

**West Virginia Department of Environmental Protection**

*Austin Caperton  
Cabinet Secretary*

# Title V Operating Permit Revision



## *For Administrative Amendment Permitting Action Under 45CSR30 and Title V of the Clean Air Act*

**Permit Action Number:** AA01 **SIC:** 2869; 2879  
**Name of Permittee:** The Chemours Company FC, LLC  
**Facility Name/Location:** Belle Plant  
**County:** Kanawha  
**Permittee Mailing Address:** 901 W. DuPont Ave., Belle, WV 25015

**Description of Permit Revision:** Separation of the Methylamines, Amides, Dimethyl Ether, Dimethyl Sulfate, and Carbon Monoxide Flare processes into two different Title V Permits. This Group 5A of 5 Permit will contain the Methylamines and Amides processes. The Dimethyl Ether, Dimethyl Sulfate, and Carbon Monoxide Flare processes will remain in the existing Group 5 of 5 Permit.

**Title V Permit Information:**

**Permit Number:** R30-03900001-2017 (Group 5A of 5)  
**Issued Date:** February 13, 2017  
**Effective Date:** February 27, 2017  
**Expiration Date:** February 13, 2022

**Directions To Facility:** I-64 to Belle exit, Route 60 east to Belle exit, turn right and plant is on the left.

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THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.VA. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.

A handwritten signature in blue ink, appearing to read "Laura M. Crowder".

Laura M. Crowder  
Director, Division of Air Quality

December 18, 2019  
Date Issued

Permit Number: **R30-03900001-2017**  
Permittee: **The Chemours Company FC, LLC**  
Facility Name: **Belle Plant**  
Manufacturing Unit: **Specialty Chemical Intermediates (Group 5A of 5)**  
Permittee Mailing Address: **901 W. DuPont Ave., Belle, WV 25015**

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*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

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Facility Location:	Belle, Kanawha County, West Virginia
Facility Mailing Address:	901 W. DuPont Ave., Belle, WV 25015
Telephone Number:	(304) 357-1000
Type of Business Entity:	Corporation
Facility Description:	Production of specialty chemical intermediates.
SIC Codes:	2869; 2879
UTM Coordinates:	451.90 km Easting • 4,232.60 km Northing • Zone 17

Permit Writer: Mike Egnor

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.*

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*Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.*

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Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
DMAC06	402.001	Heat Exchanger	1960	AMCD01 - Flare
DMAC07	402.001	Heat Exchanger	1999	AMCD01 - Flare
DMAC08	402.001	Tank	1937	AMCD01 - Flare
DMAC09	402.001	Column	2000	AMCD01 - Flare
DMAC10	402.001	Heat Exchanger	1998	AMCD01 - Flare
DMAC11	402.001	Heat Exchanger	1990	AMCD01 - Flare
DMAC12	402.001	Heat Exchanger	2002	AMCD01 - Flare
DMAC13	402.001	Vacuum Jet	1960	AMCD01 - Flare
DMAC14	402.001	KO Pots	1960	AMCD01 - Flare
DMAC15	432.002	Tank	1960	None
DMAC16	432.002	Tank	Before 1961	None
DMAC17	432.002	Tank	1963	None
DMAC18	432.002	Tank	1960	None
DMAC19	432.002	Tank	1960	None
DMAC20	432.003	Filter	1997 RIK <sup>2</sup>	None
DMAC21	432.003	Product Loading	Before 1960	None
<b><i>Dimethyl Ether (DME)</i></b>				
DME010	451.100	Tank	1940	DMSCD01 - Flare
DME020	451.100	Reactor	1999	DMSCD01 - Flare
DME021	451.100	Vaporizer	1998	DMSCD01 - Flare
DME022	451.100	Heat Exchanger	1989	DMSCD01 - Flare
DME023	451.100	Heat Exchanger	1978	DMSCD01 - Flare
DME024	451.100	Filter	1960	DMSCD01 - Flare
DME025	451.100	Heater	2005	DMSCD01 - Flare
DME026	451.100	Heater	2005	DMSCD01 - Flare
DME027	451.100	Filter	1978	DMSCD01 - Flare
DME040	451.100	Tank	1969	DMSCD01 - Flare
DME041	451.100	Condenser	1996	DMSCD01 - Flare
DME042	451.100	Condenser	1996	DMSCD01 - Flare
DME030	451.100	Column	1999	DMSCD01 - Flare
DME031	451.100	Filter	2001	DMSCD01 - Flare
DME032	451.100	Filter	2001	DMSCD01 - Flare

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
DME033	451.100	Reactor	1963	DMSCD01—Flare
DME034	451.100	Condenser	2001	DMSCD01—Flare
DME035	451.100	Condenser	2001	DMSCD01—Flare
DME036	451.100	Cooler	1975	DMSCD01—Flare
DME037	451.100	Condenser	1991	DMSCD01—Flare
DME050	451.100	Column	1996	DMSCD01—Flare
DME051	451.100	Condenser	1976	DMSCD01—Flare
DME052	451.100	Heat Exchanger	1980	DMSCD01—Flare
DME053	451.100	Reflux Drum	1976	DMSCD01—Flare
DME056	451.100	Cooler	2005	DMSCD01—Flare
DME07	451.100	Tank	1966	DMSCD01—Flare
DME08	451.100	Tank	1974	DMSCD01—Flare
DME09	451.100	Tank	1967	DMSCD01—Flare
DME10	451.100	Tank	1978	DMSCD01—Flare
DME11	451.100	Filter	1986	DMSCD01—Flare
DME12	451.100	Filter	1986	DMSCD01—Flare
DME13	451.100	Product Loading	Before 1966	DMSCD01—Flare
DME14	451.2	Tank	2002	None
<b><i>Dimethyl Sulfate (DMS)</i></b>				
DMS001	451.002	Tank	1978	DMSCD03—Scrubber DMSCD04—Demister DMSCD02—Mist Eliminator (Emergency Back-up and Personnel Protection Only)
DMS002	451.003	Tank	1978	None
DMS003	451.003	Heat Exchanger	1987	None
DMS004	451.003	Filter	1981	None
DMS005	No Emissions	Tank	1978	None
DMS006	No Emissions	Heat Exchanger	2000	None
DMS007	451.100	Reactor	2000	DMSCD01—Flare
DMS008	451.100	Tank	1978	DMSCD01—Flare
DMS009	451.100	Eductor	2000	DMSCD01—Flare

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
DMS010	451.100	Tank	1989	DMSCD01—Flare
DMS011	451.100	Eductor	2000	DMSCD01—Flare
DMS012	451.200	Kettle	1978	None
DMS013	451.200	Tank	1978	None
DMS014	451.200	Separator	1978	None
DMS015	451.200	Heat Exchanger	1978	None
DMS016	451.200	Separator	1966	None
DMS017	451.200	Vacuum Jet	2000	None
DMS018	451.200	Condenser	2000	None
DMS019	451.200	Condenser	2000	None
DMS020	451.200	Condenser	2000	None
DMS021	451.100	Tank	1937	DMSCD01—Flare
DMS022	451.100	Tank	1937	DMSCD01—Flare
DMS023	451.100	Tank	1978	DMSCD01—Flare
DMS024	451.100	Tank	1978	DMSCD01—Flare
DMS025	451.300	Tank	2000	None
DMS026	451.100	Tank	1983	DMSCD01—Flare
DMS027	451.100	Filter	1975	DMSCD01—Flare
DMS028	451.100	Separator	1983	DMSCD01—Flare
DMS029	451.100	Loading Racks	Before 1966	DMSCD01—Flare
<i>Carbon Monoxide Flare</i>				
—	209.001	CO Plant	1987	COFLARE—Flare
<i>Drum Plant</i>				
DP0027	DPDF	Drum Filler	Pre-1990	None

<sup>1</sup>Orig. – Original

<sup>2</sup>RIK – Replacement in kind

## 1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-0914B	<del>October 31, 2008</del>
R13-2284A	<del>January 26, 2006</del>
R13-3230	August 25, 2016

- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
  1. The permit or rule evaluated, with the citation number and language.
  2. The result of the test for each permit or rule condition.
  3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13]

### 3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
  - a. The date, place as defined in this permit and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of the analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A; ~~45CSR13, R13-2284, 4.4.1;~~ ~~45CSR13, R13-0914, 4.4.1;~~ 45CSR13, R13-3230, 4.4.1.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
[45CSR§30-5.1.c. State-Enforceable only.]

