

Fact Sheet



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

Permit Number: **R30-09500001-2017**
Application Received: **December 6, 2016**
Plant Identification Number: **03-54-09500001**
Permittee: **MPM Silicones, LLC**
Facility Name: **Sistersville**
Mailing Address: **10851 Energy Highway, Friendly, WV 26146-9720**

Physical Location: Friendly, Tyler County, West Virginia
UTM Coordinates: 492 km Easting • 4370.5 km Northing • Zone 17
Directions: WV State Route 2 approximately six miles south of Sistersville.

Facility Description

MPM Silicones, LLC, is located approximately six miles south of Sistersville, WV on State Route 2. The Sistersville Plant is located in a rural setting and is situated on approximately 1300 acres of land. The operating areas are situated centrally and encompass approximately 50 acres. The Sistersville Plant is engaged in specialty chemical manufacturing (SIC 2869) and manufactures a broad range of silicone and silane products, plus organic chemical intermediates related to the silanes and silicones products. The site operates 24 hours a day and consists of a number of continuous and batch processes.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2016 Actual Emissions
Carbon Monoxide (CO)	59.90	17.60
Nitrogen Oxides (NO _x)	146.01	29.00
Particulate Matter (PM _{2.5})	22.90	13.73

Regulated Pollutants	Potential Emissions	2016 Actual Emissions
Particulate Matter (PM ₁₀)	22.90	13.73
Total Particulate Matter (TSP)	22.90	13.73
Sulfur Dioxide (SO ₂)	5.30	0.17
Volatile Organic Compounds (VOC)	633.20	231.16

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2016 Actual Emissions
Acrylonitrile	1.30	0.00
Allyl Chloride	1.00	0.31
Aniline	0.40	0.24
Chlorine	3.10	1.88
Cumene	0.20	0.07
Ethyl chloride (Chloroethane)	69.80	1.51
Ethylbenzene	0.50	0.14
Glycol Ethers	6.10	2.21
Hexane, n-	0.30	0.13
Hydrogen chloride	31.50	27.51
Methanol	55.50	33.99
Methyl Chloride	8.80	1.46
Methyl Methacrylate	0.02	0.02
Methylene Chloride	3.30	0.02
Propionaldehyde	48.30	2.50
Toluene	168.10	26.20
Xylene	2.20	0.98
Total HAPs	400.42	99.24

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

Title V Program Applicability Basis

This facility has the potential to emit 146.01 TPY of NO_x, 633.20 TPY of VOC, 69.80 TPY of ethyl chloride, 31.50 TPY of hydrogen chloride, 55.50 TPY of methanol, 48.30 TPY of propionaldehyde, 168.10 TPY of toluene, and 400.42 TPY of aggregate HAPs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, MPM Silicones, LLC 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 Particulate Air Pollution from Manufacturing Process Operations.
	45CSR10	To Prevent and Control Particulate Air Pollution from the Emission of Sulfur Oxides.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR permits.
	45CSR16	Standards of Performance for New Stationary Sources pursuant to 40 C.F.R. Part 60.
	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 Pursuant to 40 C.F.R. Part 63
	40 C.F.R. Part 60, Subpart NNN	Standards of performance for VOC emissions from SOCFI distillation operations
	40 C.F.R. Part 60, Subpart IIII	Standards of performance for CI engines
	40 C.F.R. Part 60, Subpart JJJJ	Standards of performance for SI engines
	40 C.F.R. Part 61, Subpart M	Asbestos inspection and removal
	40 C.F.R. Part 61, Subpart FF	Benzene Waste Operations
	40 C.F.R. Part 63, Subpart EEE	National Emission Standards for Hazardous Waste Combustion
	40 C.F.R. Part 63, Subpart DDDDD	National Emission Standards for Hazardous Air Pollutants of Industrial, Commercial, and Institutional Boilers and Process Heaters.
	40 C.F.R. Part 63, Subpart FFFF	National Emission Standard for Misc. Organic Chemical Production and Processes (MON)
	40 C.F. R. Part 63 Subpart EEEE	National Emission Standard for Organic Liquid Distribution (OLD)

	40 C.F. R. Part 63 Subpart ZZZZ	National Emission Standard for Reciprocating Internal combustion Engines (RICE)
	40 C.F.R. Part 68	Chemical Accident Prevention Provisions.
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.

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>
R13-16	8/16/1973	
R13-50	4/18/1974	
R13-657	4/15/1982	
R13-952C	6/30/2005	
R13-1649B	10/31/2006	
R13-1746B	12/15/2006	
R13-1748A	1/05/2006	
R13-2030A	10/12/1999	
R13-2180D	1/8/2013	
R13-2338I	12/15/2011	
R13-2806A	3/12/2014	
G60-C030A	12/10/2014	

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

- Changes were made to the Title V boilerplate conditions 3.5.3, 3.5.5 and 3.5.6.
- Emission Unit IDs- T-872, E-429, E-676, T-1356 were removed per company's request.

- The Hazardous Air Pollutant (HAP) Propionaldehyde was added in Attachment E of this permit. The company submitted the notification on October 4, 2013 through certified mail. This notification states that the Sistersville Facility's K-84 Production Unit, as permitted by R13-952C, emits the Hazardous Air Pollutant (HAP) Propionaldehyde at an estimated rate greater than 50 lbs/year.

