressure drop and scrubber water flow rate(s) immediately after the corrective action; and

(f) the name(s) of the personnel who performed the work.

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

d. Pressure Drop Indicator Range

In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall be between 10 to 30inches of water.

e. Scrubber Water Flow Rate Indicator Range

In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall be between 285 to 315 gallons per minute.

f. The indicator ranges 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 range(s) based upon information obtained during future emission tests that demonstrate compliance with the allowable PE rate for this emissions unit. In addition, approved revisions to the range(s) 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(3) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the appropriate Ohio EPA District Office or local air agency, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1), and 40 CFR Part 64]

(4) At all times, the permittee shall maintain the monitoring, including but not limit to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(5) If it is determined by the appropriate Ohio EPA District Office or local air agency that the permittee has not used acceptable procedures in response to a deviation of the indicator range(s), the permittee may be required to develop and implement a Quality Improvement Plan (QIP) pursuant to 40 CFR Part 64.8

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(6) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install P0116575, issued on April 2, 2014: **[d)(2)]**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record keeping

requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

(7) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or the liquid flow rate 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 e)(1)a. or e)(1)b. (above) where a prompt investigation was not conducted;

d. each incident of deviation described in e)(1)a. or e)(1)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 e)(1)a. or e)(1)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 (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install P0116575, issued on April 2, 2014: **[e)(1)]**. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements

of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0116575 and 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. Emission Limitations:

PE shall not exceed 6.05 lbs/hr and 26.50 tpy.

<u>Applicable Compliance Method:</u>

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 2.02 lbs/hr and 8.85 tpy.

<u>Applicable Compliance Method:</u>

The hourly allowable CO emission limitation was established by multiplying the maximum gas burning rate (mmcf/hr) [as indicated in the permit application] by an emission factor (lb/mmcf) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 1.87 lbs/hr and 8.19 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

SO2 emissions shall not exceed 0.21 lb/hr and 0.92 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore,

provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0116575; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

13. P083, Unit 807 - Curing Oven and Sear Roll

Operations, Property and/or Equipment Description:

sear roll and curing oven 807

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.	OAC rule 3745-31-05(A)(3) [PTI P0116575, issued 04/02/2014]	The requirements of this rule also include compliance with the requirements OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 1.25 pounds per hour (lbs/hr) and 5.48 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 2.79 lbs/hr and 12.22 tpy. Organic compound (OC) emissions shall not exceed 1.14 lbs/hr and 4.99 tpy. Nitrogen oxide (NOx) emissions shall not exceed 1.09 lbs/hr and 4.77 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.30 lb/hr and 1.31 tpy.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).

(2) Additional Terms and Conditions

a. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI P0116575 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0116575 and 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. Emission Limitations:

PE shall not exceed 1.25 lbs/hr and 5.48 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 2.79 lbs/hr and 12.22 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 1.14 lbs/hr and 4.99 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an

emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

NOx emissions shall not exceed 1.09 lbs/hr and 4.77 tpy.

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable NOx emission limitation by testing in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 0.30 lb/hr and 1.31 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0116575; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

14. P084, Unit 807 - Finishing

Operations, Property and/or Equipment Description:

product finishing unit 807

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.	OAC rule 3745-31-05(A)(3) [PTI 03-16294, issued 07/06/2006]	Particulate emissions (PE) shall not exceed 0.59 pound per hour (lb/hr) and 2.58 tons per year (tpy). Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)	See b)(2)c.
c.	OAC rule 3745-17-11(B)	See b)(2)c.
d.	40 CFR Part 64 – Compliance Assurance Monitoring (CAM)	See d)(1) through d)(7) and e)(1).

(2) Additional Terms and Conditions

a. The “Best Available Technology” (BAT) requirements for this emissions unit have been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

b. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for the cyclone(s) and baghouse(s), in series, controlling this emissions unit is a daily visible emission observation of the cyclones and baghouse stack(s). The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The cyclone(s) and baghouse(s) shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(3) Whenever abnormal visible emissions are observed, the permittee shall take prompt corrective action to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(4) Investigation and records required by the monitoring and recordkeeping requirements 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(5) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the appropriate Ohio EPA District Office or local air agency, and if necessary, submit a proposed modification to the Title V

permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(6) If it is determined by the appropriate Ohio EPA District Office or local air agency that the permittee has not used acceptable procedures in response to a deviation of the indicator range(s), the permittee may be required to develop and implement a Quality Improvement Plan (QIP) pursuant to 40 CFR Part 64.8

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(7) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install 03-16294, issued on July 6, 2006: **[d)(2)]**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the baghouse stack serving this emissions unit; and

b. any corrective actions taken to eliminate the visible particulate 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 03-16294, issued on July 6, 2006: **e)(1)**. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

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. Emission Limitations:

PE shall not exceed 0.59 lb/hr and 2.58 tpy.

Applicable Compliance Method:

The hourly allowable PE emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with Test Method 9 as set forth in “Appendix on Test Methods” in 40 CFR, Part 60 (“Standards of Performance for New Stationary Sources”), as such Appendix existing on July 1, 2002.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

15. P085, Unit 800 Offline Curing Unit

Operations, Property and/or Equipment Description:

offline sear roll and curing oven (handwrap)

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.	OAC rule 3745-31-05(A)(3) [PTI P0116575, issued 04/02/2014]	The requirements of this rule also include compliance with the requirements OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 0.14 pound per hour (lb/hr) and 0.61 ton per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 0.31 lbs/hr and 1.36 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.030 lb/hr and 0.13 tpy.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).

(2) Additional Terms and Conditions

a. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI P0116575 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0116575 and 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. Emission Limitations:

PE shall not exceed 0.14 lb/hr and 0.61 tpy.

<u>Applicable Compliance Method:</u>

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 0.31 lb/hr and 1.36 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

SO2 emissions shall not exceed 0.03 lb/hr and 0.13 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0116575; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

16. P086, Unit 800 Offline Finishing

Operations, Property and/or Equipment Description:

offline product finishing unit (handwrap)

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 operations(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. 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) [PTI 03-16294, issued 07/06/2006]	Particulate emissions (PE) shall not exceed 0.07 pound per hour (lb/hr) and 0.31 ton per year (tpy). Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)	See b)(2)c.
c.	OAC rule 3745-17-11(B)	See b)(2)c.

(2) Additional Terms and Conditions

a. The "Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

b. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-16294 and 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. Emission Limitations:

PE shall not exceed 0.07 lb/hr and 0.31 tpy.

<u>Applicable Compliance Method:</u>

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

17. P092, Unit 87 - Forming and Collection

Operations, Property and/or Equipment Description:

line 87 forming and collection

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 operations(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. 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 3745-31-10 through 20 [PTI P0103686, issued 01/09/2009]	Carbon monoxide (CO) emissions shall not exceed 60.0 pounds per hour (lbs/hr) and 262.80 tons per rolling 12-month period.
b.	OAC rule 3745-31-05(A)(3)(b) [PTI P0103686, issued 01/09/2009]	See b)(2)b.
c.	OAC rule 3745-31-05(A)(3) [PTI P0103686, issued 01/09/2009]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate matter equal to or less than 10 microns in size (PM10) emissions shall not exceed 9.99 pounds per hour (lbs/hr) and 43.76 tons per year (tpy). [See b)(2)c.] Volatile organic compounds (VOC) emissions shall not exceed 7.51 lbs/hr and 32.89 tpy.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack(s) serving this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
e.	40 CFR, Part 63, Subpart NNN	See b)(2)d.
f.	OAC rule 3745-17-11(B)	The emission limitations specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
g.	OAC rule 3745-114-01 ORC 3704.03(F)	See g)(1)
h.	OAC rule 3745-18-06(E)	See b)(2)e.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for CO were cost effective.

b. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the nitrogen oxides (NOx) and sulfur dioxide (SO2) emissions from this air contaminant source since the uncontrolled potential to emit for each pollutant is less than ten tons per year.

The potential to emit for NOx emissions for this emissions unit is 5.39 tpy; determined by multiplying the maximum hourly emission rate of 1.23 lbs/hr (as determined by stack testing) by the maximum operating schedule of 8760 hours per year.

The potential to emit for SO2 emissions for this emissions unit is 0.88 tpy; determined by multiplying the maximum hourly emission rate of 0.20 lbs/hr (as determined by stack testing) by the maximum operating schedule of 8760 hours per year.

c. All particulate matter emissions are PM10 (filterable only).

d. 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR, Part 63, Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)

e. The potential to emit for SO2 from this emissions unit [see b)(2)b.] is less than the allowable emission limitation established pursuant to this rule.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI P0103686 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI P0103686 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI P0103686 and 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. Emission Limitations:

PM10 shall not exceed 9.99 lbs/hr and 43.76 tpy.

Applicable Compliance Method:

The hourly allowable PM10 limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0103686 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 60.0 lbs/hr and 262.80 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0103686 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

VOC emissions shall not exceed 7.51 lbs/hr and 32.89 tons VOC/yr.

Applicable Compliance Method:

The hourly allowable VOC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0103686 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0103686; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) Modeling to demonstrate compliance with ORC 3704.03(F)(4)(b) ["Review of New Sources of Air Toxics Emissions, Option A."] 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. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification"

as defined by OAC rule 3745-31-01. 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 permit to install.

18. P093, Unit 87 - Curing Oven

Operations, Property and/or Equipment Description:

line 87 curing operation

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 operations(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. 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) (PTI 03-17015, issued 01/10/2006)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate matter of 10 microns or less (PM10) shall not exceed 1.78 pounds per hour (lbs/hr) and 7.80 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 4.37 lbs/hr and 19.14 tpy. Organic compound (OC) emissions shall not exceed 2.88 lbs/hr and 12.61 tpy. [See b)(2)d.] Nitrogen oxide (NOx) emissions shall not exceed 3.66 lbs/hr and 16.03 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.09 lb/hr and 0.39 tpy. Formaldehyde emissions shall not exceed 0.82 lb/hr and 3.59 tpy.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	40 CFR, Part 63, Subpart NNN	See b)(2)c.
d.	OAC rule 3745-17-11(B)	See b)(2)b.
e.	OAC rule 3745-18-06(E)	See b)(2)b.
f.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).

(2) Additional Terms and Conditions

a. All particulate matter emissions are PM10(filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR 63 Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)

d. All OC are volatile organic compounds (VOC).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI 03-17015; OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-07(M)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall collect and record the following information each month for this emissions unit:

a. The company identification for each liquid organic material employed in this emissions unit; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed).

[PTI 03-17015; OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-07(M)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material [as specified in c)(1)] was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI 03-17015; OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-07(M)]

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. Emission Limitations:

PM10 emissions shall not exceed 1.78 lbs/hr and 7.80 tpy.

<u>Applicable Compliance Method:</u>

The hourly allowable PM10 limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 201/201A and 202 of 40 CFR Part 51, Appendix M. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA, Northwest District Office.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 4.37 lbs/hr and 19.14 tpy.

<u>Applicable Compliance Method:</u>

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (tons/hr) [as indicated in the permit application] by an

emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 2.88 lbs/hr and 12.61 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Method 1-4, and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

NOx emissions shall not exceed 3.66 lbs/hr and 16.03 tpy.

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4, and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore,

provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 0.09 lb/hr and 0.39 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4, and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

Formaldehyde emissions shall not exceed 0.82 lb/hr and 3.59 tpy.

Applicable Compliance Method:

The hourly allowable formaldehyde emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance by testing in accordance with Methods 1-4, and 316 or 318 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-17015 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI 03-17015; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

19. P301, Unit 21 - Forming and Collection

Operations, Property and/or Equipment Description:

Melts glass using natural gas to make glass fibers.

