

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 October 23, 2007.

Permit Number: **R30-07300003-2007 (Part 1 of 4)**
Application Received: **October 1, 2010**
Plant Identification Number: **03-54-07300003**
Permittee: **CYTEC Industries Inc.**
Facility Name: **Willow Island**
Manufacturing Unit: **Urethanes (Part 1 of 4)**
Mailing Address: **1 Heilman Avenue, Willow Island, WV 26134**

Permit Action Number: *MM02* Revised: *January 25, 2011*

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

The Urethanes unit (Part 1 of 4) manufactures aliphatic isocyanates for use in industrial coatings, adhesives, textiles and elastomers. The automotive industry is a major user of these products.

Title V minor modification R30-07300003-2007 (Part 1 of 4) – MM02 incorporates the following changes approved under R13-2473H on November 1, 2010: 1) Replacement of two old obsolete vacuum pumps P590A/B (25 HP motors which require 10 GPM of well water) with two new smaller vacuum pumps (10 HP motors which require 3 GPM of well water) in the Methyl Carbamate (MeC) process; and 2) Elimination of two vents (MEC-001 and UCM-004) in the Urethanes Manufacturing Unit.

In addition to the changes approved under R13-2473H, this minor modification R30-07300003-2007 (Part 1 of 4) – MM02 also incorporates the following changes to the Title V permit which were proposed by CYTEC in the application: 1) Addition of the federal and state mandatory greenhouse gas reporting requirements as conditions 3.4.7, 3.5.10, and 3.5.11; 2) Addition of an explanation to the non applicable requirements in condition 3.7.2 to address the fact that some requirements under 40 C.F.R. 63, Subparts F, G, and H (HON) may be applicable but only as they apply under 40 C.F.R. 63, Subpart FFFF (MON); and 3) Addition of a reference to 40 C.F.R. 63, Subpart H in condition 4.4.10 (record keeping requirements for MON).

Emissions Summary

The proposed changes do not result in an increase in allowable emissions. There is actually a decrease in allowable VOC and THAP emissions due to the elimination of emission points MEC-001 and UCM-004.

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 VOC, 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 a criteria pollutant, 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:	45CSR13 45CSR30	Preconstruction permits for minor sources. Operating permit requirement.
State Only:	45CSR42	Greenhouse Gas Reporting
Federal Only:	40 C.F.R. 98	Mandatory Greenhouse Gas Reporting

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 (if any)
R13-2473H	November 1, 2010	NA

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

Title V minor modification R30-07300003-2007 (Part 1 of 4) – MM02, includes the following:

1) **Changes approved under R13-2473H, issued on November 1, 2010.**

The vent for the methanol storage tank (V516) in the methyl carbamate manufacturing process was modified so that a vapor balancing system is now used to send the vented vapors back to the rail car or tank wagon when methanol is unloaded into the storage tank. Also, the pressure setting for the conservation vent on this tank was increased to 5 psig to prevent venting from the tank due to normal ambient temperature changes. Therefore, emission point MEC-001 was eliminated since there is no longer a direct vent for the methanol storage tank (V516).

The methanol surge tank (V010) in the TMXDI and Crude TMI manufacturing process was modified so that it now vents to the DMF Scrubber/Vent Condenser (C102/E120), emission point UAM-001, instead of directly to the atmosphere (previously, emission point UCM-004).

Section	Revisions					
1.0	The following additions (underlined) and deletions (strike-outs) were made to the Emissions Units Table in Section 1.1:					
	Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
	<u>V516</u> ⁴	<u>No Direct Vent</u>	<u>Methanol Storage Tank</u>	1988	<u>17,500 gallons</u>	<u>None</u>
	V516	MEC-001	Methanol Storage Tank	1988	17,500 gallons	None
	<u>V540</u> ⁴	<u>No Direct Vent</u>	<u>Methanol Column Secondary Condenser</u>	2010	<u>350,000 BTU/hr</u>	<u>None</u>
	<u>V010</u>	<u>UAM-001</u>	<u>Methanol Surge Tank</u>	<u>1974 Modified 10/2/87</u>	<u>10,700 gallons</u>	C102/E120
	V555 V560	UAM-002	DMF Waste Tank Wagon Recovered DMF Tank Wagon	2008 2008	5,000 gal 5,000 gal	C101/E+12 0/P051A/B
	V010	UCM-004		1974 Modified 10/2/87	10,700 gallon	None

