

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 this 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**
Title V Application Received: **April 4, 2013**
Plant Identification Number: **10700001**
Permittee: **E. I. duPont de Nemours and Company**
Facility Name: **Washington Works**
Business Unit: **Acetal Resin Production (Part 3 of 14)**
Mailing Address: **P.O. Box 1217, Washington, WV 26181-1217**

Permit Action Number: MM02 Revised: April 21, 2014

Physical Location: Washington, Wood County, West Virginia
UTM Coordinates: 442.3767 km Easting • 4,346.8331 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.

Emissions Summary

As a result of this modification, the facility will have the following change in emissions:

Toluene	- < 0.01 TPY
Methanol	- 0.13 TPY
Benzene	- < 0.01 TPY
Formaldehyde	- 0.77 TPY
VOCs	- 8.86 TPY
Total HAP	- 1.57 TPY

Title V Program Applicability Basis

Due to the facility-wide potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of an individual HAP, and over 25 tons per year aggregate HAPs, 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.
State Only:	N/A	

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 (<i>if any</i>)
R13-1849M	January 17, 2014	
R13-2617F	March 29, 2012	

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

Changes made to the Title V Permit as part of this minor modification are summarized below:

R13-1849M

1. The active R13 Permit list of Section 1.2 has been updated.
2. Emission Units DDO and DEC have been revised in the emissions unit table to show that the emission points for these units are DOME/HZZE (Comparable Fuels Boiler/flare) instead of DAKE (Tank Farm Scrubber). The control devices for these emission points are DOMC/HZZC.
3. The Brine Tank (DIN) is now operated at much lower temperatures, leading to a drop in vapor pressure and therefore emissions. Because of this, the DINC Condenser has been removed from the process and the emission unit table.
4. Brine Tank (DIR) has been removed from service. It has been removed from the emission unit table and Table 5.1.1.
5. A VRS Oil Scrubber (DOA) has been added to emission point DOME/HZZE. This control device has been added to the emission unit table.
6. An aqueous waste water decanter and brine tank have been added to the emission unit table under the alternative operating scenario: Process Unit Shutdown.
7. The emission limits in Table 5.1.1 have been adjusted so that they are all specified to 2 decimal points. The VOC emission limits for the Tank Farm Scrubber (DAKE), Comparable Fuels Boiler (DOME), and Flare (HZZC) have been lowered. This is due to the removal of Brine Tank (DIR) and lowered emissions of Brine Tank (DIN) as described in 3 and 4 above. Using updated EPA modeling software, it was discovered that there were benzene emissions from DOME/HZZE, and these have been added to the table. The emission limits for VOC and methanol have been lowered for the Brine Tank (DIN) due to new operating parameters as described in 3 above. Using updated EPA modeling software, it was discovered that there are THAP emissions for the Brine Tank. The table has been updated accordingly.
8. Emissions from the Recycle Alcohol Tank (DDO) were controlled by the Tank Farm Scrubber (DAKC). They are now controlled by the Comparable Fuels Boiler (DOMC) and Flare (HZZC). This has been reflected in Table 5.1.7.1.a.
9. Emission unit DIG has been removed from Table 5.1.7.2.a. The Oil Scrubber (DOA) has been added to this table.
10. The sources listed in Table 5.1.7.7.1 have been updated.
11. Some units in Table 5.1.7.7.2 have been removed. The alternative operating scenario for the Brine Tank (DIN) has been added with a 0.01 lbs/hr methanol limit.
12. A miscalculation was discovered regarding the feed rate to the VRS Oil Scrubber (DOA). The rate has been changed from 11,000 lbs/hr to 5,000 lbs/hr. This is given in Appendix C.1.

13. The Brine Tank (DIN) parameters have been revised in Appendix C.1. References to the condenser have been removed. The operating temperature has been lowered from 20°C to 10°C. Data Collection is now only required during operation of the Acetal Process. The Data Averaging Period has been changed from 3 hours to daily. Parameters have been added for an Alternative Operating Scenario when the Brine Tank is operating during startup/shutdown and the temperature is between 10°C and 15°C

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. Part 64 - Compliance Assurance Monitoring (CAM)

Group 3 is not subject for the following reasons:

40CFR§64.2(a)(3) – As a result of this modification, the facility did not add any units that have potential pre-control device emissions equal to or greater than 100 percent of the amount, in tons per year, of any pollutant that would require the facility to be classified as a major source.

2. R13-2617F

The most recent Title V Permit was based in part on R13-2617E. The NSR modification, R13-2617F, addressed some emission points in that permit's Appendix A. However, Group 3 only lists emission points associated with the Acetal Resin Production area. None of those emission units were affected by the R13-2617F modification.

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:

Mike Egnor
Title V Permit Writer
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

Mike Egnor
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1208 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

Not applicable.