West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-10700001-2016**
Application Received: **December 23, 2015**
Plant Identification Number: **03-054-107-00001**
Permittee: **E. I. du Pont de Nemours and Company**
Facility Name: **Nylon Resins Production (Part 5 of 14)**
Mailing Address: **P. O. Box 2800, Washington, WV 26181**

Revised: N/A

Physical Location:	Washington, Wood County, West Virginia
UTM Coordinates:	422.27 km Easting • 4,346.57 km Northing • Zone 17
Directions:	Route 68 west from Parkersburg to intersection of Route 892. Continue west on Route 892 with the plant being on the north side about one mile from the intersection of Routes 68 and 892.

Facility Description

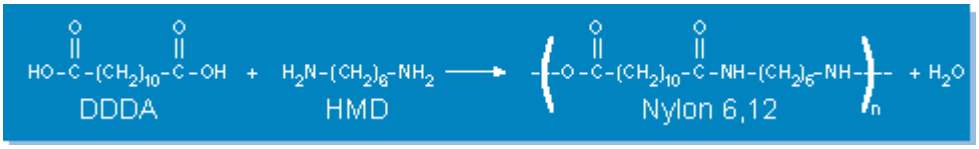
Raw materials (organic acids and base) are transported to the site by railcars or trucks. The organic acids are powders that are pneumatically conveyed into storage hoppers or handled in bags. A liquid organic base is mixed with water in the railcar or truck, and then pumped into a storage tank. The organic acids and base are mixed with water in an atmospheric vessel to create the raw material (salt) for the polymer. The salt is held in tanks until pumped to the polymerization process.

The salt can be pumped to an evaporator vessel for concentration using indirect steam heating, directly to an autoclave polymerization vessel, or it can be pumped to a continuous process system. A physical process of concentration of the water-based salt solution is what occurs in the evaporator before being sent to the autoclave. Nylon polymer is produced in the autoclave or in the continuous MPW1 process through application of heat and pressure. Water of dilution is driven off, as is water of reaction, creating nylon from a condensation reaction. The vapor emissions are directed to a scrubber. When enough water has been driven off, the desired viscosity has been reached.

Nitrogen is used to pressure up the autoclave to allow the polymer to exit the bottom of the vessel through a valve and die assembly. The desired viscosity resin is pumped directly from the continuous system to a die assembly. Strands or ribbons of molten polymer are water quenched and cut by a pelletizer or dicer into small pellets, which are then screened and conveyed into a blender/dryer vessel. Residual moisture is removed in the dryer, and the pellets are pneumatically conveyed to a screener to remove longs and fines and then to a bin. The pellets are then packaged into bags or boxes and shipped to the warehouse or directly to customers.

Typically, the batch autoclaves produce 6,12 nylon in accordance with the following polyamide chemistry:

Nylon 6,12
Nylons are the polyamide products from the polycondensation of diamines with dicarboxylic acids. Dodecanedioic Acid (DDDA) is used as the diacid monomer in Nylon 6,12 adhesives, resins and filaments.



The continuous process employed by the MPW1 process area utilizes a plug flow reactor, which produces nylon 6,6 as its primarily product.

SIC Codes: 2819, 2821, 2824.

Emissions Summary

Part 5 of 14 Emissions Summary [Tons per Year]		
Regulated Pollutants	**Potential Emissions**	**2015 Actual Emissions** [1]
Carbon Monoxide (CO)	6.14	2.80
Nitrogen Oxides (NO_X)	82.76	33.77
Particulate Matter ($PM_{2.5}$)	103.06	29.78
Particulate Matter (PM_{10})	104.63	30.22
Total Particulate Matter (TSP)	141.51	31.77
Sulfur Dioxide (SO_2)	0.38	0.10
Volatile Organic Compounds (VOC)	4.05	3.35
Hazardous Air Pollutants	**Potential Emissions**	**2015 Actual Emissions**
BiPhenyl (fugitives)	0.40	0.40
Ethylene Glycol (fugitives)	1.0	0.05
Glycol ethers (fugitives)	25.1	0.35

[1] With the exception of $PM_{2.5}$ and Biphenyl, the actual emissions are from SLEIS. The actual emissions (and PTE) of $PM_{2.5}$ and Biphenyl are from technical correspondence received from the permittee on October 19, 2016. Other PTEs are from the application and October 19, 2016 technical correspondence.