Section	Revisions																																																																			
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4.0	<p>The following additions (underlined> and deletions (strike-outs) were made to condition 4.1.1:</p> <table border="1"> <thead> <tr> <th rowspan="2">Emission Point</th> <th rowspan="2">Emission Unit ID</th> <th rowspan="2">Pollutant</th> <th colspan="2">Emission Limit</th> </tr> <tr> <th>Lb/hr</th> <th>TPY</th> </tr> </thead> <tbody> <tr> <td colspan="5" style="text-align: center;">Emission Limits when TMI to TMU Process in On-Line</td> </tr> <tr> <td>UCM-004</td> <td>V010</td> <td>VOC</td> <td>0.1</td> <td>0.10</td> </tr> <tr> <td></td> <td></td> <td>THAP</td> <td>0.1</td> <td>0.10</td> </tr> <tr> <td colspan="5" style="text-align: center;">Emission Limits when DMF Recovery Operation in On-Line</td> </tr> <tr> <td>UCM-004</td> <td>V010</td> <td>VOC</td> <td>0.1</td> <td>0.1</td> </tr> <tr> <td><u>UAM-001</u></td> <td></td> <td>THAP</td> <td>0.1</td> <td>0.1</td> </tr> <tr> <td colspan="5" style="text-align: center;">Emission Limits when TMXDI and Crude TMI Production Process in On-Line</td> </tr> <tr> <td>UCM-004</td> <td>V010</td> <td>VOC</td> <td>0.1</td> <td>0.3</td> </tr> <tr> <td></td> <td></td> <td>THAP</td> <td>0.1</td> <td>0.3</td> </tr> <tr> <td colspan="5" style="text-align: center;">Emission Limits when Methyl Carbamates Process in On-Line</td> </tr> <tr> <td>MEC-001</td> <td>V516</td> <td>VOC</td> <td>12.8</td> <td>1.65</td> </tr> <tr> <td></td> <td></td> <td>THAP</td> <td>12.8</td> <td>1.65</td> </tr> </tbody> </table> <p>Condition 4.1.7 was revised such that the scrubbing liquor flow rate for the water ring vacuum pump (P590A/B) was changed from 10 gpm to 3.0 gpm.</p>	Emission Point	Emission Unit ID	Pollutant	Emission Limit		Lb/hr	TPY	Emission Limits when TMI to TMU Process in On-Line					UCM-004	V010	VOC	0.1	0.10			THAP	0.1	0.10	Emission Limits when DMF Recovery Operation in On-Line					UCM-004	V010	VOC	0.1	0.1	<u>UAM-001</u>		THAP	0.1	0.1	Emission Limits when TMXDI and Crude TMI Production Process in On-Line					UCM-004	V010	VOC	0.1	0.3			THAP	0.1	0.3	Emission Limits when Methyl Carbamates Process in On-Line					MEC-001	V516	VOC	12.8	1.65			THAP	12.8	1.65
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2) **Additional changes requested in the Title V permit application for minor modification MM02.**

Section	Revisions
1.0	No changes.
2.0	No changes.
3.0	<p>Added R13-2473H to the permit list in Condition 3.1.13.</p> <p>Added greenhouse gas requirements from 45CSR42 as Condition 3.5.10 and from 40 C.F.R. 98 as Conditions 3.4.7 and 3.5.11.</p> <p>Revised Condition 3.7.2 to account for 40 C.F.R. 63, Subpart F, G, and H (HON) requirements that are applicable because of CYTEC's applicability to 40 C.F.R. 63, Subpart FFFF (MON).</p>
4.0	Added a reference to 40 C.F.R. 63, Subpart H to Condition 4.4.10 because CYTEC is complying with the LDAR requirements of 40 C.F.R. 63, Subpart FFFF (MON) through 40 C.F.R. 63, Subpart H (HON).

Non-Applicability Determinations

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

There were no non-applicability determinations made as a result of this minor 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:

Carrie McCumbers
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

Carrie McCumbers
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1226 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

No comments were received.