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 operations(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. 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 3745-17-11(B)(1)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
c.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380-1399] [In accordance with 40 CFR 63.1380(b)(3), this emissions unit is an existing flame attenuation wool fiberglass manufacturing line producing a bonded pipe product.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kilograms of formaldehyde per mega gram (6.8 pounds of formaldehyde per ton) of glass pulled.
d.	40 CFR 63.1-15 [CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 -15 apply.

(2) Additional Terms and Conditions

a. PE from this emissions unit shall be less than 10 pounds per hour*.

* The uncontrolled mass rate of PE from this emissions unit is less than 10 pounds/hour (the permittee has demonstrated this based on stack testing). Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, based on Table I of OAC rule 3745-17-

11, the allowable PE limitation is greater than 10 lbs PE/hr. However, to ensure that Figure II will not be applicable, the permittee has agreed to accept the PE limitation stated above (less than 10 lbs/hr).

c) Operational Restrictions

(1) The permittee must initiate corrective action within 1 hour when the monitored process parameter level(s) is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for the process modification(s) used to control formaldehyde emissions and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the process parameter(s) is outside the limits(s) established during the performance test as specified in 40 CFR 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must operate the process modifications such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR part 63.1384(a)(9).

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR part 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

(3) The permittee must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must include as part of their operations, maintenance, and monitoring plan the following information:

a. Procedures for the proper operation and maintenance of the process.

b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate.

c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions.

d. A schedule for monitoring the process parameter(s).

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation binder.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) The permittee must monitor and record the formulation of each batch of binder used.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended.

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction of minimize emissions.

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(12) In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[OAC rule 3745-77-07(C)(1)]

(2) As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by the record keeping requirements of paragraphs d)(11) and d)(11). When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

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. Emission Limitation:

PE shall be less than 10.0 lbs/hr

<u>Applicable Compliance Method:</u>

Compliance with the hourly allowable PE limitation above shall be based on the results of stack testing conducted pursuant to the methods in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(10)]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation in accordance with the methods in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

c. Emission Limitation:

Formaldehyde emissions shall not exceed 6.8 lbs per ton of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) Unless disapproved by the Director, the permittee of a flame attenuation manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;

b. the affected line;

c. how the established process parameters will deviate from previously approved levels;

d. the duration of the experimental production run;

e. the date and time of the experimental production run; and

f. a description of any emission testing to be performed during the experimental production run.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new

control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR Part 63.1384.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

20. P308, Unit 23 - Forming and Collection

Operations, Property and/or Equipment Description:

Melts glass using natural gas to make glass fibers.

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 operations(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. 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 rules 3745-31-10 through 20 [PTI 03-13943, issued 05/22/2003]	Carbon monoxide (CO) emissions shall not exceed 74.73 pounds per hour (lbs/hr). See b)(2)a.
b.	OAC rule 3745-31-05(D) [PTI 03-13943, issued 05/22/2003]	CO emissions shall not exceed 262.87 tons per rolling 12-month period based upon a restriction on glass pull rates. Particulate emissions (PE) shall not exceed 29.73 tons per rolling 12-month period based upon a restriction on glass pull rates. [See b)(2)c.] Organic compound (OC) emissions shall not exceed 21.41 tons per rolling 12-month period based upon a restriction on glass pull rates. [See b)(2)d.] Nitrogen oxide (NOx) emissions shall not exceed 16.84 tons per rolling 12-month period based upon a restriction on glass pull rates. Fluoride emissions shall not exceed 1.04 tons per rolling 12-month period based upon a restriction on glass pull rates. See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(A)(3) [PTI 03-13943, issued 05/22/2003]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 through 20, OAC rule 3745-17-07(A), 3745-31-05(D) and 3745-18-06(E). PE shall not exceed 9.92 lbs/hr. OC emissions shall not exceed 5.12 lbs/hr. NOx emissions shall not exceed 6.32 lbs/hr. Fluoride emissions shall not exceed 0.39 lb/hr.
d.	OAC rule 3745-17-11(B)	See b)(2)f.
e.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
f.	OAC rule 3745-18-06(E)	None [See b)(2)g.]
g.	40 CFR, Part 63, Subpart NNN	See b)(2)e.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for CO were cost effective.

b. The permittee has requested federally enforceable restrictions to limit the potential to emit from the emissions units contained in PTI 03-13943 by limiting the annual glass pull rate for the two highest emitting product groups manufactured in this emissions unit [See c)(1) and c)(2)].

c. All PE is assumed to be in the form of PM10 (Filterable only).

d. For purposes of federal enforceability the restriction of OC's effectively restricts volatile organic compounds (VOC).

e. 40 CFR, Part 63, Subpart NNN is not applicable to this emissions unit because it is a modified existing source that produces bonded, heavy-density product.

f. The emission limitations specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

g. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate is less than 1,000 pounds per hour.

c) Operational Restrictions

(1) The maximum annual glass pull rate for low-medium efficiency products shall not exceed 780,000 pounds, based upon a rolling 12-month summation of the monthly low-medium efficiency products glass pull rates.

[PTI 03-13943 and OAC rule 3745-77-07(A)(1)]

(2) The maximum annual glass pull rate for high efficiency products shall not exceed 813,120 pounds, based upon a rolling 12-month summation of the monthly high efficiency products glass pull rates.

[PTI 03-13943 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain the following monthly records for this emissions units:

a. The company identification for each product manufactured;

b. Documentation of the type and efficiency of each product manufactured;

c. The glass pull rates for each product manufactured, in pounds;

d. The rolling, 12-month summation of the monthly glass pull rates for high efficiency products manufactured, in pounds; and

e. The rolling, 12-month summation of the monthly glass pull rates for low-medium efficiency products manufactured, in pounds.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(4) In addition to the above information, the permittee shall also collect and record the following information each month for this emissions unit:

a. The total glass pull rates for each product group manufactured, in pounds;

b. The calculated emission rates for CO, PE, OC, NOx and fluorides [d)(5)a. x the product-specific emission factor*] for each product group manufactured, in tons.

c. The total emission rates for CO, PE, OC, NOx and fluorides for all the product groups manufactured [summation of d)(5)b. for all products], in tons; and

d. The rolling, 12-month summations of the monthly CO, PE, OC, NOx and fluorides emission rates, in tons.

*the product-specific emission factors are specified in PTI application 03-13943 submitted to the Ohio EPA, Northwest District Office on December 12, 2002.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify exceedances of the following:

a. The rolling, 12-month glass pull rate limitations for low-medium and high efficiency products of 780,000 and 813,120 tons, respectively;

b. The rolling 12-month emission limitations for CO, PE, OC, NOx and fluorides.

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

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) 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 180 days after permit issuance. Additionally testing frequency will be determined in accordance with Ohio EPA, Office of Air Pollution Control, Division of Engineering, Engineering Guide #16.

Note: Based on the result of the most recent emissions test and Engineering Guide #16, the permittee is required to conduct testing on an annual basis. Should the emissions test following the permit issuance allow for a variation in the testing schedule, the permittee shall notify the Ohio EPA of the new testing frequency required.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for CO in the appropriate averaging period(s)

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. for CO, Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

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

d. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it 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 at the MSOR 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.

[OAC rule 3745-77-07(C)(1)]

(2) 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. Emission Limitation:

The maximum annual glass pull rate for low-medium efficiency products shall not exceed 780,000 pounds, based upon a rolling 12-month summation of the monthly low-medium efficiency products glass pull rates.

Applicable Compliance Method:

Compliance with the annual glass pull rate restriction above shall be demonstrated by the record keeping requirements specified in d)(3) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

The maximum annual glass pull rate for high efficiency products shall not exceed 813,120 pounds, based upon a rolling 12-month summation of the monthly high efficiency products glass pull rates.

Applicable Compliance Method:

Compliance with the annual glass pull rate restriction above shall be demonstrated by the record keeping requirements specified in d)(3) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

CO emissions shall not exceed 74.73 lbs/hr and 262.87 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for CO (lbs/ton)*.

Compliance with the hourly emission limitation shall be demonstrated through the testing required in f)(1).

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

PE shall not exceed 9.92 lbs/hr and 29.73 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for PE (lbs/ton)*.

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

OC emissions shall not exceed 5.12 lbs/hr and 21.41 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for OC (lbs/ton)*.

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

NOx emissions shall not exceed 6.32 lbs/hr and 16.84 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for NOx (lbs/ton).

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitations:

Fluoride emissions shall not exceed 0.39 lb/hr and 1.04 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for fluorides (lbs/ton)*.

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 13 or 26, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

h. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If require, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI 03-13943; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

*the product-specific emission factors are specified in PTI application 03-13943 submitted to the Ohio EPA, Northwest District Office on December 12, 2002.

g) Miscellaneous Requirements

(1) None.

21. P309, Unit 24 - Forming and Collection

Operations, Property and/or Equipment Description:

Melts glass using natural gas to make glass fibers.

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 operations(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. 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 3745-31-10 through 20 [PTI 03-13943, issued 05/22/2003]	See b)(2)a. Carbon monoxide (CO) emissions shall not exceed 99.63 pounds per hour (lbs/hr).
b.	OAC rule 3745-31-05(D) [PTI 03-13943, issued 05/22/2003]	See b)(2)b. CO emissions shall not exceed 246.69 tons per rolling, 12-month period based upon a restriction on glass pull rates. Particulate emissions (PE) shall not exceed 34.89 tons per rolling, 12-month period based upon a restriction on glass pull rates. [See b)(2)c.] Organic compound emissions (OC) shall not exceed 26.29 tons per rolling, 12-month period based upon a restriction on glass pull rates. [See b)(2)d.] Nitrogen oxide (NOx) emissions shall not exceed 17.56 tons per rolling, 12-month period based upon a restriction on glass pull rates. Fluoride emissions shall not exceed 1.10 tons per rolling, 12-month period based upon a restriction on glass pull rates.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(A)(3) [PTI 03-13943, issued 05/22/2003]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-10 through 20, OAC rule 3745-17-07(A), OAC rule 3745-21-07(G), 3745-31-05(D), and 3745-18-06(E). PE shall not exceed 8.28 lbs/hr. OC emissions shall not exceed 6.82 lbs/hr. NOx emissions shall not exceed 4.14 lbs/hr. Fluoride emissions shall not exceed 0.26 lb/hr.
d.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)	See b)(2)e.
f.	40 CFR, Part 63 Subpart, NNN	See b)(2)f.
g.	OAC rule 3745-18-06(E)	See b)(2)g.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for CO were cost effective.

b. The permittee has requested federally enforceable restrictions to limit the potential to emit from the emissions units contained in PTI 03-13943 by limiting the annual glass pull rate for the two highest emitting product groups manufactured in this emissions unit [See c)(1) and c)(2)].

c. All PE is assumed to be in the form of PM10 (filterable only).

d. For purposes of federal enforceability the restriction of OC's effectively restricts volatile organic compounds (VOC).

e. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

f. 40 CFR, Part 63, Subpart NNN is not applicable to existing flame attenuation lines producing bonded heavy-density product. For the purpose of 40 CFR, Part 63, Subpart NNN, this modified emissions unit is still considered an existing emissions unit. (The modifications performed do not constitute reconstruction as defined in 40 CFR 63.2)

g. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate is less than 1,000 pounds per hour.

c) Operational Restrictions

(1) The maximum annual glass pull rate for Aircraft and Aerospace (AA) products shall not exceed 1,200,000 pounds, based upon a rolling 12-month summation of the monthly low-medium efficiency products glass pull rates.