Title V Program Applicability Basis

This facility has the potential to emit 104.63 tpy of PM_{10} and 25.1 tpy of glycol ethers. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, E. I. du Pont de Nemours and Company's Nylon Resins Production business unit is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Control of Particulate Matter from Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR7	Control of Particulate Matter from Manufacturing Processes
	45CSR10	Control of Sulfur Oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for construction/modification
	45CSR16	New Source Performance Standards
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for HAPs
	40 C.F.R. 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. 63 Subpart DDDDD	Process Heaters and Boilers MACT
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR21	Control of VOCs

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-0278	01-14-1977	
R13-0985	01-21-1988	PD15-08 Salt Scrubbers

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-1145E	8-04-2014	PD15-097 Maintenance Shop
R13-1686G	12-22-2010	PD15-087 de minimis Bandsaw
R13-2617I	12-08-2014	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

Unless otherwise noted or defined by the context, the language *current permit* in the following discussion means operating permit R30-10700001-2011 (Part 5 of 14) MM03. Changes have been made for the renewal permit as further discussed below.

1. **40 C.F.R. 63 Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters***. The following changes have been made in the operating permit in order to reflect the current regulation and to correct items in the permit conditions.

   a. The placeholder conditions 5.1.13. (natural gas-fired process heaters 152Z-V3 and 152Z-V4) and 6.1.8. (natural gas-fired process heaters 254-01S, 254-02S, 254-05S, and 254-06S) have been eliminated because the current compliance date is already in the current Title V permit (8.1.1.). Furthermore, all applicable requirements (including the initial notifications and NOCS) specified in these placeholder conditions were already incorporated into the current permit as significant modification SM01, which was part of the first revision of the current Title V permit. Based upon these facts, these placeholder conditions are no longer necessary for the operating permit.

   b. Current permit condition 8.1.1. states, “Unless otherwise specified, all other Conditions in Section 8.0 are subject to the compliance date given in this Condition 8.1.1.” This statement was written because SM01 was finalized before the January 31, 2016 compliance date. Since the compliance date is in the past at the time of this renewal, the last statement in current condition 8.1.1. is not necessary and has been deleted.

   c. The introductory text of condition 8.1.2. has been revised to reflect the last statement in §63.7540(a)(12): “If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.” Additionally, the applicable language from §63.7515(d) has been added at the end of the first paragraph of condition 8.1.2. The current permit condition cited this requirement but did not specify the 61-month time period.

   d. The parenthetical text of 8.1.2.(i) has been updated. However, the regulation language pertaining to units that produce electricity for sale has been excluded.

   e. The word “annual” has been deleted from conditions 8.1.2.(vi) and 8.4.3. to reflect the regulation since the applicable tune-up frequency is once every 5 years.

f. The word "practices" is changed to "program" twice in condition 8.1.3.e.

g. Current permit conditions 8.4.5. and 8.4.6. related to startup and shutdown recordkeeping have been deleted since §§63.7555(i) and (j) are no longer in the regulation. Such requirements in the current regulation apply to sources subject to emission limits in Tables 1, 2, or 11 through 13 of Subpart DDDDD (cf. §§63.7555(d), (d)(9), and (d)(10)) and the affected sources in this case are not subject to these limits.

h. Current permit condition 8.5.1. requires the submittal of an NOCS containing the results of the initial compliance demonstration (cf. §63.7530(f)). The permittee has submitted this NOCS dated January 29, 2016. The permit condition, however, was written with the requirement to submit an NOCS "within 60 days of completion of each process heater tune-up". Yet the NOCS is for reporting the results of the *initial* compliance demonstration. This is determined from the fact that the title question for §63.7530 is "How do I demonstrate *initial* compliance with the emission limitations, fuel specifications and work practice standards?" Further, with regard to notifications §63.7545(e) links the NOCS with the "initial compliance demonstration". In contrast, the title question for §63.7540 is "How do I demonstrate *continuous* compliance with the emission limitations, fuel specifications and work practice standards?" There is nothing in §§63.7540(a), (c), or (d) requiring an NOCS. However, §63.7540(b) requires reporting of deviations according to §63.7550, and it is in this latter section that the requirements for Compliance reports (rather than NOCS) are specified. Therefore, the Compliance report is utilized to report the results of the 5-year frequency tune-ups, and ongoing NOCS submittals are not an accurate interpretation of the regulation. The Compliance report requirements are written in the current operating permit (conditions 8.5.4. through 8.5.6.) and are renewal conditions 8.5.1. through 8.5.3. For these reasons the current operating permit condition 8.5.1. has been removed for the permit renewal.

