

Fact Sheet



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

This Fact Sheet serves to address the changes specific to the Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on July 10, 2012.

Permit Number: **R30-10700001-2012**
Application Received: **August 13, 2014 (MM03)**
Plant Identification Number: **107-00001**
Permittee: **E. I. du Pont de Nemours and Company**
Facility Name: **Washington Works**
Manufacturing Unit: **Acetal Resin Production (Part 3 of 14)**
Mailing Address: **P. O. Box 1217, Washington, WV 26181-1217**

Permit Action Number: MM03 Revised: December 2, 2014

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

The Acetal Resin Business Unit permit is divided into three sections: Formaldehyde, Polymerization, and Finishing. In the Formaldehyde section, liquid methanol is vaporized and mixed with process gas (a mixture of recycle gas from the absorber and fresh air) to create formaldehyde gas. The formaldehyde gas is then fed to an absorber train where the formaldehyde is condensed and absorbed in water to produce an aqueous formaldehyde solution. The formaldehyde solution is then stored for internal consumption.

The polymerization of acetal resin homopolymer starts with the purification of the formaldehyde monomer stream. This feedstock is fed to a polymerizer. The product of the polymerizer is a homopolymer and solvent slurry mixture. The mixture produced in the polymerizer is fed to a separation device that isolates the solids and drops them into a conveyor/dryer system.

The solids are then placed into a set of intermediate storage bins. The final product from the polymerization process is called fluff. This fluff material is transferred to bins for the Finishing Area. The Finishing Area converts the fluff into pelletized polymer that is delivered to customers.

In the Finishing Area the pelletized polymer is produced on five extrusion lines. These extrusion lines provide various product enhancements through the use of additives, heat, and pressure. The fluff and additives are fed directly to extruders to make blends for the production of a final product. The pelletized polymer is shipped to customers.

SIC Codes: 2819, 2821, 2824.

Emissions Summary

The following reductions in emissions are a result of these modifications.

Regulated Pollutant	Change in permitted Emissions	
	lb/hr	tpy
Total VOC	-2.31	-10.13
Benzene	0.00	- 0.01
Formaldehyde	-0.38	- 1.69
Methanol	-0.03	-0.20
Toluene	0.00	< 0.01*
Total HAP	-0.66	-2.95

*- The actual reported increase is insignificant (0.00048 TPY) which was based on more accurate calculations than previously done.

Title V Program Applicability Basis

With the proposed changes associated with this permitting action, this facility maintains the facility-wide potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs. Therefore, DuPont Washington Works 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.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR13	Permits for construction, modification, relocation, etc.
	45CSR30	Operating permit requirement.
	45CSR34	Hazardous Air Pollutants
	45CSR63, Subpart YY	NESHAP for Generic MACT sources
	45CSR63, Subpart ZZZZ	NESHAP for RICE sources
State Only:	None	

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V

permit that is enforceable by the State but is not Federally-enforceable is identified in the draft 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 (<i>if any</i>)
R13-1849N	August 28, 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 B, which may be downloaded from DAQ's website.

Determinations and Justifications

MM03 changes due to R13-1849N

Emission Point DAKE has been removed from the equipment table and Appendix C.1 as it is no longer in service.

The Emission Point Identification for Emission Source DEA, has been changed from DAKE to DOME/HZZE in the Section 1.1 Emission Unit Table. The Emission Point Identification for Emission Sources DDO-Alt and DEA-Alt have been changed to the Emergency Wet Scrubber DEME.

Moved the emission point DEA from the alternative operating scenario table from Condition 5.1.7.7.2 to 5.1.7.7.1.

Added 0.01 lbs/hr emissions for Total HAPs and Total VOCs for DINE in Condition 5.1.7.7.2. These limits were 3 .actually added under R13-1849M, but were inadvertently left out of MM02.

The previously permitted Hold Up Tank (DEA) has been replaced with a Pyro Feed Tank. The emission point ID, name, date of installation, and control device have been updated in the emission unit table.

The Emission Point ID for Source HAN has been updated from DOUE to DOME/HZZE. The Control Device has been updated from DAKC Scrubber to DOMC/HZZC.

All references to DOMC/HZZC in the equipment table as a control device that did not specify them to be a Boiler/Flare now do so.

The Tank farm scrubber [DAKC] has been removed. It is no longer listed in Condition 5.1.7.7 as an alternative operating scenario. Condition 5.1.8.4, which had operating requirements for the scrubber has been removed. Condition 5.3.11, which had testing requirements for the scrubber has been removed and the Condition is now listed as "reserved" for consistency of numbering in the Permit. Condition 5.4.15, which was a record keeping requirement for DAKC has been removed and the Condition is now listed as "reserved" for consistency of numbering in the Permit. Condition 5.2.9, which was a monitoring requirement for DAKC, has been removed and the Condition is now listed as "reserved" for consistency of numbering in the Permit. DAKC has been removed from Condition 5.5.2.3, which required daily average values of monitored parameters.

The DAKE Scrubber emission limits from Condition 5.1.1 have been removed. The equipment that was venting to this control device now emits to the DOME/HZZE, therefore these emission limits have been revised accordingly.

Emission Point DEA has been determined to meet the definition of Front End Process Vent for 40CFR63, Subpart YY. It has been added to Table 5.1.7.1.a.

40 C.F.R. 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE): The facility has an 8hp CI emergency diesel engine [DENG-603], part of the Delrin fire protection system. It is considered a CI \leq 500hp emergency stationary RICE. It would be used in case of an emergency and operated for less than 50 hours per year to maintain it in a state of readiness. Section 7.0 has been created to add the applicable requirements. This engine is covered by 40 CFR 63, Subpart ZZZZ provisions. The emission source has been added to the emission unit table.

The engine is classified as an emergency engine rated at less than 500 HP at a Major Source of HAPs. The engine is covered by 40 CFR 63, Subpart ZZZZ as follows:

- The engine must comply with the emission limitations in 40 C.F.R. §63.6602 and Table 2c to this subpart. These limits were added as condition 7.1.1.a.
- The engine must comply with the continuous compliance requirements & general requirements in 40 C.F.R. §§63.6605 and 63.6640. These requirements were added as conditions 7.1.1.b and d, 7.5.1, 7.5.2, 7.5.3, and 7.5.4.
- The engine must comply with the general provisions of 40 CFR part 63. Except per 40 C.F.R. §63.6645(a)(5), the following do not apply: §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), and 63.9(b)-(e), (g) and (h). This requirement was added as condition 7.1.1.c.
- The engine must be operated in compliance with the monitoring, installation, collection, operation, and maintenance requirements of 40 C.F.R. §§ 63.6625(e), (f), (h), and (i). These requirements were added as condition 7.2.1.
- The engine must be operated in compliance with the recordkeeping requirements of 40 C.F.R. §§63.6655(a), (d), (e), and (f). These requirements were added as condition 7.4.1.

This subpart has been removed from the list of requirements not applicable to this Business Unit in Condition 3.7.2. It has been replaced with “reserved” to maintain consistency within the Permit.

Additionally, the previous version of this Permit did not identify DOMC/HZZC as the control device for Emission Units DEC, DAL, DDO, DEA, and DEB in Appendix A.1 which resulted as a change to R13-2617H. This has been corrected.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:
None

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: N/A

Ending Date: N/A

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

Michael Egnor

Engineer

West Virginia Department of Environmental Protection

Division of Air Quality

601 57th Street SE

Charleston, WV 25304

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.

Point of Contact

Michael Egnor

West Virginia Department of Environmental Protection

Division of Air Quality

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Charleston, WV 25304

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Response to Comments (Statement of Basis)

N/A