[PTI 03-13943 and OAC rule 3745-77-07(A)(1)]

(2) The maximum annual glass pull rate for high efficiency products shall not exceed 485,760 pounds, based upon a rolling 12-month summation of the monthly high efficiency products glass pull rates.

[PTI 03-13943 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were

taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain the following monthly records for this emissions units:

a. The company identification for each product manufactured;

b. Documentation of the type and efficiency of each product manufactured;

c. The glass pull rates for each product manufactured, in pounds;

d. The rolling, 12-month summation of the monthly glass pull rates for high efficiency products manufactured, in pounds; and

e. The rolling, 12-month summation of the monthly glass pull rates for AA products manufactured, in pounds.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(4) In addition to the above information, the permittee shall also collect and record the following information each month for this emissions unit:

a. The total glass pull rates for each product group manufactured, in pounds;

b. The calculated emission rates for CO, PE, OC, NOx and fluorides [d)(4)a. x the product-specific emission factor*] for each product group manufactured, in tons.

c. The total emission rates for CO, PE, OC, NOx and fluorides for all the product groups manufactured [summation of d)(4)b. for all products], in tons; and

d. The rolling, 12-month summations of the monthly CO, PE, OC, NOx and fluorides emission rates, in tons.

*the product-specific emission factors are specified in PTI application 03-13943 submitted to the Ohio EPA, Northwest District Office on December 12, 2002.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify exceedances of the following:

a. The rolling, 12-month glass pull rate limitations for AA and high efficiency products of 1,200,000 and 485,760 tons, respectively;

b. The rolling 12-month emission limitations for CO, PE, OC, NOx and fluorides.

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

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) 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 approximately 2.5 years after issuance of the permit (following the effective date for the Title V permit) and within 6 months prior to the permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) for CO in the appropriate averaging period(s)

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. for CO, Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

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

d. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it 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 at the MSOR 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.

[OAC rule 3745-77-07(C)(1)]

(2) 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. Emission Limitation:

The maximum annual glass pull rate for AA products shall not exceed 1,200,000 pounds, based upon a rolling 12-month summation of the monthly AA products glass pull rates.

Applicable Compliance Method:

Compliance with the annual glass pull rate restriction above shall be demonstrated by the record keeping requirements specified in d)(3) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

The maximum annual glass pull rate for high efficiency products shall not exceed 485,760 pounds, based upon a rolling 12-month summation of the monthly high efficiency products glass pull rates.

Applicable Compliance Method:

Compliance with the annual glass pull rate restriction above shall be demonstrated by the record keeping requirements specified in d)(3) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

CO emissions shall not exceed 99.63 lbs/hr and 246.69 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for CO (lbs/ton)*.

Compliance with the hourly emission limitation shall be demonstrated through the testing required in f)(1).

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

PE shall not exceed 8.28 lbs/hr and 34.89 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for PE (lbs/ton)*.

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

OC emissions shall not exceed 6.82 lbs/hr and 26.29 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for OC (lbs/ton)*.

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

NOx emissions shall not exceed 4.14 lbs/hr and 17.56 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for NOx (lbs/ton)*.

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitations:

Fluoride emissions shall not exceed 0.26 lb/hr and 1.10 tons per rolling 12-month period.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum glass pull rate (tons/hr) by the emission factor for fluorides (lbs/ton)*.

If required, compliance with the hourly emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 13 or 26, as appropriate, of 40 CFR, Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(4) of this permit.

[PTI 03-13943 and OAC rule 3745-77-07(C)(1)]

h. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If require, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI 03-13943; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

*the product-specific emission factors are specified in PTI application 03-13943 submitted to the Ohio EPA, Northwest District Office on December 12, 2002.

g) Miscellaneous Requirements

(1) None.

22. P317, Unit 24 - Curing Oven

Operations, Property and/or Equipment Description:

The oven process cures fiberglass product.

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 operations(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. 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 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 1.30 pounds per hour (lbs/hr).
b.	OAC rule 3745-17-07(A)	Visible PE from the stacks servicing these emissions units shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
c.	OAC rule 3745-18-06(E)	None [See b)(2)a.]

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate (natural gas) is less than 1,000 pounds per hour.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[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. Emission Limitation:

PE shall not exceed 1.30 lbs/hr.

Applicable Compliance Method:

If required, compliance with the PE limitation above shall be demonstrated in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(10)]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation in accordance with the methods in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

23. P325, Unit 21 - Fiberglass Pipe Curing Oven

Operations, Property and/or Equipment Description:

The oven process cures fiberglass pipe insulation.

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)(15), d)(16), d)(17) and d)(18).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) [PTI 03-03282, issued 11/16/2000]	The requirements of this rule also include compliance with the requirements of 40 CFR, Part 63, Subpart NNN and OAC rule 3745-17-11(B)(1), 3745-17-07(A) and 3745-18-06(E). Particulate emissions (PE) shall not exceed 6.22 tons per year (tpy). Sulfur dioxide (SO2) emissions shall not exceed 1.52 pounds per hour (lbs/hr) and 6.70 tpy. Carbon monoxide (CO) emissions shall not exceed 1.87 lbs/hr and 8.20 tpy. Nitrogen oxides (NOx) emissions shall not exceed 1.16 lbs/hr and 5.10 tpy. Organic compound (OC) emissions shall not exceed 2.99 lbs/hr and 13.10 tpy. [See b)(2)a.]
b.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 1.42 lbs/hr. [See b)(2)b.]
c.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380-1399] [In accordance with 40 CFR 63.1380(b)(3), this emissions unit is an existing flame attenuation wool fiberglass manufacturing line producing a bonded pipe product.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per mega gram (6.8 lb of formaldehyde per ton) of glass pulled from each existing or new flame attenuation manufacturing line that produces pipe product wool fiberglass.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).
f.	OAC rule 3745-18-06(E)	See b)(2)c.
g.	40 CFR 63.1-15 [CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 -15 apply.

(2) Additional Terms and Conditions

a. For purposes of federal enforceability, all OC is considered to be VOC.

b. This emissions unit shall be vented to either the North or South HEAF units.

c. The maximum process weight rate is less than 1,000 pounds/hr. Therefore, this emissions unit is exempt from the SO2 emission limitation based on OAC rule 3745-18-06(E), pursuant to OAC rule 3745-18-06(C).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI 03-03282; OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-07(M)]

(2) The permittee must initiate corrective action within 1 hour when the monitored process parameter level(s) is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for the process modification(s) used to control formaldehyde emissions and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the process parameter(s) is outside the limits(s) established during the performance test as specified in 40 CFR 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must operate the process modifications such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee shall use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee shall use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR Part 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the volatile content (including water) of each material as employed; and

b. the liquid organic portion of said volatile content, in percent by volume as applied.

[PTI 03-03282; OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-07(M)]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(2)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rules 3745-77-07(C)(1)]

(3) Notwithstanding the frequency of reporting requirements specified in e)(2), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(2).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

(4) The permittee shall establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee shall monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee shall include as part of their operations, maintenance, and monitoring plan the following information:

a. procedures for the proper operation and maintenance of the process;

b. process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR Part 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate;

c. correlation(s) between process parameter(s) to be monitored and formaldehyde emissions;

d. a schedule for monitoring the process parameter(s); and

e. record keeping procedures, consistent with the record keeping requirements of 40 CFR Part 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) The permittee shall monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee shall monitor and record the formulation of each batch of binder used.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee shall monitor and record at least once every 8 hours, the product (LOI) and product density of each bonded wool fiberglass product manufactured.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) The permittee shall develop and implement a written plan as described in 40 CFR part 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR part 63.6(e)(3), the plan shall include:

a. procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. a maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) The permittee shall also keep records of each event as required by 40 CFR Part 63.10(b) of this part and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR Part 63.10(e)(3)(iv).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(12) As required by 40 CFR Part 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(13) In addition to the general records required by 40 CFR Part 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a flame attenuation manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. The process parameter level(s) flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any period when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(14) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install 03-03282, issued on November 16, 2000: **d)(2) and d)(3)**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record

keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

(15) PTI 03-03282, issued 11/17/1999 allows the use of coatings specified by the permittee in the permit to install application for emissions units P325 and P327. To fulfill the best available technology requirements of OAC rule 3745-31-05 and to ensure compliance with OAC rule 3745-17-07 (Air Pollution Nuisances Prohibited), the emission limitations specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Toxic Contaminant: Formaldehyde

TLV (mg/m3): 273

Maximum Hourly Emission Rate (lbs/hr): 0.57 (P325 and P327 combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.26

MAGLC (ug/m3): 6.49

Toxic Contaminant: Phenol

TLV (mg/m3): 19,000

Maximum Hourly Emission Rate (lbs/hr): 0.35 (P325 and P327 combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.16

MAGLC (ug/m3): 452

Toxic Contaminant: Methanol

TLV (mg/m3): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.18 (P325 and P327 combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.56

MAGLC (ug/m3): 6,238

[PTI 03-03282]

(16) OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a modification:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the table above;

b. changes to the emissions unit or its exhaust parameters (e.g. increase emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);

c. changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and

d. changes in the composition of the materials used, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

[PTI 03-03282]

(17) The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

a. The change is not otherwise considered a "modification" under OAC Chapter 3745-31;

b. The permittee can continue to comply with the allowable emission limitations specified in its permit to install; and

c. Prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

[PTI 03-03282]

(18) For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

[PTI 03-03282]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material [as specified in c)(1)] was employed in this emissions unit. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI 03-03282; OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-07(M)]

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[OAC rule 3745-77-07(C)(1)]

(3) As required by 40 CFR Part 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR Part 63.10(c) as well as the additional records required by the record keeping requirements of paragraph V.17 of this permit. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

[OAC rule 3745-77-07(C)(1)]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirement is as stringent as or more stringent than the reporting requirements contained in Permit to Install 03-03282, issued on November 16, 2000: **e)(2)**. The reporting requirements contained in the above-referenced Permit-to-Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

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. Emission Limitations:

PE shall not exceed 1.42 lbs/hr and 6.22 tpy.

Applicable Compliance Method:

If required, compliance with the emission limitation above shall be conducted in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

NOx emissions shall not exceed 1.16 lbs/hr and 5.10 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of stack testing conducted in accordance with Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

CO emissions shall not exceed 1.87 lbs/hr and 8.20 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of stack testing conducted in accordance with Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

OC emissions shall not exceed 2.99 lbs/hr and 13.1 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of stack testing conducted in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 1.52 lbs/hr and 6.70 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of the stack testing conducted in accordance with Methods 1 through 4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600, and then dividing by 2000. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance shall also be shown with the annual limitation.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per mega gram (6.8 lb of formaldehyde per ton) of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g. Emission Limitation:

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

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

(2) Unless disapproved by the Director, the permittee may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;

b. the affected line;

c. how the established process parameters will deviate from previously approved levels;

d. the duration of the experimental production run;

e. the date and time of the experimental production run; and

f. a description of any emission testing to be performed during the experimental production run.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) For all process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR Part 63.1384.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

24. P326, Fiberglass Pipe Grinding, Trimming, & Slitting

Operations, Property and/or Equipment Description:

This process grinds, trims and slits the cured pipe insulation to proper final product specifications.

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 operations(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. 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) [PTI 03-03282, issued 11/16/2000]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 1.00 pound per hour (lb/hr) and 4.40 tons per year (tpy). See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)(1)	See b)(2)b.