i. Current condition 8.5.2. based upon §63.7530(e) is a component of the initial NOCS which has already been submitted. There are no ongoing NOCS submittals and the energy assessment is a one-time requirement that has been fulfilled. Based upon these facts, the current permit condition is unnecessary for the renewal and has been removed from the permit.

j. Current condition 8.5.3. is a component of the initial NOCS which has already been submitted and there are no ongoing NOCS submittals and the results of the 5-year frequency tune-ups are submitted in the Compliance report prescribed by §63.7550. Therefore, the current permit condition is unnecessary for the renewal and has been removed from the permit.

k. Renewal condition 8.5.3.d. has been revised to reflect the language in §63.7550(h)(3).

l. Current permit condition 8.5.5. makes a parenthetical reference to condition 8.5.7., which does not exist in the current permit. The reference has been corrected to be 8.5.3. (after accounting for deleting existing conditions discussed above).

m. The subsections 8.2., 8.3., and 8.6. have been changed from "NA" to each containing a "Reserved" condition number.

2. **Equipment Table Revisions**. In subsection 1.1. of the permit the following changes have been made. Several of the changes are based upon technical correspondence received via e-mail from Mr. Chris Shoop of the permittee's Site Environmental Group on October 3 and 19, 2016.

   a. For EU# Z128east the control device Z128eastC Scrubber has been added and the EU description revised.

   b. For EU# Z128west the control device Z128westC Scrubber has been added and the EU description revised.

   c. For EP# Z746 the description has been changed from "Sleeve" to "Separator Sleeve Change".

   d. The HMD Weigh Tank (EU# Z130) has been deleted since the tank has been abandoned in place and the permittee has no plans to use it.

   e. Tank #11 (EU# Z108; EP# Z108E), which was better described as "Tank #11-12", now serves in place of 155-T14S. Therefore, references to Z108 and Z108E have been deleted from permit conditions 4.1.2. and 4.1.3.

   f. For Tanks #13-14 (EU# 155-T14S) the language "(Replaced using Tanks #11-12, previously emission unit ID Z108)" was added to the description and the installation date was changed to 2015.

   g. The description of Z710S has been changed from "Extrusion Steam Vac" to "Z-1 Extruder Vacuum System" for a better description. The steam jet vacuum system was replaced in 2015 using a liquid-ring pump.

   h. The Casting Table Vac (EU# Z409S) has been deleted as the permittee stated that the source and vent IDs were reassigned in about 2003 as Z725S when a second attempt was made to register all previously un-permitted sources. It has also been deleted from conditions 6.1.3. and 6.1.4.

   i. The description of Z725S has been changed from "Casting Table Exhaust" to "Z-1 Extruder Die Exhaust".

   j. EU# Z331 MPW Degreaser Tanks has been removed from the emission units table in the Packout/Maintenance section of the table. According to technical correspondence, the designation Z331 originally described three parts cleaners. When the permittee added the fourth by a permit determination, the permittee decided it was needful to be more specific for their locations so the permittee split Z331 into Z331-1, -2, and -3, and added Z331-4.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. 40 C.F.R. 60, Subpart K - "Standards of Performance For Storage Vessels For Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978." There are no petroleum liquid storage tanks in the Nylon Resins Production Area.

2. 40 C.F.R. 60, Subpart Ka - "Standards of Performance for Storage Vessels For Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984." There are no petroleum liquid storage tanks in the Nylon Resins Production Area.

3. 40 C.F.R. 60, Subpart Kb - "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984." There are no volatile organic liquid storage tanks in the Nylon Resins Production Area.

4. 40 C.F.R. 60, Subpart VV - "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry." The Nylon Resins Production Area does not produce as intermediates or final products any of the materials listed in 40 C.F.R. §60.489.

5. 40 C.F.R. 60, Subpart DDD - "Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry." The Nylon Resins Production Area does not manufacture polypropylene, polyethylene, polystyrene, or poly(ethylene terephthalate) for which this rule applies.
6. 40 C.F.R. 60, Subpart RRR - "Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes." The Nylon Resins Production Area does not produce any of the chemicals listed in 40 C.F.R. §60.707 as a product, co-product, by-product, or intermediate.

7. 40 C.F.R. 61, Subpart V - "National Emission Standards for Equipment Leaks (Fugitive Emissions Sources)." Applies to sources in VHAP service as defined in 40 C.F.R. §61.241. VHAP service involves chemicals that are not used in a manner that qualifies them under the rule in the Nylon Resins Production Area.

