

West Virginia Department of Environmental Protection

Harold D. Ward  
Cabinet Secretary

# Permit to Operate



Pursuant to  
**Title V**  
of the Clean Air Act

*Issued to:*  
Belle Chemical Company  
Belle Plant  
Specialty Chemical Intermediates  
R30-03900693-2022

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*Laura M. Crowder*  
*Director, Division of Air Quality*

*Issued: Draft/Proposed • Effective: Draft/Proposed*  
*Expiration: Draft/Proposed • Renewal Application Due: Draft/Proposed*

Permit Number: **R30-03900693-2022**  
Permittee: **Belle Chemical Company**  
Facility Name: **Belle Plant**  
Manufacturing Unit: **Specialty Chemical Intermediates**  
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: Nikki B. Moats

*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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## 1.0 Emission Units and Active R13, R14, and R19 Permits

### 1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
<i>Methylamines (MMA, DMA, TMA, and Ammonia Storage)</i>				
AM01	402.001	Tank	1972	AMCD01 - Flare
AM02	402.001	Tank	1960	AMCD01 - Flare
AM03	402.001	Tank	1960	AMCD01 - Flare
AM04	402.001	Tank	1959	AMCD01 - Flare
AM05	402.001	Tank	1965	AMCD01 - Flare
AM06	402.001	Tank	1993	AMCD01 - Flare
AM07	402.001	Heat Exchanger	RIK <sup>2</sup> 2011	AMCD01 - Flare
AM08	402.001	Heat Exchanger	RIK <sup>2</sup> 2014	AMCD01 - Flare
AM09	402.001	Heat Exchanger	1981	AMCD01 - Flare
AM10	402.001	Tank	Orig. <sup>1</sup> 1968 RIK <sup>2</sup> 1995	AMCD01 - Flare
AM11	402.001	Heat Exchanger	1973	AMCD01 - Flare
AM12	402.001	Heat Exchanger	1985	AMCD01 - Flare
AM13	402.001	Heat Exchanger	Orig. <sup>1</sup> 1977 RIK <sup>2</sup> 2020	AMCD01 - Flare
AM14	402.001	Heat Exchanger	Orig. <sup>1</sup> 1977 RIK <sup>2</sup> 1998	AMCD01 - Flare
AM15	402.001	Heat Exchanger	Orig. <sup>1</sup> 1977 RIK <sup>2</sup> 2000	AMCD01 - Flare
AM16	402.001	Heat Exchanger	Orig. <sup>1</sup> 1977 RIK <sup>2</sup> 2001	AMCD01 - Flare
AM17	402.001	Heat Exchanger	Spare Not In Service	AMCD01 - Flare
AM18	402.001	Heat Exchanger	Orig. <sup>1</sup> 1977 RIK <sup>2</sup> 1998	AMCD01 - Flare
AM19	402.001	Heat Exchanger	1997	AMCD01 - Flare
AM20	402.001	Heat Exchanger	RIK <sup>2</sup> 2006	AMCD01 - Flare
AM21	402.001	Heat Exchanger	RIK <sup>2</sup> 2006	AMCD01 - Flare
AM22	402.001	Heat Exchanger	RIK <sup>2</sup> 2006	AMCD01 - Flare

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Control Device</b>
AM23	402.001	Heat Exchanger	RIK <sup>2</sup> 2006	AMCD01 - Flare
AM24	402.001	Reactor	RIK <sup>2</sup> 2020	AMCD01 - Flare
AM25	402.001	Heat Exchanger	1993	AMCD01 - Flare
AM26	402.001	Distillation Column	2000 RIK <sup>2</sup>	AMCD01 - Flare
AM27	402.001	Tank	1977	AMCD01 - Flare
AM28	402.001	Heat Exchanger	1977	AMCD01 - Flare
AM29	402.001	Heat Exchanger	1993	AMCD01 - Flare
AM30	402.001	Heat Exchanger	1993	AMCD01 - Flare
AM31	402.001	Heat Exchanger	2002	AMCD01 - Flare
AM32	402.001	Heat Exchanger	2003 RIK <sup>2</sup>	AMCD01 - Flare
AM33	402.001	Heat Exchanger	1995	AMCD01 - Flare
AM34	402.001	Heat Exchanger	1984	AMCD01 - Flare
AM35	402.001	Distillation Column	1968	AMCD01 - Flare
AM36	402.001	Heat Exchanger	1993	AMCD01 - Flare
AM37	402.001	Heat Exchanger	1997	AMCD01 - Flare
AM38	402.001	Heat Exchanger	2003 RIK <sup>2</sup>	AMCD01 - Flare
AM39	402.001	Distillation Column	1968	AMCD01 - Flare
AM40	402.001	Tank	1997	AMCD01 - Flare
AM41	402.001	Heat Exchanger	1987	AMCD01 - Flare
AM42	402.001	Heat Exchanger	1960	AMCD01 - Flare
AM43	402.001	Heat Exchanger	1977	AMCD01 - Flare
AM44	402.001	Distillation Column	1963	AMCD01 - Flare
AM45	402.001	Tank	1977	AMCD01 - Flare
AM46	402.001	Heat Exchanger	1986	AMCD01 - Flare
AM47	402.001	Heat Exchanger	1969	AMCD01 - Flare
AM48	402.001	Heat Exchanger	1963	AMCD01 - Flare
AM49	402.001	Heat Exchanger	1969	AMCD01 - Flare
AM50	402.001	Product Loading	Before 1966	AMCD01 - Flare
AM51	402.001	Tank	1963	AMCD01 - Flare
AM52	402.001	Tank	1969	AMCD01 - Flare
AM53	402.001	Tank	1977	AMCD01 - Flare
AM54	402.001	Tank	1977	AMCD01 - Flare