(2) Additional Terms and Conditions

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

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install 03-03282, issued on November 16, 2000: **d)(2) and d)(3)**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(2)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-15-03(B)(1)(a); OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

(3) Notwithstanding the frequency of reporting requirements specified in e)(2), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(2).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-15-03(B)(1)(a); OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirement is as stringent as or more stringent than the reporting requirements contained in Permit to Install 03-03282, issued on November 16, 2000: **e)(2)**. The reporting requirements contained in the above-referenced Permit-to-Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[OAC rule 3745-15-03(B)(1)(a); OAC rule 3745-15-03(C) and 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. Emission Limitations:

PE shall not exceed 1.00 lb/hr and 4.40 tpy.

<u>Applicable Compliance Method</u>:

If required, the permittee shall demonstrate compliance with the lb/hr based upon the results of stack testing conduced in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

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

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI 03-03282; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(B)(1)]

g) Miscellaneous Requirements

(1) None.

25. P327, Fiberglass Pipe Sear Roll

Operations, Property and/or Equipment Description:

The Sear Roll thermally sets the exterior of the uncured pipe insulation before entering the curing oven.

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)(15), d)(16), d)(17) and d)(18).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) [PTI 03-03282, issued 11/16/2000]	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-11(B)(1), 3745-18-06(E) and 40 CFR, Part 63, Subpart NNN. Particulate emissions (PE) shall not exceed 0.75 pound per hour (lb/hr) and 3.30 tons per year (tpy). Sulfur dioxide (SO2) emissions shall not exceed 0.15 lb/hr and 0.70 tpy. Nitrogen oxide (NOX) emissions shall not exceed 0.12 lb/hr and 0.50 tpy. Carbon monoxide (CO) emissions shall not exceed 0.19 lb/hr and 0.80 tpy. Organic compound (OC) emissions shall not exceed 0.31 lb/hr and 1.40 tpy. [See b)(2)a.]
b.	OAC rule 3745-17-11(B)(1)	See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
d.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380-1399]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 40 CFR 63.1380(b)(3), this emissions unit is an existing flame attenuation wool fiberglass manufacturing line producing a bonded pipe product.]	formaldehyde per mega gram (6.8 lb of formaldehyde per ton) of glass pulled.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).
f.	40 CFR 63.1-15 [CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 -15 apply.

(2) Additional Terms and Conditions

a. For purposes of federally enforceability, all OC is considered to be VOC.

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[OAC rule 3745-77-07(A)(1) and OAC rule 3745-21-07(M)]

(2) The permittee must initiate corrective action within 1 hour when the monitored process parameter level(s) is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for the process modification(s) used to control formaldehyde emissions and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the process parameter(s) is outside the limits(s) established during the performance test as specified in 40 CFR 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must operate the process modifications such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee shall use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384(a)(9).

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee shall use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384(a)(9). For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month:

a. The volatile content (including water) of each material, as employed; and

b. The liquid organic portion of said volatile content, in percent by volume, as applied.

[OAC rule 3745-77-01(C)(1) and OAC rule 3745-21-07(M)]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(2)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-15-03(B)(1)(a); OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

(3) Notwithstanding the frequency of reporting requirements specified in e)(2), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(2).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-15-03(B)(1)(a); OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

(4) The permittee shall establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee shall monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee shall include as part of their operations, maintenance, and monitoring plan the following information:

a. Procedures for the proper operation and maintenance of the process;

b. Process parameter(s) to be monitored to demonstrate compliance with the applicable emission limits in 40 CFR 63.1382. Examples of process parameters include loss on ignition (LOI), binder solids content, and binder application rate;

c. Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions;

d. A schedule for monitoring the process parameter(s); and

e. Record keeping procedures, consistent with the record keeping requirements of 40 CFR 63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) The permittee shall monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee shall monitor and record the formulation of each batch binder used.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee shall monitor and record at least once every 8 hours, the product (LOI) and product density of each bonded wool fiberglass product manufactured.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) The permittee shall also keep records of each event as required by 40 CFR 63.10(b) of this part and record and report if an action taken during a startup, shutdown or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(12) As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee shall retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or record. The most recent 2 years of records shall be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape or in microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(13) In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch, the LOI and density for each product manufactured on this flame attenuation line and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. The process parameter level(s) of flame attenuation manufacturing lines that use process modifications to comply with the emission limits, including any periods when the parameter level(s) deviated from the established limit(s), the date and time of the deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(14) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install 03-03282, issued on November 16, 2000: **d)(2) and d)(3)**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

(15) PTI 03-03282, issued 11/17/1999 allows the use of coatings specified by the permittee in the permit to install application for emissions units P325 and P327. To fulfill the best available technology requirements of OAC rule 3745-31-05 and to ensure compliance with OAC rule 3745-17-07 (Air Pollution Nuisances Prohibited), the emission limitations specified in this permit were established using the Ohio EPA's "Air Toxic Policy" and are based on both the materials used and the design parameters of the emissions unit's

exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Toxic Contaminant: Formaldehyde

TLV (mg/m3): 273

Maximum Hourly Emission Rate (lbs/hr): 0.57 (P325 and P327 combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.26

MAGLC (ug/m3): 6.49

Toxic Contaminant: Phenol

TLV (mg/m3): 19,000

Maximum Hourly Emission Rate (lbs/hr): 0.35 (P325 and P327 combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.16

MAGLC (ug/m3): 452

Toxic Contaminant: Methanol

TLV (mg/m3): 262,000

Maximum Hourly Emission Rate (lbs/hr): 1.18 (P325 and P327 combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.56

MAGLC (ug/m3): 6,238

[PTI 03-03282]

(16) OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process <u>may</u> be determined to be a modification:

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the table above;

b. changes to the emissions unit or its exhaust parameters (e.g. increase emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);

c. changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and

d. changes in the composition of the materials used, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

[PTI 03-03282]

(17) The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

a. The change is not otherwise considered a "modification" under OAC Chapter 3745-31;

b. The permittee can continue to comply with the allowable emission limitations specified in its permit to install; and

c. Prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

[PTI 03-03282]

(18) For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

[PTI 03-03282]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material [as specified in c)(1)] was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-21-07(M)]

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[OAC rule 3745-15-03(B)(1)(a); OAC rule 3745-15-03(C) and OAC rule 3745-77-07(C)(1)]

(3) As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) as well as the additional records required by record keeping requirement d)(13) and d)(14) of this permit. When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

[OAC rule 3745-77-01(C)(1) and 40 CFR, Part 63, Subpart NNN]

(4) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirement is as stringent as or more stringent than the reporting requirements contained in Permit to Install 03-03282, issued on November 16, 2000: **e)(2)**. The reporting requirements contained in the above-referenced Permit-to-Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

f) Testing Requirements

a. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

<u>Applicable Compliance Method:</u>

If required, the permittee shall demonstrate compliance with the visible PE limitation in accordance with the methods in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

b. Emission Limitations:

PE shall not exceed 0.75 lb/hr and 3.30 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of the stack testing conducted in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

NOx emissions shall not exceed 0.12 lb/hr and 0.50 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of the stack testing conducted in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

CO emissions shall not exceed 0.19 lb/hr and 0.80 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of the stack testing conducted in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

OC emissions shall not exceed 0.31 lb/hr and 1.40 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of the stack testing conducted in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

SO2 emissions shall not exceed 1.52 lbs/hr and 6.70 tpy.

Applicable Compliance Method:

If required, compliance with the hourly emission limitation based upon the results of the stack testing conducted in accordance with Methods 1-4 and 6, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-03282 and OAC rule 3745-77-07(C)(1)]

g. Emission Limitation:

The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 3.4 kg of formaldehyde per mega gram (6.8 lbs of formaldehyde per ton) of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) Unless disapproved by the Director, the permittee may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in

duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;

b. the affected line;

c. how the established process parameters will deviate from previously approved levels;

d. the duration of the experimental production run;

e. the date and time of the experimental production run; and

f. a description of any emission testing to be performed during the experimental production run.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) For all process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in 40 CFR 63.6(e)(3), Subpart A and in 40 CFR 63.1384.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

26. P801, Process Water Treatment - POND

Operations, Property and/or Equipment Description:

Process Water Storage Pond

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 operations(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. 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) [PTI 03-13993, issued 05/17/2007]	Fugitive volatile organic compounds (VOC) shall not exceed 18.61 tons per year (tpy).

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall conduct quarterly sampling and testing to determine the individual concentrations, in % by weight, of phenol, formaldehyde and methanol in the process water stored.

[PTI 03-13993 and OAC rule 3745-77-07(C)(1)]

(2) Each quarter, the permittee shall calculate the tons of fugitive VOC emissions based on the quarterly testing results.

[PTI 03-13993 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall calculate the annual fugitive VOC's emissions based upon the summation of the last four quarterly VOC results.

[PTI 03-13993 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify any exceedances of the annual VOC limit. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI 03-13993 and 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. Emission Limitation:

Fugitive VOC shall not exceed 18.61 tpy.

Applicable Compliance Method:

The emission limitation was established in accordance with the company supplied calculations based on an average phenol, formaldehyde, and methanol concentrations, by weight, a maximum water surface area of 105,025 ft^2 and a maximum operating schedule of 8760 hours per year. Compliance shall be demonstrated by the monitoring and record keeping requirements specified in d) of these terms and conditions.

[OAC rule 3745-77-07(C)(1) and PTI 03-13993]

g) Miscellaneous Requirements

(1) None.

27. Emissions Unit Group -Curing Ovens 23 and 25 (Plant 2): P316,P318

EU ID	Operations, Property and/or Equipment Description
P316	Fiber glass curing oven #23.
P318	Fiber glass curing oven #25.

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 operations(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. 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 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 1.66 pounds per hour (lbs/hr).
b.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-18-06(E)	Exempt [See b)(2)a.]

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) pursuant to OAC rule 3745-18-06(C) because the process weight rate (natural gas) is less than 1,000 pounds per hour.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations long:

a. The color of the emissions;

b. Whether the emissions are representative of normal operations;

c. If the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. The total duration of any visible emission incident; and

e. Any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[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. Emission Limitation:

PE shall not exceed 1.66 lbs/hr.

Applicable Compliance Method:

If required, compliance with the emission limitation above shall be conducted in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(10)]

b. Emission Limitation:

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

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

28. Emissions Unit Group -Electric Melters: P061,P062,P063

EU ID	Operations, Property and/or Equipment Description
P061	electric melter 1
P062	electric melter 2
P063	electric melter 3

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 operations(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. 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) [PTI 03-16294, issued 07/06/2006]	The requirements of this rule also include compliance with the requirements of 40 CFR, Part 63, Subpart NNN. Particulate emissions (PE) shall not exceed 0.34 pound per hour (lb/hr) and 1.49 tons per year (tpy) PE. [See b)(2)b.] Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity as a six-minute average. Sulfur dioxide (SO2) emissions shall not exceed 0.45 lb/hr and 1.97 tpy. Carbon monoxide (CO) emissions shall not exceed 0.89 lb/hr and 3.90 tpy. See b)(2)a.
b.	40 CFR, Part 63, Subpart NNN [40 CFR 63.1380 – 1399] [In accordance with 40 CFR 63.1380(b)(1), this emissions unit is a new glass melting furnace located at a wool fiberglass manufacturing facility.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.25 kilogram (kg) of particulate matter (PM) per mega gram (Mg) (0.5 lb of PM per ton) of glass pulled.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(A)	See b)(2)c.
d.	OAC rule 3745-17-11(B)	See b)(2)c.
e.	OAC rule 3745-18-06(E)	See b)(2)c.
f.	40 CFR 63.1 – 15 [40 CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 -15 apply.