8. 40 C.F.R. 63, Subpart H - "National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks." 40 C.F.R. 63 Subparts F, G, and H do not apply to manufacturing process units that do not meet the criteria in 40 C.F.R. §§63.100(b)(1), (b)(2), and (b)(3).

9. 40 C.F.R. 63, Subpart JJJ - "National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins." The Nylon Resins Production Area does not produce the materials listed in 40 C.F.R. §63.1310.

10. 40 C.F.R. 60, Subpart EEEE – "National Emission Standard for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)." The Nylon Resins Production Area does not distribute organic liquids as defined by 40 C.F.R. §63.2406.

11. 40 C.F.R.60, Subpart FFFF – "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing." The Nylon Resins Production Area does not manufacture any material or family of materials defined in 40 C.F.R. §63.2435(b)(1)(i) through (v).

12. 40 C.F.R. 63, Subpart PPPP – "National Emission Standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products." The Nylon Resins Production Area does not produce an intermediate or final product that meets the definition of "surface coated" plastic part.

13. 40 C.F.R. 63, Subpart WWWW - "National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production." The Nylon Resins Production Area does not engage in reinforced plastics composites production as defined in 40 C.F.R. §63.5785 and does not manufacture composite material as defined in 40 C.F.R. §63.5935.

14. 40 C.F.R. 82, Subpart B - "Protection of Stratospheric Ozone." Requires recycling of Chlorofluorocarbons (CFCs) from motor vehicles and that technicians servicing equipment need to be licensed. The Nylon Resins Production Area does not conduct motor vehicle maintenance involving CFCs on site.

15. 40 C.F.R. 82, Subpart C – "Protection of Stratospheric Ozone." Bans non-essential products containing Class I substances and bans non-essential products containing or manufactured with Class II substances. The Nylon Resins Production Area does not use, manufacture, nor distribute these materials.

16. 40 C.F.R. Part 64 – "Compliance Assurance Monitoring." At the time of this renewal there are no emission units at the facility that meet all three applicability criteria in 40 C.F.R. §§64.2(a)(1) through (3); therefore, CAM is not applicable. This 2016 renewal application included a CAM plan for both of the Autoclave Lines #1 and #2 (emission unit IDs: 152Z-AC1 and 152-AC2). These units are subject to a PM limit from underlying requirement A.1. of permit R13-1145E, and are required to utilize a wet scrubber 152Z-1C to control PM from both 152Z-AC1 and 152Z-AC2. However, the pre-control device potential PM emissions from the lines 152Z-AC1 and 152Z-AC2 is 69 tpy for each line. Since the pre-control emissions of PM are less than the 100 tpy major source threshold, 152Z-AC1 and 152-AC2 do not meet the applicability criterion in §64.2(a)(3), and consequently 40 C.F.R. Part 64 is not applicable to the Autoclave Lines #1 and #2 (emission unit ID: 152Z-AC1 and 152Z-AC2) and the submitted CAM plan has not been incorporated into the renewal permit.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	October 31, 2016
Ending Date:	November 30, 2016

Point of Contact

All written comments should be addressed to the following individual and office:

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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

U.S. EPA Comments

On November 30, 2016, Mr. Paul Wentworth with U.S. EPA Region III submitted the following comments via e-mail to the permit writer. Responses were provided in an e-mail to Mr. Wentworth on December 5, 2016.

Comment No. 1

4.3.1. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[**45CSR13, R13-0985, B; 45CSR§7-8.1]**

EPA Comment: There are no specified time periods for testing requirements to verify that the monitoring requirements assure that the particulate loading from the nylon salt preparation and storage facility does not exceed the limits set in the tables in subsection 4.1.1 and 4.1.3. EPA suggests testing requirements for testing specified in subsection 4.3.1 be implemented in 5 year intervals.

Response to Comment No. 1

The testing requirement in condition 4.3.1. is directly from State rule 45CSR7, which may be utilized by the Director to verify compliance with the mass rate allowable limit set by 45CSR§7-4.1. The PM limits in condition 4.1.1. are more stringent than the 45CSR7 mass rate limit for which condition 4.3.1. could be used to demonstrate compliance. Therefore, as long as the permittee is complying with the other relevant permit requirements, it should be meeting these limits that are less than the 45CSR7 allowable for which 4.3.1. would be used to demonstrate compliance.