- 4.1.12. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. (*Emission Points: 402.001 and AE.001*) [45CSR§6-4.3]
- 4.1.13. The provisions of 4.1.12 shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up. (*Emission Points: 402.001 and AE.001*) [45CSR§6-4.4]
- 4.1.14. The permittee shall comply with the following applicable requirements from CO-R21-97-31 for Methylamines, Dimethylformamide (DMF), and Methanol Storage:
- 4.1.14.1. On or after the effective date of Consent Order CO-R21-97-31 (September 10, 1997), the COMPANY shall, reduce the total maximum theoretical emissions of VOCs from all sources at the facility having hourly maximum theoretical VOC emissions of 6 lb/hr or greater, by not less than ninety (90) percent on both an hourly and annual basis, in accordance with the plan set forth in Attachment A of CO-R21-97-31; and shall continue to comply with such emissions reduction requirements and the emission limits set forth in Attachment A as Consent Order CO-R21-97-31 expressly provides. Compliance with the emission limits set forth in Attachment A of Consent Order CO-R21-97-31 shall be demonstrated by test or monitoring data, approved emission factors, material balances, and/or representative calculations in accordance with 45CSR21. The Attachment A limits from Consent Order CO-R21-97-31 for the Methylamines Process, Dimethylformamide (DMF), and Methanol Storage are provided in APPENDIX BA of this permit. [45CSR§21-40 (State-Enforceable only); CO-R21-97-31, III.1 and Attachment A (State-Enforceable only); Letter dated October 21, 1997 from Ronald E. Smith, DuPont Belle, to Rebecca J. Johnson, OAQ (State-Enforceable only)]
- 4.1.14.2. At all times, including periods of start-up, shutdown, and malfunction, the COMPANY shall maintain and operate the VOC emitting sources and associated air pollution control devices subject to the provisions of Consent Order CO-R21-97-31 in a manner consistent with good air pollution control practices for minimizing emissions. Compliance with the emission limits set forth in Attachment A of Consent Order CO-R21-97-31 shall be demonstrated at all times unless exception periods are provided for in accordance with this paragraph. The COMPANY shall comply with 3.5.10 and 3.5.11 (45CSR§§21-5.2 and 9.3) with respect to all periods of non-compliance with the emission limitations and emission reduction requests set forth in Attachment A of Consent Order CO-R21-97-31 resulting from unavoidable malfunctions of equipment. In the event that the emission limitation and/or emission reduction requirements for a source listed in Attachment A of CO-R21-97-31 cannot be met during routine start-ups, shutdowns, or routine maintenance activities, the COMPANY shall, within 180 days of the effective date of Consent Order CO-R21-97-31 (September 10, 1997), submit an operation and VOC emissions mitigation plan for such periods. If such plan is submitted, it shall contain the information outlined in Attachment B of CO-R21-97-31 and provided in APPENDIX BA of this permit, and shall become an Appendix to Consent Order CO-R21-97-31. The Director may require reasonable revisions to the COMPANY's plan if he or she finds the routine start-up, shutdown, or maintenance resulting in excess VOC emissions not addressed by the plan occur or that the plan fails to provide for operation in a manner consistent with good air pollution control practices for minimizing emissions. VOC emissions and associated control procedures conforming to the COMPANY's plan submitted under this provision shall not be subject to the variance approval process of 3.5.11 (45CSR§21-9.3) provided that the COMPANY maintains test, monitoring, operating, and maintenance records containing sufficient information and detail to enable the COMPANY and

## 6.0 — Dimethyl Ether (DME)

### 6.1. — Limitations and Standards

~~6.1.1. — Group 1 Process Vents. The permittee shall reduce emissions of organic HAP from Group 1 process vents using a flare. The flare shall comply with the requirements of 40 C.F.R. §63.11(b). (Emission Units: DME010, DME041, DME042, DME040, DME034, DME035, and DME033) [45CSR34; 40 C.F.R. §§63.113(a), 63.113(a)(1), 63.113(a)(1)(i); 45CSR13, R13-2284, 4.1.9]~~

~~6.1.2. — Group 1 Wastewater Tanks. For each wastewater tank that receives, manages, or treats a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream, the owner or operator shall comply with 6.1.3 and shall operate and maintain a fixed roof and closed vent system that routes the organic hazardous air pollutants vapors vented from the wastewater tank to a control device. (Emission Units: DME053) [45CSR34; 40 C.F.R. §§63.133(a), (a)(2), and (a)(2)(i); 45CSR13, R13-2284, 4.1.9]~~

~~6.1.3. — Group 1 Wastewater Tanks. To comply with the requirements of 6.1.2, the fixed roof shall meet the requirements of 6.1.3.1, the control device shall meet the requirements of 6.1.3.2, and the closed vent system shall meet the requirements of 6.1.3.3. [45CSR34; 40 C.F.R. §63.133(b); 45CSR13, R13-2284, 4.1.9]~~

~~6.1.3.1. The fixed roof shall meet the following requirements: [45CSR34; 40 C.F.R. §63.133(b)(1); 45CSR13, R13-2284, 4.1.9]~~

~~a. — Except as provided in 6.1.3.4, the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements specified in 40 C.F.R. §63.148. [45CSR34; 40 C.F.R. §63.133(b)(i); 45CSR13, R13-2284, 4.1.9]~~

~~b. — Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair. [45CSR34; 40 C.F.R. §63.133(b)(ii); 45CSR13, R13-2284, 4.1.9]~~

~~6.1.3.2. The control device shall be designed, operated, and inspected in accordance with the requirements of 40 C.F.R. §63.139. Flares shall comply with the requirements of 40 C.F.R. §63.11(b). [45CSR34; 40 C.F.R. §§63.133(b)(2) and 63.139(e)(3); 45CSR13, R13-2284, 4.1.9]~~

~~6.1.3.3. Except as provided in 6.1.3.4, the closed vent system shall be inspected in accordance with the requirements of 40 C.F.R. §63.148. [45CSR34; 40 C.F.R. §63.133(b)(3); 45CSR13, R13-2284, 4.1.9]~~

~~6.1.3.4. For any fixed roof tank and closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 C.F.R. §63.148. [45CSR34; 40 C.F.R. §63.133(b)(4); 45CSR13, R13-2284, 4.1.9]~~

~~(Emission Units: DME053)~~

~~6.1.4. Group 1 Process Wastewater Streams. For wastewater streams that are Group 1 for Table 9 compounds, the owner or operator shall reduce, by removal or destruction, the mass flow rate by at least the fraction removal (Fr) values specified in Table 9 of 40 C.F.R. 63, Subpart G. The removal/destruction efficiency shall be determined by the procedures specified in 40 C.F.R. §63.145(e) for noncombustion treatment processes.~~

~~Table 9 Organic HAP's Subject to the Wastewater Provisions for Process Units at New and Existing Sources and Corresponding Fraction Removed (Fr) Values~~

Chemical Name	CAS No. <sup>a</sup>	Fr
Methanol	67561	0.31

<sup>a</sup>CAS numbers refer to the Chemical Abstracts Service registry number assigned to specific compounds, isomers, or mixtures of compounds.

~~(refiner column and condenser) [45CSR34; 40 C.F.R. §63.138(e)(2) and Table 9 of 40 C.F.R. 63, Subpart G; 45CSR13, R13-2284, 4.1.9]~~

~~6.1.5. Group 1 Process Wastewater Streams. Residual removed from the Group 1 wastewater streams shall be controlled for air emissions by complying with 6.1.2 and by recycling the residual to the production process. [45CSR34; 40 C.F.R. §§63.138(k) and (k)(1); 45CSR13, R13-2284, 4.1.9]~~

~~6.1.6. Maintenance Wastewater. Each owner or operator of a source subject to 40 C.F.R. 63, Subpart F shall comply with the requirements of 6.1.6.1 through 6.1.6.3 for maintenance wastewaters containing those organic HAP's listed in table 9 of 40 C.F.R. 63, Subpart G. [45CSR34; 40 C.F.R. §63.105(a); 45CSR13, R13-2284, 4.1.8]~~

~~6.1.6.1. The owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance turn-around) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall: [45CSR34; 40 C.F.R. §63.105(b); 45CSR13, R13-2284, 4.1.8]~~

~~a. Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities. [45CSR34; 40 C.F.R. §63.105(b)(1); 45CSR13, R13-2284, 4.1.8]~~

~~b. Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and [45CSR34; 40 C.F.R. §63.105(b)(2); 45CSR13, R13-2284, 4.1.8]~~

~~c. Specify the procedures to be followed when clearing materials from process equipment. [45CSR34; 40 C.F.R. §63.105(b)(3); 45CSR13, R13-2284, 4.1.8]~~

~~6.1.6.2. The owner or operator shall modify and update the information required by 6.1.6.1 as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure. [45CSR34; 40 C.F.R. §63.105(e); 45CSR13, R13-2284, 4.1.8]~~