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. §§60.40b-60.49b NSPS Subpart Db (June 19, 1984)	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. Boilers #5 and #6 are below 100 MM Btu/hr.
40 C.F.R. §§60.110-60.113 NSPS Subpart K (June 11, 1973)	Standards of Performance for Storage Vessels for Petroleum Liquids For Which Construction, Reconstruction, or Modification Commenced after June 11, 1973 and prior to May 19, 1978. Petroleum liquid storage vessels have capacities less than 40,000 gallons.
40 C.F.R. §§60.110a-60.115a NSPS Subpart Ka (May 19, 1978)	Standards of Performance for Storage Vessels for Petroleum Liquids For Which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and prior to July 23, 1984. Petroleum liquid storage vessels have capacities less than 40,000 gallons.
40 C.F.R. §§60.110b-60.117b NSPS Subpart Kb (July 23, 1984)	All tanks were found not to be subject to NSPS Kb since all: 1) Were built before July 23, 1984, and no physical modifications or reconstructions were performed since July 23, 1984 and/or 2) Are of capacity less than 19,813 gallons and/or 3) Are of a capacity greater than 39,890 gallons, and have a maximum true vapor pressure of 0.51 psia or less and/or 4) Are of a capacity between 19,818 gallons and 39,890 gallons and have a maximum true vapor pressure of 2.2 psia or less.
40 C.F.R. §§60.150-60.156 NSPS Subpart O	Standards of Performance for Sewage Treatment Plants. The Permittee does not operate a municipal treatment plant.
40 C.F.R. §§60.610-60.618 NSPS Subpart III (October 21, 1983)	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Process. This facility does not produce any of the listed chemicals as a product, co-product, by-product, or intermediate.
40 C.F.R. §§60.700-60.708 NSPS Subpart RRR (6/29/1990)	Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. This facility does not produce any of the listed chemicals as a product, co-product, by-product, or intermediate.
40 C.F.R. §§ 60.480-60.489 NSPS Subpart VV (1/5/1981)	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. This facility does not produce final or intermediate products as defined in § 60.489.
40 C.F.R. §§ 63.100-63.107 Subpart F	National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry is not applicable to the facility. The facility does not produce any of the listed chemicals as a primary product.
40 C.F.R. §§ 63.110-63.153 Subpart G	National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Tanks, Transfer Operations, and Wastewater is not applicable to the facility. The facility does not produce any of the listed chemicals as a primary product.
40 C.F.R. §§63.160-63.183 Subpart H	National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Equipment Leaks is not applicable to the facility. The facility does not produce any of the listed chemicals as a primary product.

40 C.F.R. §§63.40-63.44 Subpart B	Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections, Sections 112 (g) and 112(j) is currently not applicable to the facility.
40 C.F.R. §§63. 7880-63.7957 Subpart GGGGG	National Emission Standards for Site Remediation is not currently applicable to any remediation activities being conducted at the facility. There are no existing sources at the facility subject to this MACT.
40 C.F.R. Part 64	<p>Compliance Assurance Monitoring does not apply to this facility.</p> <p>Potential pre-control device emissions are less than Title V major source levels, per 40 C.F.R. §64.2(a)(3) for the following control devices: S-205, M-319, S-203, S-157, C-426, E-1442, S-192, E-1281, C-196, C-448, C-80, C-589, E-1537, and S-75.</p> <p>Continuous compliance determination method is in place per 40 C.F.R. §64.2(b)(1)(vi) for the following control devices: S-174, E-1353, S-171, S-137, S-196, S-197, S-224, E-2322, S-223, S-270, S-257, S-260, S-132, S-272, E-2229, S-248, S-237, S-10001, S-10003, S-10005, S-162, S-163, M-320, and S-164.</p> <p>The following control devices are subject to the MON MACT (40 C.F.R. 63, Subpart FFFF): C-49, C-405, C-370, and C-65. These control devices are not subject to CAM because they are subject to 40 C.F.R. Part 63, Subpart FFFF that was proposed after November 11, 1990. 40 C.F.R. §64.2(b)(1)(i) exempts emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act; and 40 C.F.R. §64.2(b)(1)(vi) exempts emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method.</p> <p>The following control devices are subject to no emission standard or limitation: S-240, C-363, EDA Scrubber, S-247, S-241, S-210, and S-209.</p> <p>The Esters HCl Absorption System does not meet definition of control device (40 CFR 64.1), as this is inherent process equipment.</p>
45 CSR§ 7-4.2	Emission Points 2001, 2005, 2020, 4001, 4002, and 4006 are exempt from the mineral acid (sulfuric acid) requirements as a result of 45CSR§7-10.6
45 CSR 10A	Testing, Monitoring, Record Keeping, and Reporting Requirements under 45CSR10 section 8 are not applicable to the facility since its fuel burning units only combust natural gas. This exemption is provided within 45CSR§10-10.3.
45 CSR 21	<p>Regulation to Prevent and Control Air Pollution from the Emissions of Volatile Organic Compounds.</p> <p>This regulation applies to sources located in Putnam County, Kanawha County, Cabell County, Wayne County, and Wood County.</p>

Request for Variances or Alternatives

None

Insignificant Activities

None

Comment Period

Beginning Date: Wednesday, September 27, 2017
Ending Date: Friday, October 27, 2017

Point of Contact

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

Beena Modi
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1228 • Fax: 304/926-0478
Beena.j.modi@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)

Not applicable.