

Fact Sheet



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

This Fact Sheet serves to address the changes specific to this Significant Modification, and shall be considered a supplement to the original Fact Sheet corresponding with the issuance of the initial Title V operating permit issued on February 8, 2006

Permit Number: **R30-03900004-2006**

Application Received: **March 2, 2009**

Plant Identification Number: **03-54-039-00004**

Permittee: **Union Carbide Corporation**

Facility Name: **Technology Park, South Charleston (Group 2 of 2)**

Mailing Address: **P.O. Box 8361, South Charleston, WV 25303**

Permit Action Number: *SM02* Revised: *September 8, 2009*

Physical Location: South Charleston, Kanawha County, West Virginia
UTM Coordinates: 438.7 km Easting • 4,245.5 km Northing • Zone 17
Directions: From Charleston take Kanawha Turnpike exit. Travel west on Kanawha Turnpike approximately 0.5 miles.

Facility Description

This Permit (Group 2 of 2) will cover facility support activities, operations related to manufacturing, and Market Development Plant.

The research and development groups provide experimental, analytical, and engineering support for the development of new products, process technology for manufacturing, and support for existing products and processes. Primary SIC and NAICS Codes for this facility are 2869 and 325199, respectively.

This significant modification reflects the changes covered by R13-2631A and the Notification of Compliance Status (NOCS) that was required by 40 C.F.R. Part 63 Subpart FFFF - Miscellaneous Organic Chemical Manufacturing. R13-2631A is Class II Administrative Update to increase production rate.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]	
Regulated Pollutants	Potential Emissions
Particulate Matter (PM ₁₀)	0.1 Increase
Total Particulate Matter (TSP)	0.1 Increase
Volatile Organic Compounds (VOC)	0.6 Increase
<i>PM₁₀ is a component of TSP.</i>	
Hazardous Air Pollutants	Potential Emissions
Toluene	0.6 Increase
<i>Some of the above HAPs may be counted as PM or VOCs.</i>	

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit over 196 tons per year of VOCs. Due to this facility's potential to emit over 100 tons per year of volatile organic compounds, UCC Technology Park 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	Operating permit requirement.
	45CSR34	Emission Standards for Hazardous Air Pollutants
	40 C.F.R. Part 63 Subpart SS	National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process
	40 C.F.R. Part 63 Subpart FFFF	National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing
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 (if any)
R13-2631A	May 8, 2008	
Supersedes R13-2631		
Class II Administrative		
Update to increase OMU2		
Production rate. Add MON requirements.		

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 changes to Title V Permit and Fact Sheet since R30-03900004-2006 (AA04) was issued are the NSR permit R13-2361A, NOCS submitted in the R13 and Title V application for the Organo Phosphite Process, Auto Flexibilizer Process, POLYSLIP Process, XL-29SE Process, OMU2 Process, and the incorporation of 40 C.F.R. Part 63 Subpart FFFF (MON) applicable provisions.

The following updates were made in this significant modification (SM02).

1. R13-2631A is a Class II Administrative Update to increase production rate of the Organo Metallic Compound Production Unit (OMU-2) Process because of process improvements. These improvements include replacement of the chemical used as solvent #3, a change in the method of removal of impurities from solvent #3 and reduced batch equipment cycle time and reduction of HAP emissions.
2. The Organo Phosphite Process and the XL-29SE Process of the Market Development Unit have been permanently shut down.
3. At the company's request, Section 4.0 for the Market Development Plant (MDP) was divided into three (3) separate sections, each with its own process equipment table. This required renumbering of the MDP process requirements.
 - (1) Organo Phosphite Process was to be Section 4.0. Since it has been permanently shut down, Section 4.0 has been revised to reserved status.
 - (2) Organo Metallic Compound Production Unit (OMU2) Process will become Section 5.0.
 - (3) Auto Flexibilizers, POLYSLIP Process will become Section 6.0.
4. Incorporated the required regulation with citations from 40 C.F.R. Part 63 Subpart FFFF into Sections 5.0 and 6.0, which is based on the company's Notification of Compliance Status (NOCS).
5. Since the organic HAP (OHAP) emissions from the batch process vents of the Auto Flexibilizers and the POLYSLIP Process are each less than 200 LB/yr, the facility is required to do batch process pressure testing, submit semi-annual periodic monitoring reports, and annual compliance certification, see Section 6.4.4 and Attachment 4. The company is required to maintain the initial

calculations that demonstrate why the batch process vents emit less than 200 LB/yr of total uncontrolled HAPs. Thus, the batch process vents are exempt from 40 C.F.R. § 63.2460.