~~6.1.6.3. The owner or operator shall implement the procedures described in 6.1.6.1 and 6.1.6.2 as part of the start-up, shutdown, and malfunction plan required under 40 C.F.R. §63.6(e)(3). [45CSR34; 40 C.F.R. §63.105(d); 45CSR13, R13-2284, 4.1.8]~~

~~6.1.7. 40 C.F.R. 63, Subpart H Requirements for Equipment Leaks. The permittee shall comply with all applicable standards of 40 C.F.R. 63, Subpart H “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.” The pertinent equipment leak standards include 40 C.F.R. §§63.162 (Standards: General), 63.163 (Standards: Pumps in light liquid service), 63.166 (Standards: Sampling connection systems), 63.168 (Standards: Valves in gas/vapor service and in light liquid service), 63.169 (Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service), and 63.174 (Standards: Connectors in gas/vapor service and in light liquid service). [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §§63.162, 63.163, 63.166, 63.168, 63.169, and 63.174; 45CSR13, R13-2284, 4.1.10]~~

~~6.1.8. 45CSR§21-37 Requirements for Equipment Leaks. The permittee shall comply with all applicable requirements of 45CSR§21-37 “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment.” The pertinent equipment leak standards include Sections 45CSR§§21-37.3 through 37.8. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.3 through 37.8 and 37.1.e (State Enforceable only); CO R21-97-31, III.2 (State Enforceable only); 45CSR13, R13-2284, 4.1.7]~~

~~6.1.9. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:~~

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

~~Where, the factor, F, is as indicated in Table I below:~~

~~Table I: Factor F, for Determining Maximum Allowable Particulate Emissions~~

Incinerator Capacity	Factor F
A. Less than 15,000 lbs/hr	5.43
B. 15,000 lbs/hr or greater	2.72

~~For flare DMSCD01 (Emission Point 451.100), the 45CSR§6 4.1 hourly particulate emission limit is 0.54 lb/hr.~~

~~(Emission Point: 451.100) [45CSR§6 4.1]~~

~~6.1.10. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. (Emission Point: 451.100) [45CSR§6 4.3]~~

~~6.1.11. The provisions of 6.1.10 shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up. (Emission Point: 451.100) [45CSR§6 4.4]~~

~~6.1.12. Production of dimethyl ether shall not exceed a maximum of 4.5 production units per hour and 35 production units per year. [45CSR13, R13-2284, 4.1.1.]~~

- ~~6.1.13. Volatile organic compound (VOC) emissions from the dimethyl ether (DME) process, vented to the flare (Emission Point ID No. 451.100) shall not exceed 21.8 pounds per hour and 38.11 tons per year. [45CSR13, R13-2284, 4.1.2]~~
- ~~6.1.14. Total VOC emissions from the flare (Emission Point ID No. 451.100) shall not exceed 25.2 pounds per hour and 41.61 tons per year. Such emissions are as a result of the operation of both the DME process and the crude hold up tank for the Dimethyl Sulfate (DMS) process. [45CSR13, R13-2284, 4.1.3]~~
- ~~6.1.15. Compliance with the VOC emission limits set forth in 6.1.13 and 6.1.14 shall be determined by the methods set forth in Consent Order CO R21-97-31. [45CSR13, R13-2284, 4.1.4; 45CSR§21-40 (State-Enforceable only); CO R21-97-31 (State-Enforceable only)]~~
- ~~6.1.16. VOC emission limits set forth under 6.1.14, shall supersede those maximum allowable VOC emission limits (for Emission Point Identification Number 451.100) set forth in Consent Order CO R21-97-31, entered into on September 10, 1997. [45CSR13, R13-2284, 4.1.5; 45CSR§21-40 (State-Enforceable only); CO R21-97-31 (State-Enforceable only)]~~
- ~~6.1.17. The permitted facility shall comply with all applicable provisions of Consent Order CO R21-97-31, entered into on September 10, 1997, except where emissions limits increase in 6.1.14. [45CSR13, R13-2284, 4.1.6; 45CSR§21-40 (State-Enforceable only); CO R21-97-31 (State-Enforceable only)]~~
- ~~6.1.18. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate Flare DMSCD01 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. [45CSR13, R13-2284, 4.1.11; 45CSR§13-5.11]~~
- ~~6.1.19. The permittee shall comply with the following applicable requirements from CO R21-97-31 for Dimethyl Ether (DME) and Dimethyl Sulfate (DMS):~~
- ~~6.1.19.1. On or after the effective date of Consent Order CO R21-97-31 (September 10, 1997), the COMPANY shall, reduce the total maximum theoretical emissions of VOCs from all sources at the facility having hourly maximum theoretical VOC emissions of 6 lb/hr or greater, by not less than ninety (90) percent on both an hourly and annual basis, in accordance with the plan set forth in Attachment A of CO R21-97-31; and shall continue to comply with such emissions reduction requirements and the emission limits set forth in Attachment A as Consent Order CO R21-97-31 expressly provides. Compliance with the emission limits set forth in Attachment A of Consent Order CO R21-97-31 shall be demonstrated by test or monitoring data, approved emission factors, material balances, and/or representative calculations in accordance with 45CSR21. The Attachment A limits from Consent Order CO R21-97-31 for the Dimethyl Ether (DME) process and Dimethyl Sulfate (DMS) process (as revised by R13-2284A) are provided in APPENDIX B of this permit. [45CSR§21-40 (State-Enforceable only); CO R21-97-31, III.1 and Attachment A (State-Enforceable only); 45CSR13, R13-2284, 4.1.3, 4.1.5, 4.1.6, and 4.1.7]~~
- ~~6.1.19.2. At all times, including periods of start up, shutdown, and malfunction, the COMPANY shall maintain and operate the VOC emitting sources and associated air pollution control devices subject to the provisions of Consent Order CO R21-97-31 in a manner consistent with good air pollution control practices for minimizing emissions. Compliance with the emission limits set~~

~~forth in Attachment A of Consent Order CO-R21-97-31 shall be demonstrated at all times unless exception periods are provided for in accordance with this paragraph. The COMPANY shall comply with 3.5.10 and 3.5.11 (45CSR§§21-5.2 and 9.3) with respect to all periods of non-compliance with the emission limitations and emission reduction requests set forth in Attachment A of Consent Order CO-R21-97-31 resulting from unavoidable malfunctions of equipment. In the event that the emission limitation and/or emission reduction requirements for a source listed in Attachment A of CO-R21-97-31 cannot be met during routine start-ups, shutdowns, or routine maintenance activities, the COMPANY shall, within 180 days of the effective date of Consent Order CO-R21-97-31 (September 10, 1997), submit an operation and VOC emissions mitigation plan for such periods. If such plan is submitted, it shall contain the information outlined in Attachment B of CO-R21-97-31 and provided in APPENDIX B of this permit, and shall become an Appendix to Consent Order CO-R21-97-31. The Director may require reasonable revisions to the COMPANY's plan if he or she finds the routine start-up, shutdown, or maintenance resulting in excess VOC emissions not addressed by the plan occur or that the plan fails to provide for operation in a manner consistent with good air pollution control practices for minimizing emissions. VOC emissions and associated control procedures conforming to the COMPANY's plan submitted under this provision shall not be subject to the variance approval process of 3.5.11 (45CSR§21-9.3) provided that the COMPANY maintains test, monitoring, operating, and maintenance records containing sufficient information and detail to enable the COMPANY and the Director to verify compliance with the plan and associated VOC emissions control requirements. These records shall be maintained on site for not less than three (3) years and be made available to the Director or his or her authorized representative upon request. The Director also may request submission of copies of such records. [45CSR§21-40 (State Enforceable only); CO-R21-97-31, III.3 and Attachment B (State Enforceable only); 45CSR13, R13-2284, 4.1.7]~~

## **6.2. Monitoring Requirements**

~~6.2.1. Group 1 Process Vents. To demonstrate compliance with 6.1.1 for Group 1 process vents using a flare, a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. (Emission Units: DME010, DME041, DME042, DME040, DME034, DME035, and DME033) [45CSR34; 40 C.F.R. §§63.114(a) and 63.114(a)(2); 45CSR13, R13-2284, 4.1.9]~~

~~6.2.2. Group 1 Process Vents. The permittee shall comply with 6.2.2.1 for any bypass line between the origin of the gas stream (i.e., at an air oxidation reactor, distillation unit, or reactor as identified in 40 C.F.R. §63.107(b)) and the point where the gas stream reaches the process vent, as described in 40 C.F.R. §63.107, that could divert the gas stream directly to the atmosphere. Equipment such as low leg drains, high point bleeds, analyzer vents, open ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this requirement. [45CSR34; 40 C.F.R. §63.114(d); 45CSR13, R13-2284, 4.1.9]~~