(2) Additional Terms and Conditions

a. The "Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of a baghouse (melter dust collector) with an overall control efficiency of 99%.

b. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) In order to maintain compliance with the applicable emission limitations(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0 to 10.0 inches of water.

[OAC rule 3745-77-07(A)(1)]

(2) The permittee must initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

[PTI 03-16294; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors exceeds the average glass pull rate established during the performance test as specified in 40 CFR 63.1384, by greater than 20 percent and

complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[PTI 03-16294; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[PTI 03-16294; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[PTI 03-16294; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system according to the following requirements:

a. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

b. The bag leak detection system sensor must produce output of relative PM emissions.

c. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

d. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

e. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, “Fabric Filter Bag Leak Detection Guidance” (EPA–454/R–98–015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

f. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

g. Following the initial adjustment, the owner or operator shall not adjust the range, averaging period, alarm set points, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under paragraph (a) of this section. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in 40 CFR 63.2 of the general provisions in Subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The operations, maintenance, and monitoring plan required by paragraph III.1. must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may be included in the plan include the following:

a. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.

b. Sealing off defective bags or filter media.

c. Replacing defective bags or filter media, or otherwise repairing the control device.

d. Sealing off a defective baghouse compartment.

e. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

f. Shutting down the process producing the particulate emissions.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(6) As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site;

b. The owner or operator may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; and

c. The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. Any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

b. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on once-per-shift 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 the pressure drop deviates from the limit or range 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 operation of the control equipment within the acceptable range 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 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. the pressure drop 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.

This range or limit on the pressure drop across the baghouse is 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 limit or range for the pressure drop based upon information

obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled 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.

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the baghouse during the operation of the emissions unit(s):

a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

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 baghouse;

c. each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

d. each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. each incident of deviation described in “a” 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 (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-15-03(B)(1)(a); OAC rule 3745-15-03(C); OAC rule 3745-77-07(C)(1) and 40 CFR Part 64.9(a)].

(2) As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) of this part as well as the additional records required by the recordkeeping requirements of paragraph d)(8) and d)(9) of this section. When no deviations have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

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. Emission Limitations:

PE shall not exceed 0.34 lb/hr and 1.49 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by a controlled emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 0.89 lb/hr and 3.90 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

SO2 emissions shall not exceed 0.45 lb/hr and 1.97 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum process weight rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Method 1-4 and 6, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

PM shall not exceed 0.5 lb per ton of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

e. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity, as a six-minute average

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the baghouse stack shall be determined in accordance with Test Method 9 as set forth in “Appendix on Test Methods” in 40 CFR, Part 60 (“Standards of Performance for New Stationary Sources”), as such Appendix existed on July 1, 2002.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and; OAC rule 3745-17-07(B)]

(2) Unless disapproved by the Director, the permittee may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in

duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;

b. the affected line;

c. how the established process parameters will deviate from previously approved levels;

d. the duration of the experimental production run;

e. the date and time of the experimental production run; and

a description of any emission testing to be performed during the experimental production run.

[PTI 03-16294; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR Part 63.1384.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

29. Emissions Unit Group -Forming and Collection: P001,P310

EU ID	Operations, Property and/or Equipment Description
P001	Line 81 forming and collection
P310	Line 25 forming and collection

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 operations(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. 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 3745-17-11(B)(1)	See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from the stacks servicing these emissions units shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. PE from these emissions units shall be less than 10 pounds per hour (lbs/hr)*.

* The uncontrolled mass rate of PE from this emissions unit is less than 10 pounds/hour (the permittee has demonstrated this based on stack testing). Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, based on Table I of OAC rule 3745-17-11, the allowable PE limitation is greater than 10 lbs PE/hr. However, to ensure that Figure II will not be applicable, the permittee has agreed to accept the PE limitation stated above (less than 10 lbs/hr).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least five (5) days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate

emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and

c. any corrective actions taken to minimize or eliminate the visible particulate 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.

[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. Emission Limitation:

PE shall be less than 10.0 lbs/hr

Applicable Compliance Method:

If required, compliance shall be based on the results of stack testing conducted pursuant to the methods in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(10)]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation in accordance with the methods in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

30. Emissions Unit Group -Glass Melting Furnaces: P303,P307

EU ID	Operations, Property and/or Equipment Description
P303	Glass melting furnace unit 2601.
P307	Glass melting furnace unit 2603.

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 operations(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. 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 3745-17-11(B)(1)	Particulate emissions (PE) shall not exceed 8.70 pounds per hour (lbs/hr). [See b)(2)a.]
b.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
c.	OAC rule 3745-18-06(E)(2)	Sulfur dioxide (SO2) emissions shall not exceed 72.0 lbs/hr.
d.	40 CFR Part 63, Subpart NNN [40 CFR 63.1380-1399] [In accordance with 40 CFR 63.1380(b)(1), this emissions unit is an existing glass-melting furnace located at a wool fiberglass manufacturing facility.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.25 kilogram (kg) of particulate matter (PM) per mega gram (Mg) (0.5 lb of PM per ton) of glass pulled.
e.	40 CFR 63.1-15 [CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 -15 apply.

(2) Additional Terms and Conditions

a. Emissions unit P303 and P307 are subject to the "grouping" provisions of OAC rule 3745-17-11(A)(3). Therefore, the PE shall not exceed 8.70 lbs/hr from emissions units P303 and P307, combined.

c) Operational Restrictions

(1) The permittee shall initiate corrective action within 1 hour of an alarm from a bag leak detection system and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The permittee shall implement a Quality Improvement Plan (QIP) consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the bag leak detection system alarm is sounded for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee shall initiate corrective action within 1 hour when any 3-hour block average of the monitored electrostatic precipitator (ESP) parameter is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee shall implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when the monitored ESP parameter is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee shall operate the ESP such that the monitored ESP parameter is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 10 percent of the total operating time in a six-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee must initiate corrective action within 1 hour when the average glass pull rate of any 4-hour block period for glass melting furnaces equipped with continuous glass pull rate monitors exceeds the average glass pull rate established during the performance test as specified in 40 CFR 63.1384, by greater than 20 percent and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(7) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 63, Subpart D when the glass pull rate exceeds, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee must operate each glass-melting furnace such that the glass pull rate does not exceed, by more than 20 percent, the average glass pull rate established during the performance test as specified in 40 CFR Part 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall prepare for each glass melting furnace subject to the provisions of 40 CFR 63.1380, a written operations, maintenance, and monitoring plan. The plan shall be submitted to the Director for review and approval as part of the application for a Part 70 permit. The plan shall include the following information:

a. Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in 40 CFR 63.1382;

b. procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturer's instructions; and

c. corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The permittee shall install, calibrate, maintain, and continuously operate a bag leak detection system according to the following requirements:

a. The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

b. The bag leak detection system sensor must produce output of relative PM emissions.

c. The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

d. For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

e. A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, “Fabric Filter Bag Leak Detection Guidance” (EPA–454/R–98–015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

f. Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

g. Following the initial adjustment, the owner or operator shall not adjust the range, averaging period, alarm set points, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under paragraph (a) of this section. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in 40 CFR 63.2 of the general provisions in Subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The operations, maintenance, and monitoring plan shall specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may be included in the plan include the following:

a. Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.

b. Sealing off defective bags or filter media.

c. Replacing defective bags or filter media, or otherwise repairing the control device.

d. Sealing off a defective baghouse compartment.

e. Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

f. Shutting down the process producing the particulate emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee shall monitor the ESP according to the procedures in the operations, maintenance, and monitoring plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The operations, maintenance and monitoring plan for the ESP shall contain the following information:

a. The ESP operating parameter(s), such as secondary voltage of each electrical field, to be monitored and the minimum and/or maximum value(s) that will be used to identify any operational problems;

b. A schedule for monitoring the ESP operating parameter(s);

c. Record keeping procedures, consistent with the record keeping requirements of 40 CFR 63.1386, to show that the ESP operating parameter(s) is within the limit(s) established during the performance test; and

d. Procedures for the proper operation and maintenance of the ESP.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR 63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in this part 63, Subpart A and in 40 CFR 63.1384.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee shall develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR 63.6(e)(3), the plan shall include:

a. Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. Corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. A maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.10(e)(3)(iv).

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) As required by 40 CFR 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site;

b. The owner or operator may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche; and

c. The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) In addition to the general records required by 40 CFR 63.10(b)(2), the permittee shall maintain records of the following information:

a. Any bag leak detection system alarms, including the date and time of the alarm, when corrective actions were initiated, the cause of the alarm, an explanation of the corrective actions taken, and when the cause of the alarm was corrected;

b. Glass pull rate, including any period when the pull rate exceeded the average pull rate established during the performance test by more than 20 percent, the date and time of the exceedance, when corrective actions were initiated, the cause of the exceedance, an explanation of the corrective actions taken, and when the cause of the exceedance was corrected.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

e) Reporting Requirements

(1) As required by 40 CFR 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR 63.10(c) of this part as well as the additional records required by the recordkeeping requirements of paragraph (d) of this section. When no deviations have occurred, the owner or operator shall submit a report stating that no excess emissions occurred during the reporting period.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

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. Emission Limitation:

PE from emissions units P303 and P307, combined, shall not exceed 8.7 lbs/hr.

Applicable Compliance Method:

If required, compliance with the PE limitation above shall be demonstrated in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(10)]

b. Emission Limitation:

SO2 emissions shall not exceed 72.0 lbs/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the emission limitation above by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-18-06(E)]

c. Emission Limitation:

Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-07(B)]

d. Emission Limitation:

The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.25 kilogram (kg) of particulate matter (PM) per mega gram (Mg) (0.5 lb of PM per ton) of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the Operation, Maintenance and Monitoring Plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) Unless disapproved by the Director, the permittee may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance test without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of the intent to perform and experimental short-term production runt shall include the following information:

a. the purpose of the experimental production run;

b. the affected line;

c. how the established process parameters will deviate from previously approved levels;

d. the duration of the experimental production run;

e. the date and time of the experimental production run; and

f. a description of any emission testing to be performed during the experimental production run.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) None.

31. Emissions Unit Group -Pipe Collection A: P064,P067,P070,P073

EU ID	Operations, Property and/or Equipment Description
P064	forming and collection unit 801
P067	forming and collection unit 802
P070	forming and collection unit 803
P073	forming and collection unit 804

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.	OAC rule 3745-31-05(A)(3) [PTI P0116575, issued 04/02/2014]	The requirements of this rule also include compliance with the requirements OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 2.69 pounds per hour (lbs/hr) and 11.78 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 2.02 lbs/hr and 8.85 tpy. Organic compound (OC) emissions shall not exceed 0.83 lb/hr and 3.64 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.09 lb/hr and 0.39 tpy.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).

(2) Additional Terms and Conditions

a. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI P0116575 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0116575 and 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. Emission Limitations:

PE shall not exceed 2.69 lbs/hr and 11.78 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 2.02 lbs/hr and 8.85 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 0.83 lb/hr and 3.64 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an

emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

SO2 emissions shall not exceed 0.09 lb/hr and 0.39 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0116575; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

32. Emissions Unit Group -Pipe Collection B: P076,P079

EU ID	Operations, Property and/or Equipment Description
P076	forming and collection unit 805
P079	forming and collection unit 806

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.	OAC rule 3745-31-05(A)(3) [PTI P0116575, issued 04/02/2014]	The requirements of this rule also include compliance with the requirements OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 4.03 pounds per hour (lbs/hr) and 17.65 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 2.02 lbs/hr and 8.85 tpy. Organic compound (OC) emissions shall not exceed 1.25 lbs/hr and 5.48 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.14 lb/hr and 0.61 tpy.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).
f.	40 CFR Part 64 – Compliance Assurance Monitoring (CAM)	See d)(1) through d)(6) and e)(1).

