

Fact Sheet



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

Permit Number: **R30-05100009-2013**
Application Received: November 8, 2012
Plant Identification Number: 05100009
Permittee: Bayer MaterialScience LLC
Facility Name: New Martinsville Facility
Mailing Address: P.O. Box 500
New Martinsville, WV 26155

Physical Location: Natrium, Marshall County, West Virginia
UTM Coordinates: 514.50 km Easting • 4397.50 km Northing • Zone 17
Directions: The plant is approximately seven (7) miles north of New Martinsville on WV State Route 2.

Facility Description

The New Martinsville facility is an integrated chemical plant whose primary purpose is to produce isocyanates, polyesters, polyethers, and acrylics. The majority of the production units in this plant are involved with the production of polyurethane products (isocyanates and polyols).

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2012 Actual Emissions
Carbon Monoxide (CO)	196.7	22.3
Nitrogen Oxides (NO _x)	302.2	88.9
Particulate Matter (PM ₁₀)	16.8	1.6
Total Particulate Matter (TSP)	42.8	4.1

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2012 Actual Emissions
Sulfur Dioxide (SO ₂)	32.6	0.2
Volatile Organic Compounds (VOC)	106.3	16.1
<i>PM₁₀ is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2012 Actual Emissions
Benzene	< 0.1	< 0.1
Chlorobenzene	< 0.1	< 0.1
Formaldehyde	< 0.1	< 0.1
Ethylene Glycol	3.4	0.3
HCL	5.3	1.5
Hexane	3.5	0.5
Hydrazine	< 0.1	< 0.1
Toluene Diisocyanate	3.3	0.2
Methylene Bis(diphenylisocyanate)	0.1	0.1
Xylene	1.9	0.9
Ethylene Oxide	3.0	< 0.1
Propylene Oxide	1.2	0.2
Toluene Diamine	< 0.1	< 0.1
Phthallic Anhydride	0.8	< 0.1
Totals	22.7	3.7

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit over 100 tons per year of Carbon Monoxide, Nitrogen Oxides, and Volatile Organic Compounds. Due to this facility's potential to emit over 100 tons per year of criteria pollutants, Bayer MaterialScience 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	To prevent and control particulate air pollution from combustion of fuel in indirect heat exchangers
	45CSR6	Open burning prohibited.
	45CSR7	To prevent and control PM air pollution from manufacturing processes and associated operations
	45CSR10	To prevent and control air pollution from the emission of sulfur oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary Sources
	45CSR16	Standards of Performance for New Stationary Sources
	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 Hazardous Air Pollutants
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
	40 C.F.R. Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
	40 C.F.R. Part 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels
	40 C.F.R. Part 63, Subpart EEE	National Emission Standard for Hazardous Air Pollutants from Hazardous Waste Combustors
	40 C.F.R. Part 63, Subpart PPP	National Emission Standard for Hazardous Air Pollutants for Polyether Polyols Production
	40 C.F.R. Part 63, Subpart VVVVVV	National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources
State Only:	45CSR4	No objectionable odors.
	45CSR27	Toxic Air Pollutants

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)
CO-SIP-2000-02	1/2000	
R13-0026	6/22/1983	
R13-0138B	6/22/1983	
R13-2677D	7/24/2008	
R13-0842E	1/19/2010	
R13-0863	7/18/1986	
R25 HW-10	10/12/2007	
R13-0537	3/7/1980	
R13-2507	10/29/2002	
R13-0459	12/21/1978	
R13-0555	6/24/1980	
R13-2443C	1/28/2008	
R13-1409B	11/21/2006	

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

The following determinations and justifications describe the changes that have been made to each section since the most recently issued Title V Permit or modification.

Miscellaneous

- Updated equipment table.
- Updated current active permits.
- Removed previous Section 4.0 (Reserved) and 11.0 (Reserved) and renumbered the remaining conditions.
- Added Subpart VVVVVV to Condition 3.7.2 to note that the facility is not subject to the major source requirements of 40CFR63, Subpart VVVVVV. Removed Boiler #7 and #8 from this Condition as they are shut down.

5.0 – ECD Poly E tanks (9100-732 and 9100-733) have been removed from the equipment table. These Poly E tanks are no longer present at the facility. The Compliance Plan requirement (Condition 6.6.1) in the previous permit which required the permittee to submit a plan of action for conducting an enhanced CMS accuracy study to the director has been removed. Bayer submitted these reports on April 30 and August 23 of 2012. Condition 5.3.2 has been added to specify the testing timelines required for stack testing of the boilers under 40CFR63, Subpart EEE. The notification requirements of 40CFR63, Subpart EEE have been added to the Permit as Condition 5.5.7.