~~6.2.2.1. Properly install, maintain and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in 6.4.1.3. The flow indicator shall be installed at the entrance to any by pass line that could divert the gas stream to the atmosphere. [45CSR34; 40 C.F.R. §63.114(d)(1); 45CSR13, R13-2284, 4.1.9]~~

~~(Emission Units: DME010, DME041, DME042, DME040, DME034, DME035, and DME033)~~

- ~~6.2.3. **Group 1 Process Wastewater Streams.** To demonstrate compliance with requirement 6.1.4, the permittee shall continuously monitor the column pressure and column bottoms temperature of the methanol column and the wastewater mass flow rate. The maximum column operating pressure is 31 psig and the minimum base temperature of the column bottoms is 124 °C. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. (*refiner column and condenser*) [45CSR34; 40 C.F.R. §§63.143(d), 63.143 (f), 63.143(g), and 63.146(b)(8)(ii); Letter from Joyce McCune Gentry (DuPont Belle) to Elaine Wright (EPA) dated December 21, 1998; Letter from Joyce McCune Gentry (DuPont Belle) to Dorena Au (EPA) dated April 21, 1999; Letter from Kathleen Henry (EPA) to Joyce McCune Gentry (DuPont Belle) dated April 22, 1999; 45CSR13, R13-2284, 4.1.9]~~
- ~~6.2.4. For the purpose of determining compliance with the opacity limits set forth in Sections 6.1.10 and 6.1.11 for flare DMSCD01 (Emission Point 451.100), the permittee shall conduct visual emissions monitoring at a frequency of at least once per month with a maximum of forty five (45) days between consecutive readings. These checks shall be performed during periods of normal operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct a visual emission evaluation per 40 C.F.R. 60, Appendix A, Method 9 within three (3) days of the first identification of visible emissions. A 40 C.F.R. 60, Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within seventy two (72) hours after the visible emission and the sources are operating at normal conditions. (*Emission Point: 451.100*) [45CSR§30-5.1.e]~~

### **6.3. Testing Requirements**

- ~~6.3.1. **40 C.F.R. 63, Subpart H Testing Requirements for Equipment Leaks.** The permittee shall comply with all applicable test methods and procedures of 40 C.F.R. 63, Subpart H "National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks" as specified in 40 C.F.R. §63.180 (Test methods and procedures). [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.180; 45CSR13, R13-2284, 4.1.10]~~
- ~~6.3.2. **45CSR§21-37 Testing Requirements for Equipment Leaks.** The permittee shall comply with all applicable test methods and procedures of 45CSR§21-37 "Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment" as specified in 45CSR§21-37.9. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.1.e and 37.9 (State-Enforceable only); CO R21-97-31, III.2 (State Enforceable only); 45CSR13, R13-2284, 4.1.7]~~
- ~~6.3.3. The permittee shall comply with all applicable provisions of 45CSR§21-41 regarding test methods and compliance procedures to demonstrate compliance with 6.1.14 and 6.1.19, except as otherwise approved by the Director. [45CSR§21-41; CO R21-97-31, III.5 (State Enforceable only); 45CSR13, R13-2284, 4.1.4 and 4.1.6]~~
- ~~6.3.4. At such reasonable times as the Director may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 C.F.R. 60, Appendix A, Method 5 or other equivalent EPA approved method approved by the Director, in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or the Director's authorized representative, may at~~

~~the Director's option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices. (Emission Point: 451.100) [45CSR§6-7.1]~~

**6.4. Recordkeeping Requirements**

~~6.4.1. Group 1 Process Vents. To demonstrate compliance with 6.1.1 for Group 1 process vents using a flare, the permittee shall keep the following records up to date and readily accessible: [45CSR34; 40 C.F.R. §63.118(a); 45CSR13, R13-2284, 4.1.9]~~

~~6.4.1.1. Continuous records of the equipment operating parameters specified to be monitored under 6.2.1 and listed in table 3 of 40 C.F.R. 63, Subpart G. For flares, hourly records and records of pilot flame outages specified in table 3 of 40 C.F.R. 63, Subpart G shall be maintained in place of continuous records.~~

~~TABLE 3. PROCESS VENTS MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT PERCENT REDUCTION OF TOTAL ORGANIC HAZARDOUS AIR POLLUTANTS EMISSIONS OR A LIMIT OF 20 PARTS PER MILLION BY VOLUME~~

<del>Control device</del>	<del>Parameters to be monitored</del>	<del>Recordkeeping and reporting requirements for monitored parameters</del>
<del>Flare</del>	<del>Presence of a flame at the pilot light [63.114(a)(2)]</del>	<del>1. Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour.</del> <del>2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination NCS.</del> <del>3. Record the times and durations of all periods when all pilot flames are absent or the monitor is not operating.</del> <del>4. Report the times and durations of all periods when all pilot flames of a flare are absent PR.</del>
<del>All control devices</del>	<del>Presence of flow diverted to the atmosphere from the control device [63.114(d)(1)]</del>	<del>1. Hourly records of whether the flow indicator was operating and whether diversion was detected at any time during each hour.</del> <del>2. Record and report the times and durations of all periods when the vent stream is diverted through a bypass line or the monitor is not operating PR.</del>

~~NCS = Notification of Compliance Status as described in 40 C.F.R. §63.152 and submitted on September 15, 1997.  
 PR = Periodic Reports described in 40 C.F.R. §63.152.~~

~~[45CSR34; 40 C.F.R. §63.118(a)(1) and Table 3 of 40 C.F.R. 63, Subpart G; 45CSR13, R13-2284, 4.1.9]~~

~~6.4.1.2. Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 C.F.R. §63.152(f). For flares, records of the times and duration of all periods during which all pilot flames are absent shall be kept rather than daily averages. [45CSR34; 40 C.F.R. §63.118(a)(2); 45CSR13, R13-2284, 4.1.9]~~

~~6.4.1.3. Hourly records of whether the flow indicator specified under 6.2.2.1 was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the gas stream is diverted to the atmosphere or the monitor is not operating. [45CSR34; 40 C.F.R. §63.118(a)(3); 45CSR13, R13-2284, 4.1.9]~~

~~(Emission Units: DME010, DME041, DME042, DME040, DME034, DME035, and DME033)~~

~~6.4.2. Group 1 Process Vents. Each owner or operator subject to the control provisions for Group 1 process vents in 6.1.1 shall: [45CSR34; 40 C.F.R. §63.117(a); 45CSR13, R13-2284, 4.1.9]~~

~~6.4.2.1. Keep an up to date, readily accessible record of the data specified in 6.4.2.1.a through 6.4.2.1.e submitted as part of the Notification of Compliance Status report dated September 15, 1997. [45CSR34; 40 C.F.R. §63.117(a)(1); 45CSR13, R13-2284, 4.1.9]~~

~~a. Flare design (i.e., steam-assisted, air-assisted, or non-assisted); [45CSR34; 40 C.F.R. §63.117(a)(5)(i); 45CSR13, R13-2284, 4.1.9]~~

~~b. All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by 40 C.F.R. §63.116(a). [45CSR34; 40 C.F.R. §63.117(a)(5)(ii); 45CSR13, R13-2284, 4.1.9]~~

~~c. All periods during the compliance determination when the pilot flame is absent. [45CSR34; 40 C.F.R. §63.117(a)(5)(iii); 45CSR13, R13-2284, 4.1.9]~~

~~(Emission Units: DME010, DME041, DME042, DME040, DME034, DME035, and DME033)~~

~~6.4.3. Group 1 Process Wastewater Streams. Records of the column operating pressure and column bottoms temperature for the methanol column and the wastewater feed mass flow rate shall be recorded continuously on a distributive control system (DCS). (refiner column and condenser) [45CSR34; 40 C.F.R. §63.147(a)(4); Letter from Joyce McCune Gentry (DuPont Belle) to Elaine Wright (EPA) dated December 21, 1998; Letter from Kathleen Henry (EPA) to Joyce McCune Gentry (DuPont Belle) dated April 22, 1999; 45CSR13, R13-2284, 4.1.9]~~

~~6.4.4. Maintenance Wastewater. The owner or operator shall maintain a record of the information required by 6.1.6.1 and 6.1.6.2 as part of the start up, shutdown, and malfunction plan required under 40 C.F.R. §63.6(e)(3). [45CSR34; 40 C.F.R. §63.105(e); 45CSR13, R13-2284, 4.1.8]~~