6. The OMU2 is the only process that has a continuous process vent K06, which is a Group 2 process vent. The OMU2 is scheduled to begin operation in the second quarter of 2009.

Group 2 continuous process vent is to:

- 6.1. Maintain records of the condenser vent (E-325) gas temperature.
 - 6.2. The condenser vent (E-325) gas temperature must be monitored to maintain the Theoretical Recovery Effectiveness (TRE) between 1.9 and 5.
 - 6.3. Vent to Flare (L15) as required by R13-2631A.
 - 6.4. Submit semi-annual reports.
7. The facility is to:
 - (1) Maintain information that was for determining the initial applicability as required by 40 C.F.R. §§ 63.2525 (b), see Section 6.4.2.
 - (2) Maintain records of each time a safety device that is opened to avoid an unsafe conditions, 40 C.F.R. §§ 63.2450 (p) and 63.2525 (f), see Section 6.4.3.
 - (3) Submit semi-annual periodic reports as required by 40 C.F.R. § 63.2520 (b) and Table 11, see Section 6.4.4.
 8. Added Section 1.2, Active R13, R14, and R19 Permits and Table.
 9. Updated the facility information and regulatory language for Sections 3.1.1 and 3.1.2, 45CSR§§6-3.1 and 3.2.
 10. Updated Emission Unit Section 1.1.
 11. The emission limits were updated in Table 4.1.1 in Section 5.1.1.
 12. The condenser E-325 replaced J36 in Section 5.1.10.
 13. The emission limits in were updated in Section 5.1.11.
 14. Sections 4.1.26, 4.1.27 and 4.1.28 from the AA04 were deleted from the SM02 because Section 4.1.26 was included with 5.1.11. Sections 4.1.27 and 4.1.28 were removed since the emission limits were revised.
 15. Old Sections 4.1.29 and 4.1.30 from AA04 becomes Section 5.1.12 with updated emission limits in SM01.
 16. Old Sections 4.1.31 and 4.1.32 from AA04 becomes new Section 5.1.13 with updated emission limits and emission sources in SM01.
 17. Old Sections 4.1.33 and 4.1.34 from AA04 becomes new Section 5.1.14 with new emission limits in SM01.
 18. Old Sections 4.1.35 and 4.1.36 From AA04 become Sections 5.1.15 and 5.1.16, respectively, in SM01.

19. Old Section 4.1.37 becomes Section 5.1.17 and was updated to incorporate the MON instead of requiring separate testing.
20. Section 5.1.20 was added.
21. Section 4.2.5 from AA04 was deleted since condenser J36 is no longer required to comply with the proposed emission limits.
22. Section 4.2.6 from AA04 was replaced with Section 5.2.5 in SM01. Section 5.2.5 was changed to make monitoring simpler.
23. Sections 5.2.6, 5.2.7, and 5.2.8 were added.
24. Section 5.3.1 was changed to incorporate the MON.
25. Section 5.3.2 was added.
26. Section 5.4.5 was changed to be consistent with the MON.
27. Section 5.4.6 was added.
28. Section 5.5.1 was added.
29. Section 4.1.12 from AA04 was not incorporated in SM01 since the permittee submitted a significant modification application to include the Notification of Compliance Status (NOCS) regulatory requirements from 40 C.F.R. Part 63 Subpart FFFF in the Title V permit.
30. Attachment 4 was added.
31. Added 40 C.F.R. Part 64 to Section 3.7.2 since it is not applicable to the source.
32. 45CSR34 is now cited with 40 C.F.R. Part 61 since 45CSR15 is listed as an inactive WV state rule. The citation for 3.1.3 has been revised accordingly.

Non-Applicability Determinations

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

40 C.F.R. Part 64	The Union Carbide Corporation's Technology Park Market Development Processes are not subject to the Compliance Assurance Monitoring (CAM) rule because they are subject to 40 C.F.R. Part 63 Subpart FFFF that was proposed after November 11, 1990.
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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: July 21, 2009
Ending Date: August 20, 2009

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

Wayne Green
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

Wayne Green
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1258 • Fax: 304/926-0478

Response to Comments (Statement of Basis)

UCC Comment:

“On Page 10 - Condition 1.2. Active R13, R14, and R19 Permits

The table includes R13-2401A that was issued on September 20, 2006.

R13-2401A was issued for the Market Development Plant, Organo Phosphite Process. Per previous communication, and the draft permit fact sheet, this process has been permanently shut down. Listing of R13-2401A as an active permit can be deleted.”

DAQ Response:

R13-2401A was removed from the Active R13, R14, and R19 Permits Table in the Title V Permit as requested.