For emission point 157-4E in condition 4.1.1., the permittee is required to monitor the opacity (4.2.1.), maintain records of opacity monitoring (4.4.1.), and maintain records of baghouse maintenance (4.4.2.). Considering that the emission limit is comparatively small (0.0062 lb/hr), performance testing for each source is impractical as there are no known problems with demonstrating compliance for this emission point, and the existing MRR has historically been sufficient to demonstrate compliance.

For emission point 157-6E in condition 4.1.1., the permittee is required to monitor the opacity (4.2.1.), maintain records of opacity monitoring (4.4.1.), operate its control device 157-6C according to 3.1.13. (4.1.4.), and maintain control device maintenance records for 157-6C (4.4.3.). Considering that the emission limits are comparatively small (0.01 lb/hr and 0.013 lb/hr for two pollutants), performance testing for each source is impractical as there are no known problems with demonstrating compliance for this emission point, and the existing MRR has historically been sufficient to demonstrate compliance.

For emission point 155-T14E in condition 4.1.1., the permittee is required to monitor the opacity (4.2.1.), and maintain records of opacity monitoring (4.4.1.). Considering that the emission limit is comparatively small (0.20 lb/hr), performance testing for each source is impractical as there are no known problems with demonstrating compliance for this emission point, and the existing MRR has historically been sufficient to demonstrate compliance.

The PM limits in condition 4.1.3. are the allowable limits from 45CSR§7-4.1., which are significantly greater than the potential PM emissions for each emission point. For example, the 45CSR7 allowable limit 8.9 lb/hr applicable to 152Z-6T1E is almost ten times greater than the potential emissions 0.9 lb/hr listed in the renewal application. Though not all less than 1 lb/hr, the other emission points in 4.1.3. are similar in having relatively large margins of compliance. Considering that the margin of compliance is significant, and that the potential emissions from the sources are so comparatively small, and there are no known problems with demonstrating compliance for these emission points, to mandate a frequency to require performance testing for so many relatively small emission units is impractical when the rule provides that the Director may require testing as provided in permit condition 4.3.1.

Comment No. 2

5.3.1. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[45CSR§7-8.1]

EPA Comment: There is no testing frequency specified to assure testing is done on a reasonable schedule to verify that the basis of the monitoring requirements is to sufficient to assure that the emissions loading from the Autoclave Plant does not exceed the limits set forth in the tables in subsections 5.1.1 and 5.1.9. EPA suggests testing requirements for testing specified in subsection 5.3.1 be implemented in 5 year intervals.

Response to Comment No. 2

The testing requirement in condition 5.3.1. is directly from State rule 45CSR7, which may be utilized by the Director to verify compliance with the mass rate allowable limit set by 45CSR§7-4.1. The PM limits in condition 5.1.1. are more stringent than the 45CSR7 mass rate limit for which condition 5.3.1. could be used to demonstrate compliance. Therefore, as long as the permittee is complying with the other relevant permit requirements, it should be meeting these limits that are less than the 45CSR7 allowable for which 5.3.1. would be used to demonstrate compliance. Considering that the emission limits in 5.1.1. are comparatively small, performance testing for each source is impractical as there are no known problems with demonstrating compliance for this emission point, and the existing MRR has historically been sufficient to demonstrate compliance.

The PM limits in condition 5.1.9. are the allowable limits from 45CSR§7-4.1., which are greater than the potential PM emissions that are less than 1 lb/hr for each emission point. Considering there is a margin of compliance, and there are no known problems with demonstrating compliance for these emission points, to mandate a frequency to require performance testing for so many relatively small emission units is impractical when the rule provides that the Director may require testing as provided in permit condition 5.3.1.

Comment No. 3

5.1.7. Emissions, prior to release to atmosphere, from source 152Z-46S shall be routed through cyclone 152Z-46C. The cyclone, referenced above, shall be maintained and operated to perform to the specifications addressed in permit application R13-1145C.
[45CSR13, R13-1145, A.7]

EPA Comment: The specifications in permit application R13-1145C which direct the maintenance and operation of the cyclone should be included in this permit.

Response to Comment No. 3

There are no specifications in permit application R13-1145C that direct the maintenance of the cyclone. The application contains parameters that characterize the cyclone, such as stack diameter and height, gas temperature and flow rate, and control efficiency. But these do not direct how the cyclone is to be operated.

However, permit condition 5.1.12. requires that the cyclone be operated in accordance with 3.1.13., which is the maintenance requirement for all APCDs in the permit. This requirement to install, operate, and maintain all APCDs in accordance with manufacturer's specifications is to provide the guaranteed minimum control efficiency. In addition, the permittee must maintain records of maintenance of APCDs according to permit condition 3.4.6.