~~6.4.5. 40 C.F.R. 63, Subpart H Recordkeeping Requirements for Equipment Leaks. The permittee shall comply with all applicable recordkeeping requirements of 40 C.F.R. 63, Subpart H “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.181 (Recordkeeping requirements). [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.181; 45CSR13, R13-2284, 4.1.10]~~

~~6.4.6. 45CSR§21-37 Recordkeeping Requirements for Equipment Leaks. The permittee shall comply with all applicable recordkeeping requirements of 45CSR§21-37 “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§21-37.10, with the exception that all records shall be maintained for a period of five (5) years instead of three (3) years. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.1.e and 37.10 (State-Enforceable only); 45CSR§30-5.1.e; CO-R21-97-31, III.2 (State-Enforceable only); 45CSR13, R13-2284, 4.1.7]~~

~~6.4.7. The permittee shall maintain records of all monitoring data required by Section 6.2.4 of this permit, documenting the date and time of each visible emission check, the emission point or equipment identification number, the name or means of identification of the responsible observer, the results of the check, and, if necessary, all corrective actions taken. Should a visible emission observation be required to be performed per the requirements specified in 40 C.F.R. 60, Appendix A, Method 9, the data records of each observation shall be maintained per the requirements of 40 C.F.R. 60, Appendix A, Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (OOS) or equivalent. These records shall be maintained on site for a period of five years and shall be made available to the Director or his authorized representative upon request. (*Emission Point: 451.100*) [45CSR§30-5.1.e]~~

~~6.4.8. **Record of Maintenance of Air Pollution Control Equipment.** For Flare DMSCD01, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures. [45CSR13, R13-2284, 4.4.2]~~

~~6.4.9. **Record of Malfunctions of Air Pollution Control Equipment.** For Flare DMSCD01, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:~~

- ~~a. The equipment involved.~~
- ~~b. Steps taken to minimize emissions during the event.~~
- ~~c. The duration of the event.~~
- ~~d. The estimated increase in emissions during the event.~~

~~For each such case associated with an equipment malfunction, the additional information shall also be recorded:~~

- ~~e. The cause of the malfunction.~~
- ~~f. Steps taken to correct the malfunction.~~
- ~~g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.~~

~~[45CSR13, R13-2284, 4.4.3]~~

~~6.4.10. To determine compliance with dimethyl ether production unit limits set forth in 6.1.12, the permittee shall keep records of the hours of operation and production units. This information shall be recorded in APPENDIX A of this permit and shall be kept on site for a period of five years. Such records shall be certified by a "Responsible Official" and made available to the Director or his duly authorized representative upon request. [45CSR13, R13-2284, 4.4.4]~~

## 6.5. Reporting Requirements

- 6.5.1. The permittee shall submit Periodic Reports as described in 40 C.F.R. §63.152(c). [~~45CSR34; 40 C.F.R. §§63.152(a)(4) and 63.152(e); 45CSR13, R13-2284, 4.1.9]~~]
- 6.5.2. The permittee shall submit reports of start-up, shutdown, and malfunction required by 40 C.F.R. §63.10(d)(5). The start-up, shutdown and malfunction reports may be submitted on the same schedule as the Periodic Reports required under 40 C.F.R. §63.152(c). [~~45CSR34; 40 C.F.R. §§63.152(a)(5) and 63.152(d)(1); 45CSR13, R13-2284, 4.1.9]~~]
- 6.5.3. **Group 1 Process Vents.** If any subsequent TRE determinations or performance tests are conducted after submittal of the Notification of Compliance Status on September 15, 1997, the data in 6.4.2.1.a through 6.4.2.1.c shall be reported in the next Periodic Report as specified in 40 C.F.R. §63.152(c). (*Emission Units: DME010, DME041, DME042, DME040, DME034, DME035, and DME033*) [~~45CSR34; 40 C.F.R. §63.117(a)(3); 45CSR13, R13-2284, 4.1.9]~~]
- 6.5.4. **Group 1 Process Vents.** The permittee shall submit to the Administrator Periodic Reports of the following recorded information according to the schedule in 40 C.F.R. §63.152(c). [~~45CSR34; 40 C.F.R. §§63.118(f), 63.152(a), 63.152(a)(4), and 63.152(e); 45CSR13, R13-2284, 4.1.9]~~]
- 6.5.4.1. For Group 1 points, reports of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data as defined in 40 C.F.R. §63.152(c)(2)(ii)(A). [~~45CSR34; 40 C.F.R. §63.118(f)(2); 45CSR13, R13-2284, 4.1.9]~~]
- 6.5.4.2. Reports of the times and durations of all periods recorded under 6.4.1.3 when the gas stream is diverted to the atmosphere through a bypass line. [~~45CSR34; 40 C.F.R. §63.118(f)(3); 45CSR13, R13-2284, 4.1.9]~~]
- 6.5.4.3. Reports of the times and durations of all periods recorded under 6.4.1.2 in which all pilot flames of a flare were absent. [~~45CSR34; 40 C.F.R. §63.118(f)(5); 45CSR13, R13-2284, 4.1.9]~~]
- (*Emission Units: DME010, DME041, DME042, DME040, DME034, DME035, and DME033*)
- 6.5.5. **Group 1 Process Wastewater Streams.** The owner or operator shall submit as part of the next Periodic Report required by 40 C.F.R. §63.152(c), the monitoring results for each operating day during which the column operating pressure and column bottoms temperature was outside the range established in 6.2.3. (*refiner column and condenser*) [~~45CSR34; 40 C.F.R. §63.146(d)(3); 45CSR13, R13-2284, 4.1.9]~~]
- 6.5.6. **40 C.F.R. 63, Subpart H Reporting Requirements for Equipment Leaks.** The permittee shall comply with all applicable reporting requirements of 40 C.F.R. 63, Subpart H “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.182 (Reporting requirements). [~~45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.182; 45CSR13, R13-2284, 4.1.10]~~]
- 6.5.7. **45CSR§21-37 Reporting Requirements for Equipment Leaks.** The permittee shall comply with all applicable reporting requirements of 45CSR§21-37 “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§§21-37.11 and 5.2. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [~~45CSR§§21-37.1.c, 37.11, and 5.2 (State-Enforceable only); CO R21-97 31, III.2 (State-Enforceable only); 45CSR13, R13-2284, 4.1.7]~~]

**6.6. Compliance Plan**

6.6.1. None

## 7.0 — ~~Dimethyl Sulfate (DMS)~~

### 7.1. — ~~Limitations and Standards~~

~~7.1.1. Group 1 Process Vents. The permittee shall reduce emissions of organic HAP from Group 1 process vents using a flare. The flare shall comply with the requirements of 40 C.F.R. §63.11(b). (Emission Units: DMS010 and DMS008) [45CSR34; 40 C.F.R. §§63.113(a), 63.113(a)(1), and 63.113(a)(1)(i)]~~

~~7.1.2. Group 2 Process Vents with a TRE index value greater than 4.0. The owner or operator of a Group 2 process vent with a TRE index value greater than 4.0 shall maintain a TRE index value greater than 4.0. (Emission Unit: DMS017) [45CSR34; 40 C.F.R. §63.113(e)]~~

~~7.1.3. Group 2 Storage Vessels. For each Group 2 storage vessel, the owner or operator shall comply with the recordkeeping requirements in 7.4.5. (Emission Units: DMS021, DMS022, DMS023, and DMS024) [45CSR34; 40 C.F.R. §63.119(a)(3)]~~

~~7.1.4. Group 1 Process Wastewater Stream. The DMS wastewater stream that is Group 1 is the purge stream from refining (kettle and condenser). This stream is sent off site for disposal in accordance with 40 C.F.R. §63.132(g). [45CSR34; 40 C.F.R. §63.132(g)]~~

~~7.1.5. Group 2 Process Wastewater Streams. For wastewater streams that are Group 2 for table 9 compounds, the owner or operator shall comply with the recordkeeping requirements specified in 7.4.6. (the vent system knock out pot discharge which flows to the waste collection tank) [45CSR34; 40 C.F.R. §63.132(a)(3)]~~

~~7.1.6. Maintenance Wastewater. Each owner or operator of a source subject to 40 C.F.R. 63, Subpart F shall comply with the requirements of 7.1.6.1 through 7.1.6.3 for maintenance wastewaters containing those organic HAP's listed in table 9 of 40 C.F.R. 63, Subpart G. [45CSR34; 40 C.F.R. §63.105(a)]~~

~~7.1.6.1. The owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance turn-around) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall: [45CSR34; 40 C.F.R. §63.105(b)]~~

~~a. Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities. [45CSR34; 40 C.F.R. §63.105(b)(1)]~~

~~b. Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and [45CSR34; 40 C.F.R. §63.105(b)(2)]~~

