

Fact Sheet



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

This Fact Sheet serves to address the changes specific to these Minor Modifications, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on February 9, 2016.

Permit Number: **R30-07300003-2016**
Applications Received: **June 4, 2018 and August 17, 2018**
Plant Identification Number: **03-54-073-00003**
Permittee: **CYTEC Industries, Inc.**
Facility Name: **Willow Island Plant**
Manufacturing Unit: **Polymer Additives (Part 2 of 3)**
Permittee Mailing Address: **1 Heilman Avenue, Willow Island, WV 26134-9801**

Permit Action Number: *MM06 and MM07* Revised: *March 19, 2019*

Physical Location: Willow Island, Pleasants County, West Virginia
UTM Coordinates: 474.00 km Easting • 4,356.00 km Northing • Zone 17
Directions: From Interstate 77, Exit 179, take State Route 2 north for approximately 10 miles. Plant site is on the left (river side) of State Route 2, two miles south of Belmont, WV.

Facility Description

CYTEC Industries is a global, research-based specialty chemical company. The company operates a multi-product, multi-process chemical plant at Willow Island, WV. Plant operations are divided into the following two manufacturing units and one support services unit: Surfactants (Part 1 of 3), Polymer Additives (Part 2 of 3), and Site Services (Part 3 of 3).

The Polymer Additives Manufacturing Unit (Part 2 of 3) manufactures ultraviolet light absorbers, antioxidants and anti-static agents. The light absorbers are used in all types of plastics (bottles, telephones, lawn furniture, auto parts), in coatings, and in sunscreens. Antioxidants are used in man-made fibers,

rubber products, plastics, and in medical applications. Anti-static agents are used in the electronics industry, in copy machine toner, and in textile applications.

The purpose of these modifications is for the addition of the P2930 (Polyamide Polymer) Product/Process Area (incorporating R13-2156AC) and for the addition of a new process vessel Feed Tank #3 (3-30T2) and its new emission point 30UE to the Physical Forms Product/Process Area (incorporating R13-2156AD).

Emissions Summary

The following emissions increases are associated with these modifications:

<i>Pollutant</i>	<i>Increase in Potential Emissions (TPY)</i>
PM _{2.5} /PM ₁₀ /TSP	0.48
VOCs	0.50
Chloroform	0.08
Total HAPs	0.49

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of a single hazardous air pollutant (HAP), and over 25 tons per year of aggregate hazardous air pollutants (HAPs). Due to this facility's potential to emit over 100 tons per year of criteria pollutants, over 10 tons per year of a single hazardous air pollutant (HAP), and over 25 tons per year of aggregate hazardous air pollutants (HAPs), CYTEC Industries, Inc. 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:	45CSR7	Particulate Matter emissions from manufacturing processes
	45CSR13	NSR permitting
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for HAPs for Source Categories Pursuant to 40 CFR, Part 63.
	40CFR63, Subpart FFFF	National Emission Standards for Hazardous Air Pollutions: Miscellaneous Organic Chemical Manufacturing (MON)

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)
R13-2156AD	October 15, 2018	

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

40 CFR Part 63, Subpart FFFF: National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

The P2930 Process is subject to the Miscellaneous Organic NESHAP (MON MACT) 40CFR63 Subpart FFFF due to meeting the applicability criteria in 40CFR§63.2435. The process utilizes two organic HAP solvents, chloroform and methanol. The P2930 process is designated as new MCPU# 28. The P2930 MCPU is subject to the following MON applicable requirements:

- Group 1 batch process vents due to >10,000 lb/yr organic HAP uncontrolled emissions.
- MON LDAR requirements.
- MON wastewater requirements.

Cytec will implement a MON-compliant (40CFR§63.2480) LDAR monitoring program and a MON wastewater program (40CFR§63.2485) for the P2930 process.

The P2930 process does not contain any MON continuous vents, storage tanks, surge control vessels, bottoms receivers, transfer racks or heat exchange systems.

Summary of Permit Changes

The following changes were made to this permit:

- Feed Tank #3 (3-30T2) (Emission Point ID: 30UE) was added to the Physical Forms section of the Emission Units Table.
- All the emission points and control devices associated with the P2930 Production Process were added to the emission units table.
- The emission limits in condition 4.1.1. (Emission Limits for Building 82 Manufacturing Unit) were updated, and the emission limit for chloroform was added.
- The P2930 Production Process was added to the 45CSR7 emission limits in condition 4.1.4.
- Condition 4.1.7.3., which addresses batch process vents covered by 40CFR63, Subpart FFFF, was revised.
 - Condition 4.1.7.3.a. was revised to clarify that it addresses recovery devices which requires a minimum 95% emissions reduction in HAPs.
 - Condition 4.1.7.3.b. was added specifically to address the P2930 process (MCPU# 28). It lists three possible compliance methods. Condition 4.1.7.3.b.1. reads almost identically to condition 4.1.7.3.a. except that it specifies a minimum 98% emissions reduction in HAPs since MCPU# 28 uses control devices instead of recovery devices. Condition 4.1.7.3.b.2. allows compliance through achieving an outlet concentration ≤ 20 ppmv as TOC or total organic HAP. Condition 4.1.7.3.b.3. allows compliance with the MON

alternative standard of total organic HAP outlet concentration of 50 ppmv or less, per §§63.2460(b)(5)(i), 63.2505, 63.2505(a)(ii) and 63.1258(b)(5).

- Condition 4.1.18, which references condition 4.1.3. of R13-2156AD, was added to this permit. This condition addresses operation of the Calgon Vapor-Pac carbon bed system (Control Device ID: S70020).
- Condition 4.1.19, which references condition 4.1.4. of R13-2156AD, was added to this permit. This condition addresses operation of the vent condenser, including operating temperature and continuous monitoring (Control Device ID: E70030).
- Condition 4.2.8. was added to this permit to address initial and ongoing compliance with emission limits in Table 2 to 40 C.F.R. 63, Subpart FFFF for MCPU# 28. The permittee shall operate and monitor the vent condenser (E70030) and the Calgon Vapor-Pac carbon bed system (S70020) according to the requirements of this condition.
- Condition 4.3.3. was added to address compliance with new condition 4.1.7.3.b. (MCPU# 28). This condition specifies initial compliance, testing, and monitoring requirements for each option listed in condition 4.1.7.3.b.
- The P2930 Production Process control devices were added to Appendix A (Parametric Monitoring).
- Chloroform was added to Appendix B (Hazardous Air Pollutants).

Non-Applicability Determinations

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

45CSR27 – “To Prevent and Control the Emissions of Toxic Air Pollutants.” Since the potential emissions of formaldehyde chloroform to the atmosphere from all sources (point, fugitive, and secondary) at CYTEC’s Willow Island Plant are each less than 1,000 lb/year, the emission units are not subject to the BAT requirements under 45CSR27, per section 45CSR§27-3.1. Also, per 45CSR§27-3.1, emission units within the Polymer Additives Manufacturing Unit that emit formaldehyde and chloroform are not subject to the BAT requirements of 45CSR27 because they are now subject to the requirements of 40 C.F.R. 63, Subpart FFFF. The potential air emissions from all sources (point, fugitive, and secondary) at CYTEC’s Willow Island Plant, of all toxic air pollutants listed in Table A of 45CSR27 are less than the amounts shown in Table A.

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

Point of Contact

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

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Division of Air Quality
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Charleston, WV 25304
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Rex.E.Compston@wv.gov

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)

After submission to the EPA for review, the address to send reports to EPA Region III was updated in condition 3.5.3. of the proposed permit modification.