(2) Additional Terms and Conditions

a. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. The emissions from these emissions units shall be vented to the wet scrubber(s) at all times the emissions units are in operation.

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI P0116575 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for these emissions units have been developed for particulate emissions. The CAM performance indicators for the wet scrubber(s) controlling these emissions units are the pressure drop across the scrubber(s) and the scrubber(s) liquid flow rate(s). The emissions units and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The wet scrubber(s) shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (in pounds per square inch, gauge) and the scrubber liquid flow rate (in gallons per minute) during operation of this/these emissions unit(s), including periods of startup and shutdown. The monitoring devices and any recorders shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals.

a. The permittee shall record the following information on a continuous basis, during each day of operation:

i. the pressure drop across the scrubber(s), in inches of water; and

ii. the scrubber(s) liquid flow rate(s), in gallons per minute.

b. Whenever the monitored values for the pressure drop and/or scrubber water flow rate(s) deviate from the indicator range(s), the permittee shall restore operation of the emissions units and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

The permittee shall promptly investigate the cause of the deviation and shall maintain records of the following information for each investigation:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. the findings and recommendations.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the indicator range(s), unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each deviation when corrective action was taken:

(a) a description of the corrective action;

(b) the date it was completed;

(c) the date and time the deviation ended;

(d) the total period of time (in minutes) during which there was a deviation;

(e) the pressure drop and scrubber water flow rate(s) immediately after the corrective action; and

(f) the name(s) of the personnel who performed the work.

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

d. Pressure Drop Indicator Range

In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the pressure drop across the scrubber, that must be maintained in order to demonstrate compliance, shall be between 10 to 30inches of water.

e. Scrubber Water Flow Rate Indicator Range

In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range for the scrubber liquid flow rate, that shall be maintained in order to demonstrate compliance, shall be between 285 to 315 gallons per minute.

f. The indicator ranges 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 range(s) based upon information obtained during future emission tests that demonstrate compliance with the allowable PE rate for this emissions unit. In addition, approved revisions to the range(s) 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(3) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the appropriate Ohio EPA District Office or local air agency, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1), and 40 CFR Part 64]

(4) At all times, the permittee shall maintain the monitoring, including but not limit to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(5) If it is determined by the appropriate Ohio EPA District Office or local air agency that the permittee has not used acceptable procedures in response to a deviation of the indicator range(s), the permittee may be required to develop and implement a Quality Improvement Plan (QIP) pursuant to 40 CFR Part 64.8

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(6) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(7) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install P0116575, issued on April 2, 2014: **[d)(2)]**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or the liquid flow rate 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 e)(1)a. or e)(1)b. (above) where a prompt investigation was not conducted;

d. each incident of deviation described in e)(1)a. or e)(1)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 e)(1)a. or e)(1)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 (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1), OAC rule 3745-15-03(C) and 40 CFR Part 64]

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install P0116575, issued on April 2, 2014: **[e)(1)]**. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

(3) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0116575 and 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. Emission Limitations:

PE shall not exceed 4.03 lbs/hr and 17.65 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 2.02 lbs/hr and 8.85 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 1.25 lbs/hr and 5.48 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

SO2 emissions shall not exceed 0.14 lb/hr and 0.61 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0116575; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

33. Emissions Unit Group -Product Finishing A: P066,P069,P072,P075

EU ID	Operations, Property and/or Equipment Description
P066	product finishing unit 801
P069	product finishing unit 802
P072	product finishing unit 803
P075	product finishing unit 804

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 operations(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. 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) [PTI 03-16294, issued 07/06/2006]	Particulate emissions (PE) shall not exceed 0.26 pound per hour (lb/hr) and 1.14 tons per year (tpy). [See b)(2)b.] Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity as a six-minute average. See b)(2)a.
b.	OAC rule 3745-17-07(A)	See b)(2)c.
c.	OAC rule 3745-17-11(B)	See b)(2)c.
d.	40 CFR Part 64 – Compliance Assurance Monitoring (CAM)	See d)(1) through d)(6) and e)(1).

(2) Additional Terms and Conditions

a. The "Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

b. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for the cyclone(s) and baghouse(s), in series, controlling this emissions unit is a daily visible emission observation of the cyclones and baghouse stack(s). The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The cyclone(s) and baghouse(s) shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(3) Whenever abnormal visible emissions are observed, the permittee shall take prompt corrective action to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(4) Investigation and records required by the monitoring and recordkeeping requirements 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(5) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the appropriate Ohio EPA District Office or local air agency, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(6) If it is determined by the appropriate Ohio EPA District Office or local air agency that the permittee has not used acceptable procedures in response to a deviation of the indicator range(s), the permittee may be required to develop and implement a Quality Improvement Plan (QIP) pursuant to 40 CFR Part 64.8

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(7) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install 03-16294, issued on July 6, 2006: **[d)(2)]**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the baghouse stack serving this emissions unit; and

b. any corrective actions taken to eliminate the visible particulate 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 03-16294, issued on July 6, 2006: **[e)(1)]**. The reporting requirements contained

in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

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. Emission Limitations:

PE shall not exceed 0.26 lb/hr and 1.14 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Visible PE shall not exceed 5 % opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9 as set forth in “Appendix on Test Methods” in 40 CFR Part 60 (“Standards of Performance for New Stationary Sources”), as such appendix existed on July 1, 2002.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

34. Emissions Unit Group -Product Finishing B: P078,P081

EU ID	Operations, Property and/or Equipment Description
P078	product finishing unit 805
P081	product finishing unit 806

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 operations(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. 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) [PTI 03-16294 issued 07/06/2006]	Particulate emissions (PE) shall not exceed 0.39 pound per hour (lb/hr) and 1.71 tons per year (tpy). [See b)(2)b.] Visible PE from the stack(s) servicing this emissions unit shall not exceed 5% opacity as a six-minute average.
b.	OAC rule 3745-17-07(A)	See b)(2)c.
c.	OAC rule 3745-17-11(B)	See b)(2)c.
d.	40 CFR Part 64 – Compliance Assurance Monitoring (CAM)	See d)(1) through d)(6) and e)(1).

(2) Additional Terms and Conditions

a. The "Best Available Technology" (BAT) requirement for this emissions unit has been determined to be the use of a control system consisting of a cyclone and baghouse (finishing dust collector). The control system shall achieve a 99% removal efficiency for PE (100% capture).

b. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

c. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for the cyclone(s) and baghouse(s), in series, controlling this emissions unit is a daily visible emission observation of the cyclones and baghouse stack(s). The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The cyclone(s) and baghouse(s) shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(3) Whenever abnormal visible emissions are observed, the permittee shall take prompt corrective action to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(4) Investigation and records required by the monitoring and recordkeeping requirements 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(5) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the appropriate Ohio EPA District Office or local air agency, and if necessary, submit a proposed modification to the Title V

permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(6) If it is determined by the appropriate Ohio EPA District Office or local air agency that the permittee has not used acceptable procedures in response to a deviation of the indicator range(s), the permittee may be required to develop and implement a Quality Improvement Plan (QIP) pursuant to 40 CFR Part 64.8

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(7) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirement is as stringent as or more stringent than the monitoring and record keeping requirement contained in Permit to Install 03-16294, issued on July 6, 2006: **[d)(2)]**. The monitoring and record keeping requirements contained in the above-referenced Permit-to-Install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the baghouse stack serving this emissions unit; and

b. any corrective actions taken to eliminate the visible particulate 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.

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 64]

(2) Pursuant to OAC Rule 3745-77-07(A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in Permit to Install 03-16294, issued on July 6, 2006: **e)(1)**. The reporting requirements contained in the above-referenced Permit to Install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the Permit to Install.

[OAC rule 3745-77-07(A)(3)(a)(ii)]

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. Emission Limitations:

PE shall not exceed 0.39 lb/hr and 1.71 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Visible PE shall not exceed 5 % opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with Test Method 9 as set forth in “Appendix on Test Methods” in 40 CFR Part 60 (“Standards of Performance for New Stationary Sources”), as such appendix existed on July 1, 2002.

[PTI 03-16294 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

35. Emissions Unit Group -Sear Roll/Curing A: P065,P068,P071,P074

EU ID	Operations, Property and/or Equipment Description
P065	sear roll and curing oven 801
P068	sear roll and curing oven 802
P071	sear roll and curing oven 803
P074	sear roll and curing oven 804

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.	OAC rule 3745-31-05(A)(3) PTI P0116575, issued 04/02/2014]	The requirements of this rule also include compliance with the requirements OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 0.56 pound per hour (lb/hr) and 2.45 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 1.24 lbs/hr and 5.43 tpy. Organic compound (OC) emissions shall not exceed 0.51 lb/hr and 2.23 tpy. Nitrogen oxide (NOx) emissions shall not exceed 0.49 lb/hr and 2.15 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.13 lb/hr and 0.57 tpy.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).

(2) Additional Terms and Conditions

a. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI P0116575 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were

representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0116575 and 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. Emission Limitations:

PE shall not exceed 0.56 lb/hr and 2.45 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 1.24 lbs/hr and 5.43 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore,

provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 0.51 lb/hr and 2.23 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

NOx emissions shall not exceed 0.49 lb/hr and 2.15 tpy.

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 0.13 lb/hr and 0.57 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0116575; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

36. Emissions Unit Group -Sear Roll/Curing B: P077,P080

EU ID	Operations, Property and/or Equipment Description
P077	sear roll and curing oven 805
P080	sear roll and curing oven 806

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.	OAC rule 3745-31-05(A)(3) [PTI P0116575, issued 04/02/2014]	The requirements of this rule also include compliance with the requirements OAC rule 3745-17-07(A). Particulate emissions (PE) shall not exceed 0.83 pound per hour (lb/hr) and 3.64 tons per year (tpy). [See b)(2)a.] Carbon monoxide (CO) emissions shall not exceed 1.86 lbs/hr and 8.15 tpy. Organic compound (OC) emissions shall not exceed 0.76 lb/hr and 3.33 tpy. Nitrogen oxide (NOx) emissions shall not exceed 0.73 lb/hr and 3.20 tpy. Sulfur dioxide (SO2) emissions shall not exceed 0.20 lb/hr and 0.88 tpy.
b.	OAC rule 3745-17-07(A)	Visible PE from the stack(s) servicing this emissions unit shall not exceed 20% opacity as a six-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)	See b)(2)b.
d.	OAC rule 3745-18-06(E)	See b)(2)b.
e.	OAC rule 3745-21-07(M)(4)	Exempt pursuant to OAC rule 3745-21-07(M)(5)(d)(ii).

(2) Additional Terms and Conditions

a. All PE is assumed to be in the form of particulate matter less than 10 microns in size (PM10) (filterable only).

b. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) The use of any liquid organic material or substance containing liquid organic material with a volatile content greater than twenty percent, by volume, is prohibited.

[PTI P0116575 and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform checks at least 5 days per week, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) Notwithstanding the frequency of reporting requirements specified in e)(1), the permittee may reduce the frequency of visual observations from at least five (5) days per week to weekly readings for this emissions unit if the following conditions are met:

a. For 1 full quarter the facility's visual observations indicate no abnormal visible emissions; and

b. The permittee continues to comply with all the record keeping and monitoring requirements specified in d)(1).