~~c. Specify the procedures to be followed when clearing materials from process equipment. [45CSR34; 40 C.F.R. §63.105(b)(3)]~~

~~7.1.6.2. The owner or operator shall modify and update the information required by 7.1.6.1 as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure. [45CSR34; 40 C.F.R. §63.105(e)]~~

~~7.1.6.3. The owner or operator shall implement the procedures described in 7.1.6.1 and 7.1.6.2 as part of the start up, shutdown, and malfunction plan required under 40 C.F.R. §63.6(e)(3). [45CSR34; 40 C.F.R. §63.105(d)]~~

- ~~7.1.7. 40 C.F.R. 63, Subpart H Requirements for Equipment Leaks. The permittee shall comply with all applicable standards of 40 C.F.R. 63, Subpart H “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.” The pertinent equipment leak standards include 40 C.F.R. §§63.162 (Standards: General), 63.166 (Standards: Sampling connection systems), and 63.169 (Standards: Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service. [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §§63.162, 63.166, and 63.169]~~
- ~~7.1.8. 45CSR§21-37 Requirements for Equipment Leaks. The permittee shall comply with all applicable requirements of 45CSR§21-37 “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment.” The pertinent equipment leak standards include Sections 45CSR§§21-37.3 through 37.8. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.3 through 37.8 and 37.1.e (State Enforceable only); CO R21-97-31, III.2 (State Enforceable only)]~~
- ~~7.1.9. Flare DMSCD01 (Emission Point 451.100) is shared with the Dimethyl Ether (DME) Process Unit. Limitations and Standards for flare DMSCD01 are provided in 6.1.9, 6.1.10, and 6.1.11.~~
- ~~7.1.10. No person shall cause suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in 7.1.11. (Emission Points: 451.002 and 451.003) [45CSR§7-3.1]~~
- ~~7.1.11. The provisions of 7.1.10 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period. (Emission Points: 451.002 and 451.003) [45CSR§7-3.2]~~
- ~~7.1.12. Mineral acids shall not be released from any type source operation or duplicate source operation or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity given in the table below.~~

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Emission Point	Emission Source	Limit
451.002	Tank DMS001 (SO <sub>2</sub> Tank)	Sulfuric Acid Mist—35 mg/dscm
451.003	Tank DMS002 (Sulfuric Acid Tank)	Sulfuric Acid Mist—35 mg/dscm

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~~(Emission Points: 451.002 and 451.003) [45CSR§7-4.2 and Table 45-7B]~~

- ~~7.1.13. The permittee shall comply with all applicable requirements of 6.1.19 from CO R21-97-31 for Dimethyl Sulfate (DMS).~~

## ~~7.2. Monitoring Requirements~~

- ~~7.2.1. Group 1 Process Vents. To demonstrate compliance with 7.1.1 for Group 1 process vents using a flare, a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame shall be installed, calibrated, maintained, and operated according to manufacturer’s specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. (Emission Units: DMS010 and DMS008) [45CSR34; 40 C.F.R. §§63.114(a) and 63.114(a)(2)]~~

~~7.2.2. Group 1 Process Vents. The permittee shall comply with 7.2.2.1 for any bypass line between the origin of the gas stream (i.e., at an air oxidation reactor, distillation unit, or reactor as identified in 40 C.F.R. §63.107(b)) and the point where the gas stream reaches the process vent, as described in 40 C.F.R. §63.107, that could divert the gas stream directly to the atmosphere. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this requirement. [45CSR34; 40 C.F.R. §63.114(d)]~~

~~7.2.2.1. Properly install, maintain and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in 7.4.1.3. The flow indicator shall be installed at the entrance to any by pass line that could divert the gas stream to the atmosphere. [45CSR34; 40 C.F.R. §63.114(d)(1)]~~

~~(Emission Units: DMS010 and DMS008)~~

~~7.2.3. Flare DMSCD01 (Emission Point 451.100) is shared with the Dimethyl Ether (DME) Process Unit. Monitoring Requirements for flare DMSCD01 are provided in 6.2.4.~~

~~7.2.4. For the purpose of determining compliance with the opacity limits set forth in Sections 7.1.10 and 7.1.11 for Tanks DMS001 and DMS002 (Emission Points 451.002 and 451.003), the permittee shall conduct visual emissions monitoring at a frequency of at least once per month with a maximum of forty five (45) days between consecutive readings. These checks shall be performed during periods of normal operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct a visual emission evaluation per 45CSR7A within three (3) days of the first identification of visible emissions. A 45CSR7A evaluation shall not be required if the visible emission condition is corrected within seventy-two (72) hours after the visible emission and the sources are operating at normal conditions. (Emission Points: 451.002 and 451.003) [45CSR§30-5.1.e]~~

### ~~7.3. Testing Requirements~~

~~7.3.1. 40 C.F.R. 63, Subpart H Testing Requirements for Equipment Leaks. The permittee shall comply with all applicable test methods and procedures of 40 C.F.R. 63, Subpart H “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.180 (Test methods and procedures). [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.180]~~

~~7.3.2. 45CSR§21-37 Testing Requirements for Equipment Leaks. The permittee shall comply with all applicable test methods and procedures of 45CSR§21-37 “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§21-37.9. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.1.e and 37.9 (State-Enforceable only); CO-R21-97-31, III.2 (State-Enforceable only)]~~

~~7.3.3. The permittee shall comply with the testing requirements of 45CSR§21-41 specified in 6.3.3.~~

~~7.3.4. Flare DMSCD01 (Emission Point 451.100) is shared with the Dimethyl Ether (DME) Process Unit. Testing Requirements for flare DMSCD01 are provided in 6.3.4.~~

**7.4. Recordkeeping Requirements**

~~7.4.1. Group 1 Process Vents. To demonstrate compliance with 7.1.1 for Group 1 process vents using a flare, the permittee shall keep the following records up to date and readily accessible: [45CSR34; 40 C.F.R. §63.118(a)]~~

~~7.4.1.1. Continuous records of the equipment operating parameters specified to be monitored under 7.2.1 and listed in table 3 of 40 C.F.R. 63, Subpart G. For flares, hourly records and records of pilot flame outages specified in table 3 of 40 C.F.R. 63, Subpart G shall be maintained in place of continuous records.~~

~~TABLE 3. PROCESS VENTS MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS FOR COMPLYING WITH 98 WEIGHT PERCENT REDUCTION OF TOTAL ORGANIC HAZARDOUS AIR POLLUTANTS EMISSIONS OR A LIMIT OF 20 PARTS PER MILLION BY VOLUME~~

<del>Control device</del>	<del>Parameters to be monitored</del>	<del>Recordkeeping and reporting requirements for monitored parameters</del>
<del>Flare</del>	<del>Presence of a flame at the pilot light [63.114(a)(2)]</del>	<del>1. Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour.</del> <del>2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination NCS.</del> <del>3. Record the times and durations of all periods when all pilot flames are absent or the monitor is not operating.</del> <del>4. Report the times and durations of all periods when all pilot flames of a flare are absent PR.</del>
<del>All control devices</del>	<del>Presence of flow diverted to the atmosphere from the control device [63.114(d)(1)]</del>	<del>1. Hourly records of whether the flow indicator was operating and whether diversion was detected at any time during each hour.</del> <del>2. Record and report the times and durations of all periods when the vent stream is diverted through a bypass line or the monitor is not operating PR.</del>

~~NCS = Notification of Compliance Status as described in 40 C.F.R. §63.152 and submitted on September 15, 1997.  
 PR = Periodic Reports described in 40 C.F.R. §63.152.~~

~~[45CSR34; 40 C.F.R. §63.118(a)(1) and Table 3 of 40 C.F.R. 63, Subpart G]~~

~~7.4.1.2. Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 C.F.R. §63.152(f). For flares, records of the times and duration of all periods during which all pilot flames are absent shall be kept rather than daily averages. [45CSR34; 40 C.F.R. §63.118(a)(2)]~~

~~7.4.1.3. Hourly records of whether the flow indicator specified under 7.2.2.1 was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the gas stream is diverted to the atmosphere or the monitor is not operating. [45CSR34; 40 C.F.R. §63.118(a)(3)]~~

~~(Emission Units: DMS010 and DMS008)~~

~~7.4.2. **Group 1 Process Vents.** Each owner or operator subject to the control provisions for Group 1 process vents in 7.1.1 shall: [45CSR34; 40 C.F.R. §63.117(a)]~~

~~7.4.2.1. Keep an up to date, readily accessible record of the data specified in 7.4.2.1.a through 7.4.2.1.e submitted as part of the Notification of Compliance Status report dated September 15, 1997. [45CSR34; 40 C.F.R. §63.117(a)(1)]~~