7.0 – Polyols Former Condition 8.1.9 has been removed from the Permit. The facility did not elect to comply with the annual epoxide emission factor limitation of 40CFR§63.1425(b)(1)(iii) or (b)(2)(iv). The remaining conditions have been renumbered accordingly. Former Condition 8.2.2 has been removed. All of the monitoring equipment requirements are already provided for in Condition 7.2.1. Former Condition 8.2.3 has been removed. There are no Group 1 Storage vessels in this section of the facility. Former Condition 8.2.4(a) has been removed from the Permit. The facility has no Group 1 Wastewater streams in this section of the facility. Former Condition 8.2.4(c) has been removed from the Permit. The compliance date for the affected sources has passed. Former Conditions 8.2.5(b), (d), and (e) have been removed from the Permit. The dates have passed and the notifications have been provided. Former Condition 8.2.6 has been removed. There are no Heat Exchangers in this section of the Facility. The other Conditions have been renumbered accordingly. Conditions 7.3.1 and 7.3.2 have been combined and simplified. As testing would only be required if the facility made a change or by request from DEP, the condition has been changed to reference the additional testing requirements of 40CFR§§63.1437(a) and (b). Former Conditions 8.3.3(a), (b), (c), and (d) have been removed from the Permit. The facility has already established the applicable parameter monitoring. Former Conditions 8.3.3(f)(2) and (4) have been removed from the Permit. The facility has no storage vessels applicable to this requirement and does not use ECO to reduce epoxide emissions. The other Conditions have been renumbered accordingly. Former Condition 8.4.4(e)(4) has been removed from the Permit. The dates specified have passed and the Facility has provided the report and status. Former Condition 8.4.4(e)(5) has been revised to remove wastewater and storage vessel requirements that are not applicable, as well as the removal of test reports that have already been performed. Former Conditions 8.4.4(e)(6)(iii)(A) and (e)(7)(i) have been removed. The facility has no applicable storage vessels nor process wastewater in this section. Former Condition 8.4.4(e)(7)(iii)(A)(4) has been removed as the facility does not wish to use alternative monitoring parameters. Former Condition 8.4.4(e)(8) has been removed as they did not send an operating permit application instead of a Precompliance Report. Former Conditions 8.4.4(f) and (g) have been removed as the facility does not wish to use alternative monitoring parameters.

8.0 – Texin Baghouse 022-115 has been added to the equipment table. It replaced former Baghouse 022-597 and Cyclone 022-081. Barringer ovens (022-526/957), vacuum pumps (022-946/1103), and Gala Dryer (022-1023) have been removed from the equipment table. These units are no longer present at the facility.

10.0 – SPU Removed L Reactor (026-078, 026-550, 026-079, and 026-076) from the equipment table and Condition 10.1.1. This reactor is no longer present at the facility. “L” Drumming equipment (026-555) is still present at the facility but not being used. It is listed as “IDLE” in the equipment table. Added 40CFR63 Subpart VVVVVV Area Source MACT requirements for the PHD Polyol process.

40 C.F.R. Part 63, Subpart VVVVVV - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

The PHD Polyol process in the SPU section is subject to 40CFR Part 63, Subpart VVVVVV. Affected sources include the TDI run tank (032-001, vent PV86) and the #1 Post Reactor (032-002, vent 002). The process uses one Table 1 HAP; Hydrazine. The only applicable requirements for the facility are:

40CFR§63.11495(a)(1) - Each process vessel in organic HAP service is equipped with a cover or lid that is in place at all times. This is given in Condition 10.1.2.

40CFR§63.11495(a)(3) - Quarterly inspections are conducted for equipment in HAP service. This is given in Condition 10.1.3.

40CFR§63.11495(a)(4) – The Permittee shall repair any leak within 15 calendar days after detection of any leak discovered by the inspections described in Condition 10.1.3. This is given in Condition 10.1.4.

40CFR§63.11495(a)(5) – The Permittee shall keep records of the dates and results of each inspection event, equipment repair, and reasons for any delay in repair. This is given in Condition 10.1.5.

40CFR§63.11501(d) – The Permittee shall submit semiannual compliance reports. This is given in Condition 10.5.1.