The permittee shall revert to readings of five (5) days per week if any abnormal visible emissions are observed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain monthly records of the following information for this emissions unit:

a. The composition of the volatile content of each material employ; and

b. The liquid organic portion of the volatile content, in % by volume, of each material employed.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate 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.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which a non-complying material was employed. These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI P0116575 and 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. Emission Limitations:

PE shall not exceed 0.83 lb/hr and 3.64 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable PE limitation by testing in accordance with Methods 1-5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

CO emissions shall not exceed 1.86 lbs/hr and 8.15 tpy.

Applicable Compliance Method:

The hourly allowable CO emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable CO emission limitation by testing in accordance with Methods 1-4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitations:

OC emissions shall not exceed 0.76 lb/hr and 3.33 tpy.

Applicable Compliance Method:

The hourly allowable OC emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an

emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and Method 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitations:

NOx emissions shall not exceed 0.73 lb/hr and 3.20 tpy.

Applicable Compliance Method:

The hourly allowable NOx emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass) derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable OC emission limitation by testing in accordance with Methods 1-4 and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 0.20 lb/hr and 0.88 tpy.

Applicable Compliance Method:

The hourly allowable SO2 emission limitation was established by multiplying the maximum glass pull rate (lb/hr) [as indicated in the permit application] by an emission factor (lb/lb of glass] derived from stack testing of a similar emissions unit.

If required, the permittee shall demonstrate compliance hourly allowable SO2 emission limitation by testing in accordance with Methods 1-4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was determined by multiplying the hourly emission limitation by 8760 hours/yr and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[PTI P0116575 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

Visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0116575; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g) Miscellaneous Requirements

(1) None.

37. Emissions Unit Group -Unit 89 Collection Modules A B C: P048,P049,P050

EU ID	Operations, Property and/or Equipment Description
P048	Line 89 Collection Module A w/venturi scrubber
P049	Line 89 Collection Module B w/venturi scrubber
P050	Line 89 Collection Module C w/venturi scrubber

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.	OAC rule 3745-31-05(F) [PTI P0115992, issued 02/25/2014]	Particulate matter 10 microns or less in size/particulate matter 2.5 microns or less in size (PM10/PM2.5) emissions shall not exceed 9.99 pounds per hour (lb/hr) and 42.96 tons per year (tpy) from P048. PM10/PM2.5 emissions shall not exceed 9.02 lbs/hr and 38.79 tpy from P049. PM10/PM2.5 emissions shall not exceed 7.76 lbs/hr and 33.37 tpy from P050. <u>For each emissions unit individually</u> Volatile organic compounds (VOC) emissions shall not exceed 3.00 lbs/hr and 12.90 tpy. Sulfur Dioxide (SO2) emissions shall not exceed 1.00 lb/hr and 4.30 tpy. [See b)(2)b.] See b)(2)a.
b.	OAC rule 3745-31-05(D) [PTI P0115992, issued 02/25/2014]	Particulate emissions (PE) shall not exceed 66.80 tons per rolling, 365-day period. [see b)(2)c.]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	ORC 3704.03(T) [PTI P0115992, issued 02/25/2014]	<u>For each emissions unit individually</u> Carbon monoxide (CO) emissions shall not exceed 3.26 tons per month averaged over a 12-month rolling period. See b)(2)e.
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/01 [PTI P0115992, issued 02/25/2014]	<u>For each emissions unit individually</u> Nitrogen oxides (NOx) emissions shall not exceed 0.69 tons per month averaged over a 12-month rolling period. See b)(2)f. and b)(2)g.
e.	OAC rule 3745-31-05(A)(3), as effective 12/01/06 [PTI P0115992, issued 02/25/2014]	See b)(2)h.
f.	40 CFR, Part 63, Subpart NNN [In accordance with 40 CFR 63.1380(b)(2), this emissions unit is an existing rotary spin wool fiberglass manufacturing line producing a bonded wool fiberglass building insulation product.]	The permittee shall not discharge or cause to be discharged into the atmosphere in excess of 0.6 kg of formaldehyde per mega gram (1.2 lb of formaldehyde per ton) of glass pulled from each existing rotary spin manufacturing line.
g.	40 CFR 63.1 – 15 [40 CFR 63.1380(d)]	Table 1 of Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the general provisions in 40 CFR 63.1 – 15 apply.
h.	40 CFR, Part 60, Subpart PPP [In accordance with 40 CFR 60.680, this emissions unit is a rotary spin wool fiberglass manufacturing line that commenced construction, modification or reconstruction after February 7, 1984.]	The permittee shall not cause to be discharged into the atmosphere from this emissions unit any gases which contain PE in excess of 5.5 kg/Mg (11.0 lbs/ton) of glass pulled.
i.	OAC rule 3745-17-07(A)	Visible PE from the stack servicing this emissions unit shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
j.	OAC rule 3745-17-11(B)	See b)(2)d.
k.	OAC rule 3745-21-07(M)(4)	See b)(2)i.
l.	OAC rule 3745-18-06(E)	See b)(2)d.

(2) Additional Terms and Conditions

a. This permit establishes the following legally and practically enforceable emission limitations. The legally and practically enforceable emission limitations are voluntary and are based on the operational restrictions contained in c)(1):

i. PM10/PM2.5* emissions shall not exceed 9.99 pounds per hour and 42.96 tons per year from P048;

ii. PM10/PM2.5* emissions shall not exceed 9.02 pounds per hour and 38.79 tons per year from P049;

iii. PM10/PM2.5* emissions shall not exceed 7.76 pounds per hour and 33.37 tons per year from P050; and

iv. VOC emissions shall not exceed 3.00 pounds per hour and 12.9 tons per year from each emissions unit individually.

*All emissions of particulate matter are considered to be PM2.5.

b. The permittee has requested the following legally and practically enforceable emission limitations.

i. SO2 emissions shall not exceed 1.0 pounds per hour and 4.30 tons per year from each emissions unit individually.

It should be noted that the SO2 emissions are considered to be uncontrolled.

c. The following federally enforceable limitation and operational restriction was established under the authority of OAC rule 3745-31-05(D) within PTI 03-10931, issued December 6, 2001 for purposes of avoiding Prevention of Significant Deterioration (PSD) permitting:

The combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of emissions.

The maximum number of operating hours for this emissions unit shall not exceed 8600, based upon a rolling, 12-month summation of the monthly numbers of operating hours.

The federally enforceable limitation and associated monitoring, recordkeeping, reporting, and demonstration of compliance have been included in this permit action to preserve and maintain the requirements associated with the avoidance of PSD permitting contained in PTI 03-10931 [see b)(1)b., b)(2)b., g)(3), g)(4), g)(5), g)(6), g)(7)].

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).

e. The Best Available Technology ("BAT") requirement established under ORC 3704.03(T) has been determined to be the following:

i. CO emissions shall not exceed 3.26 tons per month averaged over a 12-month rolling period.

ii. use of a venturi scrubber meeting the following maximum mass emission rates

(a) 9.99 pounds PM10/PM2.5 per hour from P048 [as established under OAC rule 3745-31-05(F)];

(b) 9.02 pounds PM10/PM2.5 per hour from P049 [as established under OAC rule 3745-31-05(F)];

(c) 7.76 pounds PM10/PM2.5 per hour from P050 [as established under OAC rule 3745-31-05(F)]; and

(d) 3.00 pounds VOC per hour from each emissions unit individually.

f. The Best Available Technology ("BAT") requirement established under OAC rule 3745-31-05(A)(3), as effective November 30, 2001, has been determined to be the following:

i. NOx emissions shall not exceed 0.69 tons per month averaged over a 12-month rolling period.

ii. SO2 emissions shall not exceed 1.0 pound per hour [as established under OAC rule 3745-31-05(F)].

g. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 Changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, the requirements of 3745-31-05(A)(3) as effective on November 30, 2001 will no longer apply.

It should be noted that the emission limitations and control requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

h. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3), as effective December 1, 2006 do not apply to the emissions of NOx and SO2 since the uncontrolled potential to emit is less than 10 tons per year.

i. This emissions unit is not subject to the requirements of the rule because it does not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

c) Operational Restrictions

(1) The following operational restrictions are being established for the purpose of establishing the following legally and practically enforceable requirements:

a. The permittee shall operate the venturi scrubbers at all times when these emissions units are in operation.

[PTI P0115992 and OAC rule 3745-77-07(A)(1)]

(2) The permittee must initiate corrective action within 1 hour when the average pressure drop, liquid flow rate, or chemical feed rate for any 3-hour block period is outside the limits established during the performance tests as specified in 40 CFR 63.1384 for each wet scrubbing control device and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.

[PTI P0115662; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR, Part 64, Subpart D when any scrubber parameter is outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

[PTI P0115662; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(4) The permittee must operate each scrubber such that each monitored parameter is not outside the limit(s) established during the performance test as specified in 40 CFR Part 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[PTI P0115662; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(5) The permittee must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in 40 CFR 63.1384.

[PTI P0115662; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in 40 CFR 63.1384. For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder formulation does not constitute a change in the binder formulation.

[PTI P0115662; OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart NNN]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee must operate each scrubber such that each monitored parameter is not outside the limit(s) established during the performance test as specified in 40 CFR 63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.

[PTI P0115662; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The shall install, calibrate, maintain, and operate monitoring devices that continuously monitor and record the gas pressure drop across each scrubber and scrubbing liquid flow rate to each scrubber according to the procedures in the operations, maintenance, and monitoring plan. The pressure drop monitor is to be certified by its manufacturer to be accurate within 250 Pascal (1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within 5 percent over its operating range. The permittee must also continuously monitor and record the feed rate of any chemical(s) added to the scrubbing liquid. 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.

[PTI P0115662; OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart NNN and 40 CFR, Part 60, Subpart PPP]

(3) 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. the pressure drop and flow rate 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 and liquid flow rate 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 an administrative permit modification.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(4) All monitoring devices required under 40 CFR, Part 60, Subpart PPP shall be recalibrated quarterly in accordance with procedures under section 60.13(b).

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart PPP]

(5) The permittee must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(6) The permittee must monitor and record the formulation of each batch of binder used.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(7) The permittee must monitor and record at least once every 8 hours, the product Loss on Ignition (LOI) and product density of each bonded wool fiberglass product manufactured.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(8) The permittee shall develop and implement a written plan as described in 40 CFR Part 63.6(e)(3) that contains specific procedures to be followed for operating the source and maintaining the source during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process modifications and control systems used to comply with the standard. In addition to the information required in 40 CFR Part 63.6(e)(3), the plan shall include:

a. procedures to determine and record the cause of the malfunction and the time the malfunction began and ended;

b. corrective actions to be taken in the event of a malfunction of a control device or process modification, including procedures for recording the actions taken to correct the malfunction or minimize emissions; and

c. a maintenance schedule for each control device and process modification that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(9) The permittee shall keep records of each event as required by 40 CFR Part 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR Part 63.10(e)(3)(iv).