~~a. Flare design (i.e., steam assisted, air assisted, or non assisted); [45CSR34; 40 C.F.R. §63.117(a)(5)(i)]~~

~~b. All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by 40 C.F.R. §63.116(a). [45CSR34; 40 C.F.R. §63.117(a)(5)(ii)]~~

~~c. All periods during the compliance determination when the pilot flame is absent. [45CSR34; 40 C.F.R. §63.117(a)(5)(iii)]~~

~~(Emission Units: DMS010 and DMS008)~~

~~7.4.3. **Group 2 Process Vents with a TRE index value greater than 4.0.** The owner or operator of a Group 2 process vent with a TRE index value greater than 4.0 as specified in 7.1.2, shall maintain records of measurements, engineering assessments, and calculations performed to determine the TRE index value of the vent stream, submitted as part of the Notification of Compliance Status report dated September 15, 1997. Documentation of engineering assessments shall include all data, assumptions, and procedures used for the engineering assessments, as specified in 40 C.F.R. §63.115(d)(1). (Emission Unit: DMS017) [45CSR34; 40 C.F.R. §63.117(b)]~~

~~7.4.4. **Group 2 Process Vents with a TRE index value greater than 4.0.** Each owner or operator subject to the provisions of 40 C.F.R. 63, Subpart G and who elects to demonstrate compliance with the TRE index value greater than 4.0 under 7.1.2 shall keep up to date, readily accessible records of: [45CSR34; 40 C.F.R. §63.118(e)]~~

~~7.4.4.1. Any process changes as defined in 40 C.F.R. §63.115(e); [45CSR34; 40 C.F.R. §63.118(e)(1)]~~

~~7.4.4.2. Any recalculation of the TRE index value pursuant to 40 C.F.R. §63.115(e). [45CSR34; 40 C.F.R. §63.118(e)(2)]~~

~~(Emission Unit: DMS017)~~

~~7.4.5. **Group 2 Storage Vessels.** For each Group 2 storage vessel, the permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 2 status and is in operation. (Emission Units: DMS021, DMS022, DMS023, and DMS024) [45CSR34; 40 C.F.R. §63.123(a)]~~

~~7.4.6. **Group 2 Process Wastewater Streams.** The owner or operator shall keep in a readily accessible location the records specified in 7.4.6.1 through 7.4.6.4. [45CSR34; 40 C.F.R. §63.147(b)(8)]~~

~~7.4.6.1. Process unit identification and description of the process unit. [45CSR34; 40 C.F.R. §63.147(b)(8)(i)]~~

~~7.4.6.2. Stream identification code. [45CSR34; 40 C.F.R. §63.147(b)(8)(ii)]~~

- ~~7.4.6.3. For existing sources, concentration of table 9 compound(s) in parts per million, by weight. Include documentation of the methodology used to determine the concentration. [45CSR34; 40 C.F.R. §63.147(b)(8)(iii)]~~
- ~~7.4.6.4. Flow rate in liter per minute. [45CSR34; 40 C.F.R. §63.147(b)(8)(iv)]  
(the vent system knock-out pot which discharges to the waste collection tank)~~
- ~~7.4.7. Maintenance Wastewater. The owner or operator shall maintain a record of the information required by 7.1.6.1 and 7.1.6.2 as part of the start up, shutdown, and malfunction plan required under 40 C.F.R. §63.6(e)(3). [45CSR34; 40 C.F.R. §63.105(e)]~~
- ~~7.4.8. 40 C.F.R. 63, Subpart H Recordkeeping Requirements for Equipment Leaks. The permittee shall comply with all applicable recordkeeping requirements of 40 C.F.R. 63, Subpart H “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.181 (Recordkeeping requirements.). [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.181]~~
- ~~7.4.9. 45CSR§21-37 Recordkeeping Requirements for Equipment Leaks. The permittee shall comply with all applicable recordkeeping requirements of 45CSR§21-37 “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§21-37.10, with the exception that all records shall be maintained for a period of five (5) years instead of three (3) years. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.1.e and 37.10 (State-Enforceable only); 45CSR§30-5.1.e; CO-R21-97-31, III.2 (State-Enforceable only)]~~
- ~~7.4.10. Flare DMSCD01 (Emission Point 451.100) is shared with the Dimethyl Ether (DME) Process Unit. Recordkeeping Requirements for flare DMSCD01 are provided in 6.4.7, 6.4.8, and 6.4.9.~~
- ~~7.4.11. The permittee shall maintain records of all monitoring data required by Section 7.2.4 of this permit, documenting the date and time of each visible emission check, the emission point or equipment identification number, the name or means of identification of the responsible observer, the results of the check, and, if necessary, all corrective actions taken. Should a visible emission observation be required to be performed per the requirements specified in 45CSR7A, the data records of each observation shall be maintained per the requirements of 45CSR7A. For an emission unit out of service during the normal monthly evaluation, the record of observation may note “out of service” (OOS) or equivalent. These records shall be maintained on site for a period of five years and shall be made available to the Director or his authorized representative upon request. (Emission Points: 451.002 and 451.003) [45CSR§30-5.1.e]~~
- ~~7.4.12. In order to demonstrate compliance with the requirements of 7.1.12, the permittee shall maintain monthly records of tank throughput and emissions (mg/m<sup>3</sup>) for Tanks DMS001 and DMS002. These records shall be maintained for a period of at least five (5) years in accordance with 3.4.2. [45CSR§30-5.1.e.]~~

## **7.5. Reporting Requirements**

- ~~7.5.1. The permittee shall submit Periodic Reports as described in 40 C.F.R. §63.152(e). [45CSR34; 40 C.F.R. §§63.152(a)(4) and 63.152(e)]~~
- ~~7.5.2. The permittee shall submit reports of start up, shutdown, and malfunction required by 40 C.F.R. §63.10(d)(5). The start up, shutdown and malfunction reports may be submitted on the same schedule as the Periodic Reports required under 40 C.F.R. §63.152(e). [45CSR34; 40 C.F.R. §§63.152(a)(5) and 63.152(d)(1)]~~

~~7.5.3. Group 1 Process Vents. If any subsequent TRE determinations or performance tests are conducted after submittal of the Notification of Compliance Status on September 15, 1997, the data in 7.4.2.1.a through 7.4.2.1.c shall be reported in the next Periodic Report as specified in 40 C.F.R. §63.152(e). (Emission Units: DMS010 and DMS008) [45CSR34; 40 C.F.R. §63.117(a)(3)]~~

~~7.5.4. Group 1 Process Vents. The permittee shall submit to the Administrator Periodic Reports of the following recorded information according to the schedule in 40 C.F.R. §63.152(e). [45CSR34; 40 C.F.R. §§63.118(f), 63.152(a), 63.152(a)(4), and 63.152(e)]~~

~~7.5.4.1. For Group 1 points, reports of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data as defined in 40 C.F.R. §63.152(e)(2)(i)(A). [45CSR34; 40 C.F.R. §63.118(f)(2)]~~

~~7.5.4.2. Reports of the times and durations of all periods recorded under 7.4.1.3 when the gas stream is diverted to the atmosphere through a bypass line. [45CSR34; 40 C.F.R. §63.118(f)(3)]~~

~~7.5.4.3. Reports of the times and durations of all periods recorded under 7.4.1.2 in which all pilot flames of a flare were absent. [45CSR34; 40 C.F.R. §63.118(f)(5)]~~

~~(Emission Units: DMS010 and DMS008)~~

~~7.5.5. Group 2 Process Vents with a TRE index value greater than 4.0. Whenever a process change, as defined in 40 C.F.R. §63.115(e), is made that causes a Group 2 process vent to become a Group 1 process vent, the owner or operator shall submit a report within 180 calendar days after the process change as specified in 40 C.F.R. §63.151(j). The report shall include: [45CSR34; 40 C.F.R. §63.118(g)]~~

~~7.5.5.1. A description of the process change; [45CSR34; 40 C.F.R. §63.118(g)(1)]~~

~~7.5.5.2. The results of the recalculation of the flow rate, organic HAP concentration, and TRE index value required under 40 C.F.R. §63.115(e) and recorded under 7.4.4; and [45CSR34; 40 C.F.R. §63.118(g)(2)]~~

~~7.5.5.3. A statement that the owner or operator will comply with the provisions of 40 C.F.R. §63.113 for Group 1 process vents by the dates specified in 40 C.F.R. 63, Subpart F. [45CSR34; 40 C.F.R. §63.118(g)(3)]~~