Comment No. 4

6.1.6. Control devices 252-80-C, 252-81-C, 255-55-C, 256-03-C, 256-04-C, 256-62-C, 256-114-C, 256-116-C, 256-117-C, 256-119-C, and 256-120-C shall be operated in accordance with the following condition:
Operation and Maintenance of Air Pollution Control Equipment. The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR13, R13-1686, 4.1.5]

EPA Comment: The above requirement is not practically enforceable. The permit should contain language requiring the facility to maintain and operate the pollution equipment in accordance with either the manufacture's operation and maintenance manual for each control system or an operation and maintenance manual developed by the facility. Additionally include a requirement that the manual be accessible at the site at all times.

Response to Comment No. 4

This requirement is from the underlying permit R13-1686G, which applies only to the control devices listed in condition 6.1.6. These devices are also covered by permit condition 3.1.13., which requires the permittee to install, operate, and maintain all air pollution control equipment in accordance with the manufacturer's specifications. The fact that the permittee must perform maintenance according to manufacturer's specifications implies that the permittee has such specifications in its possession. The permittee must also maintain records of inspection and preventative maintenance procedures as specified in condition 6.4.4. Considering that there are requirements in place to ensure the manufacturer specifications are followed and recorded for maintenance performed, and there are no known problems with demonstrating compliance with condition 6.1.6., additional requirements are not necessary.

Comment No. 5

6.3.1. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[45CSR13, R13-1686, 4.1.3.6; 45CSR§7-8.1]

EPA Comment: There are no specified time periods for testing requirements to insure that the basis of monitoring requirements is accurate and assures that the emissions loading from Melt Polymer MPW1/MPW2 facility does not exceed the limits set in the tables in subsections 5.1.1 and 5.1.9. EPA suggests testing requirements for testing specified in subsection 6.3.1 be implemented in 5 year intervals.

Response to Comment No. 5

The limits for MPW1/MPW2 are not in conditions 5.1.1. and 5.1.9. However, considering the pattern established by the previous comments, the limits in 6.1.1. and 6.1.4. will be addressed similarly to those already discussed.

The testing requirement in condition 6.3.1. is directly from State rule 45CSR7, which may be utilized by the Director to verify compliance with the mass rate allowable limit set by 45CSR§7-4.1. The PM limits in condition 6.1.1. are more stringent than the 45CSR7 mass rate limit for which condition 6.3.1. could be used to demonstrate compliance. Therefore, as long as the permittee is complying with the other relevant permit requirements, it should be meeting these limits that are less than the 45CSR7 allowable for which 6.3.1. would be used to demonstrate compliance.

The PM limits in condition 6.1.4. are the allowable limits from 45CSR§7-4.1., which are greater than the potential PM emissions for each emission point (which are very small, the highest potential being 1.32 lb/hr). Considering there is a margin of compliance, and there are no known problems with demonstrating compliance for these emission points, to mandate a frequency to require performance testing for so many relatively small emission units is impractical when the rule provides that the Director may require testing as provided in permit condition 6.3.1.

Comment No. 6

7.3.1. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[45CSR§7-8.1]

EPA Comment: There are no specified time periods for testing requirements to insure that the basis of monitoring requirements is accurate and assures that the emissions loading from Melt Polymer MPW1/MPW2 facility does not exceed the limits set in the tables in subsection 7.1.2. EPA suggests testing requirements for testing specified in subsection 6.3.1 be implemented in 5 year intervals.

Response to Comment No. 6

The testing requirement in condition 7.3.1. is directly from State rule 45CSR7, which may be utilized by the Director to verify compliance with the mass rate allowable limit set by 45CSR§7-4.1. The PM limits in condition 7.1.2. are the allowable limits from 45CSR§7-4.1., which are greater than the potential PM emissions for each emission point (the maximum potential emissions are less than 1 lb/hr). Considering there is a margin of compliance, and there are no known problems with demonstrating compliance for these emission points, to mandate a frequency to require performance testing for so many relatively small emission units is impractical when the rule provides that the Director may require testing as provided in permit condition 7.3.1.

On December 13, 2016, Mr. Paul Wentworth and the permit writer had a telephone discussion of the comments and responses. In conclusion, on behalf of EPA Mr. Wentworth concurred with the responses to all of the comments and the writer's recommendation to issue the renewal permit. After the telephone discussion Mr. Wentworth sent an e-mail concurring with the responses.

Public Comments

No comments were received from the public.