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(10) As required by 40 CFR Part 63.10(b), the permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart:

a. The permittee must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

b. The permittee may retain records on microfilm, on a computer, on computer disks, on magnetic tape, or on microfiche.

c. The permittee may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(11) In addition to the general records required by 40 CFR Part 63.10(b)(2), the permittee shall maintain records of the following information:

a. The formulation of each binder batch and the LOI and density for each product manufactured on a rotary spin manufacturing line subject to the provisions of this subpart, and the free formaldehyde content of each resin shipment received and used in the binder formulation.

b. Scrubber pressure drop, scrubbing liquid flow rate, and any chemical additive (including chemical feed rate to the scrubber), including any period when a parameter level(s) deviated from the established limit(s), the date and time of the

deviation, when corrective actions were initiated, the cause of the deviation, an explanation of the corrective actions taken, and when the cause of the deviation was corrected.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(12) The permittee shall maintain monthly records of the NOx and CO emissions from this emissions unit; and at the end of 12 months of operation, the rolling 12-month summation of NOx and CO emissions and the average calculated over each rolling 12-month period.

Note: The above records shall be determined in accordance with the emissions calculations presented to the Ohio EPA in the permit application submitted by the permittee.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. each period of time (start time and date, and end time and date) when the pressure drop across the scrubber and/or the liquid flow rate 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.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(2) As required by 40 CFR Part 63.10(e)(3)(v), the permittee shall report semiannually if measured emissions are in excess of the applicable standard or a monitored parameter deviates from the levels established during the performance test. The report shall contain the information specified in 40 CFR Part 63.10(c) as well as the additional

records required by the record keeping requirements of 40 CFR Part 63.1386(d). When no deviations have occurred, the permittee shall submit a report stating that no excess emissions occurred during the reporting period.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

f) Testing Requirements

(1) 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 6 months prior to permit expiration date.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates (lb/hr) for PM10/PM2.5 and VOC.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

i. For PM10/PM2.5, Methods 201/201A and 202 of 40 CFR, Part 51, Appendix M.

ii. For VOC, Methods 1-4 and 18, 25 or 25A, as appropriate of 40 CFR, Part 60, Appendix A.

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

d. The emissions testing shall be conducted on one of the collection units that would be representative of the unit that would be most challenged to meet the established requirement.

e. The test(s) shall be conducted at a Maximum Source Operating Rate (MSOR), unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. MSOR is defined as the condition that is most likely to challenge the emission control measures with regards to meeting the applicable emission standard(s). Although it 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 at the MSOR is justification for not accepting the test results as a demonstration of compliance.

f. 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).

g. 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.

h. 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.

[OAC rule 3745-77-07(C)(1)]

(2) 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. Emission Limitations:

PM10/PM2.5 emissions shall not exceed 9.99 lbs/hr and 42.96 tpy from P048.

PM10/PM2.5 emissions shall not exceed 9.02 lbs/hr and 38.79 tpy from P049.

PM10/PM2.5 emissions shall not exceed 7.76 lbs/hr and 33.37 tpy from P050.

<u>Applicable Compliance Method</u>:

Compliance with the hourly emission limitation shall be determined based on the results of emission testing required in f)(1).

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600 hours, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance with the annual limitation shall also be demonstrated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

VOC emissions shall not exceed 3.00 lbs/hr and 12.90 tpy from each emissions unit individually.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined based on the results of emission testing required in f)(1).

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600 hours, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance with the annual limitation shall also be demonstrated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

CO emissions shall not exceed 3.26 tons per month averaged over a 12-month rolling period.

Applicable Compliance Method:

Compliance with the CO emission limitation shall be demonstrated by the record keeping requirements specified in d)(12) of this permit.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

NOx emissions shall not exceed 0.69 tons per month averaged over a 12-month rolling period.

Applicable Compliance Method:

Compliance with the NOx emission limitation shall be demonstrated by the record keeping requirements specified in d)(12) of this permit.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

e. Emission Limitations:

SO2 emissions shall not exceed 1.00 lb/hr and 4.30 tpy.

Applicable Compliance Method:

If required, compliance shall be demonstrated by stack testing conducted in accordance with Methods 1 - 4 and 6 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by 8600 hours, and then dividing by 2000 lbs/ton. Therefore, provided

compliance is shown with the hourly limitation and the restriction on the annual number of hours of operation of 8600, compliance with the annual limitation shall also be demonstrated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

f. Emission Limitations:

Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[PTI P0115992; OAC rule 3745-77-07(C)(1) and OAC rule 3745-17-03(B)(1)]

g. Emission Limitations:

PE shall not exceed 11.0 lbs/ton of glass pulled (5.5 kg/Mg).

Applicable Compliance Method:

Compliance with the emission limitation was demonstrated based on stack testing conducted in accordance with Methods 1 through 5E of 40 CFR, Part 60, Appendix A.

If required, additional testing shall be conducted at the discretion of the agency in accordance with Methods 1 – 5 of 40 CFR, Part 60, Appendix A..

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 60, Subpart PPP]

h. Emission Limitation:

Formaldehyde emissions shall not exceed 1.20 lbs per ton of glass pulled.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring requirements specified in the operation, maintenance and monitoring plan.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

i. Emission Limitation:

66.80 tons PE per rolling, 365-day period (from emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined)

Applicable Compliance Method:

Compliance with the rolling, 365-day PE limitation shall be demonstrated by the record keeping requirements specified in g)(6) below.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(3) Unless disapproved by the Director, the permittee of a rotary spin manufacturing line regulated by this subpart may conduct short-term experimental production runs using binder formulations or other process modifications where the process parameter values would be outside those established during performance tests without first conducting performance tests. Such runs must not exceed 1 week in duration unless the Director approves a longer period. The permittee must notify the Director and postmark or deliver the notification at least 15 days prior to commencement of the short-term experimental production runs. The Director must inform the permittee of a decision to disapprove or must request additional information prior to the date of the short-term experimental production runs. Notification of intent to perform an experimental short-term production run shall include the following information:

a. The purpose of the experimental production run;

b. The affected line;

c. How the established process parameters will deviate from previously approved levels;

d. The duration of the experimental production run;

e. The date and time of the experimental production run; and

f. A description of any emission testing to be performed during the experimental production run.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

g) Miscellaneous Requirements

(1) For all control device and process operating parameters measured during the initial performance tests, the permittee may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in 40 CFR Part 63.1382. The permittee shall conduct all additional performance tests according to the procedures 40 CFR, Part 63, Subpart A and in 40 CFR Part 63.1384.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(2) The written operations, maintenance and monitoring plan required by 40 CFR 63.1383(a) has been submitted and approved by the Administrator. This plan shall be updated if the control device and/or process operating parameters measured during the initial performance are modified in accordance with g)(1) above.

[PTI P0115992; OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart NNN]

(3) The permittee shall maintain the following daily records for this emissions unit:

a. the company identification for each product group manufactured;

b. the numbers of hours of production for each product group manufactured;

c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve*, for each product group manufactured; and

d. the total PE rate (lbs/day), for all the product groups manufactured [summation of (c x b) for all product groups].

* The permittee calculates the hourly PE by employing a pac factor. The pack factor is the design density of each product produced multiplied by the design thickness of the same product. This resultant value is used to figure out the PE (lbs/hr) from the emission factor curve. The emission factor curve is a statistical polynomial and was derived from multiple stack tests on this emissions unit. The hourly PE calculated from the polynomial is then multiplied by the number of hours of production of the product for which the pack factor was calculated.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(4) The permittee shall calculate and maintain dailyrecords of the particulateemissions and the rolling 365-dayemissions of particulates, in tons, for emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055, combined.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(5) The permittee shall maintain monthly records of the following information:

a. the operating hours for each month; and

b. the rolling, 12-month summation of the operating hours.

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

(6) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. all exceedances of the rolling, 12-month numbers of operating hours restriction of 8600; and

b. all exceedances of the rolling, 365-day PE limitation of 66.8 tons (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined).

[PTI P0115992 and OAC rule 3745-77-07(C)(1)]

38. Emissions Unit Group -Unit 89 Cullet Silos: P054,P055

EU ID	Operations, Property and/or Equipment Description
P054	Fiberglass internal cullet silo; Line no. 89
P055	Fiberglass external cullet silo; Line no. 89

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 operations(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. 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(D) [PTI 03-10931, issued 12/06/2001]	Particulate emissions (PE) shall not exceed 66.80 tons per rolling, 365-day period. [See b)(2)a.]
b.	OAC rule 3745-31-05(A)(3) [PTI 03-10931, issued 12/06/2001]	The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D). PE shall not exceed 0.10 pound per hour (lb/hr) and 0.44 tons per year (tpy). [See b)(2)c.] Visible PE from the stack(s) servicing this emissions unit shall not exceed 0% opacity as a six-minute average. See b)(2)b.
c.	OAC rule 3745-17-07(A)	See b)(2)d.
d.	OAC rule 3745-17-11(B)	See b)(2)d.

(2) Additional Terms and Conditions

a. The permittee has requested a federally enforceable restriction of 66.80 tons PE per rolling, 365-day period for purposes of avoiding PSD.

The combined annual PE from Line 89, which includes emissions units P047, P048, P049, P050, P051, P052, P054 and P055, shall not exceed 66.80 tons, based upon a rolling, 365-day summation of the monthly PE rates.

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

c. All PE is assumed to be in the form of PM10 (filterable only).

d. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) In order to maintain compliance with the applicable emission limitations(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.5 to 10.0 inches of water.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on hourly basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range 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 operation of the control equipment within the acceptable range 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 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. the pressure drop 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.

This range or limit on the pressure drop across the baghouse is 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 limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled 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

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain the following daily records for this emissions unit:

a. the company identification for each product group manufactured;

b. the numbers of hours of production for each product group manufactured;

c. the calculated PE factor (lbs PE/hour of production), based upon the emission factor curve*, for each product group manufactured; and

d. the total PE rate (lbs/day), for all the product groups manufactured [summation of (c x b) for all product groups].

* The permittee calculates the hourly PE by employing a pac factor. The pack factor is the design density of each product produced multiplied by the design thickness of the same product. This resultant value is used to figure out the PE (lbs/hr) from the emission factor curve. The emission factor curve is a statistical polynomial and was derived from multiple stack tests on this emissions unit. The hourly PE calculated from the polynomial is then multiplied by the number of hours of production of the product for which the pack factor was calculated.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(4) The permittee shall calculate and maintain dailyrecords of the particulateemissions and the rolling 365-dayemissions of particulates, in tons, for emissions units P047, P048, P049, P048, P049, P050, P051, P052, P054 and P055, combined.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the baghouse during the operation of the emissions unit(s):

a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. an identification of each incident of deviation described in “a” (above) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in “a” where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in “a” 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.

If no deviations/excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

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

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

(2) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 365-day PE limitation of 68.8 tons (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined). These deviation reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[PTI 03-10931 and 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. Emission Limitation:

PE shall not exceed 66.80 tons per rolling 365-day period (for emissions units P047, P048, P049, P050, P051, P052, P054 and P055, combined)

Applicable Compliance Method:

Compliance with the rolling 365-day PE limitation shall be demonstrated by the record keeping requirements specified in d)(2) and d)(3) of this permit.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

b. Emission Limitations:

PE shall not exceed 0.10 lb/hr and 0.44 tpy.

Applicable Compliance Method:

The hourly allowable PE limitation was established by multiplying an outlet grain loading of 0.02 gr/scf by the maximum flow rate of the silos dust collector (565 acfm) and by 60, and then dividing by 7000.

If required, the permittee shall demonstrate compliance with the hourly PE limitation shall be demonstrated by testing in accordance with Methods 1 - 5 of 40 CFR, Part 60, Appendix A.

The tons/yr PE limitation was developed by multiplying the lbs/hr PE limitation by the maximum operating schedule of 8760 hours/yr, and then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual limitation.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Visible PE shall not exceed 0% opacity as a six-minute average.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

[PTI 03-10931 and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.