~~(Emission Unit: DMS017)~~

~~7.5.6. Group 2 Process Vents with a TRE index value greater than 4.0. Whenever a process change, as defined in 40 C.F.R. §63.115(e), is made that causes a Group 2 process vent with a TRE greater than 4.0 to become a Group 2 process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 calendar days after the process change. The report may be submitted as part of the next periodic report. The report shall include: [45CSR34; 40 C.F.R. §63.118(h)]~~

~~7.5.6.1. A description of the process change. [45CSR34; 40 C.F.R. §63.118(h)(1)]~~

~~7.5.6.2. The results of the recalculation of the TRE index value required under 40 C.F.R. §63.115(e) and recorded under 7.4.4, and [45CSR34; 40 C.F.R. §63.118(h)(2)]~~

~~7.5.6.3. A statement that the owner or operator will comply with the requirements specified in 40 C.F.R. §63.113(d). [45CSR34; 40 C.F.R. §63.118(h)(3)]~~

~~(Emission Unit: DMS017)~~

~~7.5.7. Group 2 Process Vents with a TRE index value greater than 4.0. The owner or operator is not required to submit a report of a process change if one of the conditions listed in 7.5.7.1 through 7.5.7.4 is met. [45CSR34; 40 C.F.R. §60.118(k)]~~

~~7.5.7.1. The process change does not meet the definition of a process change in 40 C.F.R. §63.115(e), or [45CSR34; 40 C.F.R. §63.118(k)(1)]~~

~~7.5.7.2. The vent stream flow rate is recalculated according to 40 C.F.R. §63.115(e) and the recalculated value is less than 0.005 standard cubic meter per minute, or [45CSR34; 40 C.F.R. §63.118(k)(2)]~~

~~7.5.7.3. The organic HAP concentration of the vent stream is recalculated according to 40 C.F.R. §63.115(e) and the recalculated value is less than 50 parts per million by volume, or [45CSR34; 40 C.F.R. §63.118(k)(3)]~~

~~7.5.7.4. The TRE index value is recalculated according to 40 C.F.R. §63.115(e) and the recalculated value is greater than 4.0. [45CSR34; 40 C.F.R. §63.118(k)(4)]~~

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~~(Emission Unit: DMS017)~~

~~7.5.8. 40 C.F.R. 63, Subpart H Reporting Requirements for Equipment Leaks. The permittee shall comply with all applicable reporting requirements of 40 C.F.R. 63, Subpart H “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.182 (Reporting requirements.). [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.182]~~

~~7.5.9. 45CSR§21-37 Reporting Requirements for Equipment Leaks. The permittee shall comply with all applicable reporting requirements of 45CSR§21-37 “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§§21-37.11 and 5.2. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.1.e, 37.11, and 5.2 (State-Enforceable only); CO-R21-97-31, III.2 (State-Enforceable only)]~~

## **7.6. Compliance Plan**

7.6.1. None.

## 8.0 — Carbon Monoxide Flare

### 8.1. — Limitations and Standards

8.1.1. — Emissions from the flare (209.001) shall not exceed the following:

Pollutant	lb/hr	tpy
CO	9.8	4.2
NO <sub>x</sub>	0.01	0.05
VOC	0.01	0.01
SO <sub>2</sub>	0	0
PM	0.01	0.01

~~Compliance with the hourly PM emission limit for flare (209.001) shall demonstrate compliance with the less stringent hourly PM emission limit from 45CSR§6 4.1. [45CSR13, R13-0914, 4.1.1 and 4.1.4; 45CSR§6 4.1]~~

8.1.2. — ~~The amount of CO sent to the flare (209.001) shall not exceed 9,749 pounds per hour nor 4,188.3 tons per year. [45CSR13, R13-0914, 4.1.2]~~

8.1.3. — ~~No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. [45CSR13, R13-0914, 4.1.5; 45CSR§6 4.3]~~

8.1.4. — ~~The provisions of 8.1.3 shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up. [45CSR§6 4.4]~~

8.1.5. — ~~Operation and Maintenance of Air Pollution Control Equipment. The permittee shall, to the extent practicable, install, maintain, and operate flare (209.001) and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. [45CSR13, R13-0914, 4.1.6]~~

### 8.2. — Monitoring Requirements

8.2.1. — ~~For the purposes of determining compliance with the conditions of 8.1.1 and 8.1.2, the permittee shall monitor the amount of CO sent to the flare each day and the number of hours each day that CO was sent to the flare. [45CSR13, R13-0914, 4.2.1; 45CSR§30 5.1.e]~~

8.2.2. — ~~For the purpose of determining compliance with the opacity limits set forth in Sections 8.1.3 and 8.1.4 for flare (209.001), the permittee shall conduct visual emissions monitoring at a frequency of at least once per month with a maximum of forty five (45) days between consecutive readings. These checks shall be performed during periods of normal operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct a visual emission evaluation per 40 C.F.R. 60, Appendix A, Method 9 within three (3) days of the first identification of visible emissions. A Method 9 evaluation shall not be required if the visible emission condition is corrected within seventy two (72) hours after the visible emission and the sources are operating at normal conditions. [45CSR§30 5.1.e]~~

### **8.3. Testing Requirements**

8.3.1. None.

### **8.4. Recordkeeping Requirements**

8.4.1. ~~Record of Maintenance of Air Pollution Control Equipment. For flare (209.001), the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures. [45CSR13, R13-0914, 4.4.2]~~

8.4.2. ~~Record of Malfunctions of Air Pollution Control Equipment. For flare (209.001), the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:~~

- ~~a. The equipment involved.~~
- ~~b. Steps taken to minimize emissions during the event.~~
- ~~c. The duration of the event.~~
- ~~d. The estimated increase in emissions during the event.~~

~~For each such case associated with an equipment malfunction, the additional information shall also be recorded:~~

- ~~e. The cause of the malfunction.~~
- ~~f. Steps taken to correct the malfunction.~~
- ~~g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.~~

~~[45CSR13, R13-0914, 4.4.3]~~

8.4.3. ~~For the purposes of determining compliance with conditions 8.1.1 and 8.1.2 of this permit, the permittee shall maintain certified daily records of the total amount of CO sent to the flare and the number of hours each day that CO was sent to the flare. [45CSR13, R13-0914, 4.4.4; 45CSR§30-5.1.c]~~

8.4.4. ~~The permittee shall maintain records of all monitoring data required by 8.2.2, documenting the date and time of each visible emission check, the emission point or equipment identification number, the name or means of identification of the responsible observer, the results of the check, and, if necessary, all corrective actions taken. Should a visible emission observation be required to be performed per the requirements specified in 40 C.F.R. 60, Appendix A, Method 9, the data records of each observation shall be maintained per the requirements of 40 C.F.R. 60, Appendix A, Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (OOS) or equivalent. These records shall be maintained in accordance with 3.4.2. [45CSR§30-5.1.e]~~

### **8.5. Reporting Requirements**

8.5.1. None.

**8.6. — Compliance Plan**

8.6.1. — None.



## ~~APPENDIX A – R13-2284 Recordkeeping Form~~



**APPENDIX BA – Consent Order CO-R21-97-31  
ATTACHMENTS A AND B**

## ATTACHMENT A

Process Area Description and Identification Number	Name of Process Equipment Vented to Control Device and Equipment Identification Number	Maximum Theoretical Emissions (MTE) of the Source (lbs/hr)	Emission Point Identification Number	Control Device Identification Number	Control Device Description	Efficiency of Control Device	Maximum Allowable Hours of Operation (hrs/yr)	Maximum Allowable VOC Emissions	
								lbs/hr	tons/yr
Methylamines (401)	All process vessels and process tanks from the Methylamines Area including loading (403) and Methylamines bulk storage (401 and 404)	1,571	401.001	001	FL	98%	8,760	31.4	42.6 <sup>1</sup>
	Reactor/Condenser DMF Process (421.015)	21	401.001	001	FL	98%	8,760		
Methanol Storage (405)	Tank (014)	225	014	014	IFR	96%	8,760	9.0	1.6
DME/DMS (441)/(451)	Crude DME Receiver (020)	80.4	451.100	451.100	FL	98%	8,760	25.2 <sup>2</sup>	41.61 <sup>2</sup>
	DME Refining Condenser (030)	26.0	451.100	451.100	FL	98%	8,760		
	MRC Condenser (031)	52.1	451.100	451.100	FL	98%	8,760		
	DME Storage & Loading	8.53	451.100	451.100	FL	98%	8,760		
	DMS Crude Hold Up Tank (026)	182.6	451.100	451.100	FL	98%	8,760		

<sup>1</sup>Letter dated October 21, 1997 from Ronald E. Smith, DuPont Belle, to Rebecca J. Haddad, OAQ.

<sup>2</sup>R13-2284, Conditions 4.1.3, 4.15, and 4.1.6.