Non-Applicability Determinations

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

40 CFR 64 – Compliance Assurance Monitoring

CAM was determined not to apply to this facility during the last renewal. There have been no additions of pollutant specific emission units since the last revision of this Permit. Therefore, CAM does not apply.

Greenhouse Gas Tailoring Rule

This is a renewal Title V Permit and there have been no changes that would have triggered a PSD permit. As such, there are no applicable GHG permitting requirements.

4.0 – Boiler House #2

Subpart JJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Bayer MaterialScience has three natural gas fired boilers at the facility. 40CFR§63.11195(e) exempts gas fired boilers from this MACT.

10.0 – SPU

40 C.F.R. Part 63, Subpart VVVVVV - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

STORAGE TANKS AND TRANSFER OPERATIONS.

There are no storage tanks associated with this CMPU that contain a Table 1 HAP. Tank 1206 contains Hydrazine Hydrate (CAS No. 10217-52-4) which is not the Table 1 HAP Hydrazine (CAS No. 302012). The hydrazine hydrate can have water molecules stripped off during reactions and become hydrazine, but this does not happen inside Tank 1206. Therefore, at no point does the New Martinsville site transfer liquids containing Table 1 HAPS to tank trucks or railcars, so the process is not subject to 40CFR§63.11495(a)(2). This facility is not subject to the requirements in 40CFR§63.11497.

WASTEWATER

Per 40CFR§63.11498 standards only apply to partially soluble HAPS – listed in Table 7 of Subpart VVVVVV. Neither Hydrazine nor TDI (the only two HAPs used in the process) are listed in Table 7. Hence the wastewater provisions in 40CFR§63.11498 do not apply.

HEAT EXCHANGE SYSTEMS

There are no heat exchangers on any HAP containing equipment. Hence, the heat exchange provisions in 40CFR§63.11499 do not apply.

PROCESS VENTS

This is a continuous unit. TREs have been calculated for the 2 emission points (the TDI run tank and the #1 post reactor). Both TREs exceed 3500, so no control devices need to be installed under 40CFR§63.11496.

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: September 20, 2013
Ending Date: October 20, 2013

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)

On October 9, 2013, the Permittee made the following comments:

Just two small items – they are related to each other:

- Section 5.5.7 I cleaned up the regulation reference and got rid of paragraph 5 since that just pertains to initial compliance and we are well beyond that.

5.5.7. → ~~(f)~~Notification of compliance—¶

(1) Comprehensive performance test. ¶

(i) Except as provided by paragraphs ~~(f)(4) and (f)(5)~~ of this section, within 90 days of completion of a comprehensive performance test, you must postmark a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under 40CFR§63.1209. ¶

(ii) Upon postmark of the Notification of Compliance, you must comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under 40CFR§63.1211(c). ¶

(2) Confirmatory performance test. Except as provided by paragraph ~~(j)(4)~~ of this section, within 90 days of completion of a confirmatory performance test, you must postmark a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard. ¶

(3) See 40CFR§§63.7(g), 63.9(h), and 63.1210(d) for additional requirements pertaining to the Notification of Compliance (e.g., you must include results of performance tests in the Notification of Compliance). ¶

(4) Time extension. You may submit a written request to the Administrator for a time extension documenting that, for reasons beyond your control, you may not be able to meet the 90-day deadline for submitting the Notification of Compliance after completion of testing. The Administrator will determine whether a time extension is warranted. ¶

~~(5) Early compliance. If you conduct the initial comprehensive performance test prior to the compliance date, you must postmark the Notification of Compliance within 90 days of completion of the performance test or by the compliance date, whichever is later. ¶~~

[40CFR§§63.1207(j)(1-5), 45CSR34. (033-040, 033-070, 033-083)]¶

- Section 3.3.1.d can we say “unless otherwise specified in the permit”.... Just so there is no confusion between this section and the one above?

Response to those comments made on October 9, 2013:

Condition 5.5.7 has been revised as requested. 40CFR§63.1207(j)(5) cited early compliance with this MACT. Since the Permittee has already conducted the initial performance test, this section no longer applies to the facility.

Condition 3.3.1.d. The citation now reads in part; “Unless otherwise specified in the permit, the permittee shall submit a report of the results of the stack test within 60 days of completion of the test.” This was added as Condition 5.5.7 allows reporting of comprehensive performance tests within 90 days of completion.