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Control Device</b>
AM55	402.001	Tank	RIK <sup>2</sup> 2017	AMCD01 - Flare
AM56	402.001	Tank	1960	AMCD01 - Flare
AM57	402.001	Tank	1960	AMCD01 - Flare
AM58	402.001	Tank	1963	AMCD01 - Flare
AM59	402.001	Tank	1963	AMCD01 - Flare
AM60	402.001	Tank	1977	AMCD01 - Flare
AM61	402.001	Tank	1963	AMCD01 - Flare
AM62	402.001	Tank	1963	AMCD01 - Flare
AM63	402.001	Mixer	1979	AMCD01 - Flare
AM64	402.001	Heat Exchanger	1979	AMCD01 - Flare
AM65	402.001	Heat Exchanger	1979	AMCD01 - Flare
AM66	402.001	Filter	1980	AMCD01 - Flare
AM67	402.001	Tank	1963	AMCD01 - Flare
AM68	402.001	Mixer	1979	AMCD01 - Flare
AM69	402.001	Heat Exchanger	1979	AMCD01 - Flare
AM70	402.001	Heat Exchanger	1979	AMCD01 - Flare
AM71	402.001	Filter	1980	AMCD01 - Flare
AM72	402.001	Tank	1963	AMCD01 - Flare
AM73	402.001	Mixer	Out of Service	AMCD01 - Flare
AM74	402.001	Heat Exchanger	Out of Service	AMCD01 - Flare
AM75	402.001	Heat Exchanger	Out of Service	AMCD01 - Flare
AM76	402.001	Filter	Out of Service	AMCD01 - Flare
AM77	402.001	Tank	1977	AMCD01 - Flare
AM78	402.003	Tank	Tank 1956; Roof 1997	AMCD03–Internal Floating Roof
AM79	AE.001	Tank	1966	AMCD02 - Flare
AM80	AE.001	Heat Exchanger	1980	AMCD02 - Flare
AM81	AE.001	Heat Exchanger	1980	AMCD02 - Flare
AM82	402.001	Storage Vessel S-112	2014 RIK <sup>2</sup>	AMCD01 - Flare
<b>Wastewater Stripping (AM83 through AM90)</b>				
AM83	402.001	Tank	RIK <sup>2</sup> 2011	AMCD01 - Flare
AM84	402.001	Blower	RIK <sup>2</sup> 2011	AMCD01 - Flare
AM85	402.001	Heat Exchanger	1977	AMCD01 - Flare

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
AM86	402.001	Heat Exchanger	1977	AMCD01 - Flare
AM87	402.001	Heat Exchanger	1977	AMCD01 - Flare
AM88	402.001	Column	1977	AMCD01 - Flare
AM89	402.001	Heat Exchanger	1977	AMCD01 - Flare
AM90	402.001	Tank	1976	AMCD01 - Flare
<b>Vent Recovery System (AM91 through AM97)</b>				
AM91	402.001	Column	1960	AMCD01 - Flare
AM92	402.001	Column	Orig. <sup>1</sup> 1960 RIK <sup>2</sup> 1997	AMCD01 - Flare
AM93	402.001	Tank	1974	AMCD01 - Flare
AM94	402.001	Heat Exchanger	1960	AMCD01 - Flare
AM95	402.001	Separator	1976	AMCD01 - Flare
AM96	402.001	Vacuum Jets	Before 1978	AMCD01 - Flare
AM97	402.001	Heat Exchanger	1995	AMCD01 - Flare
AM99	402.001	Distillation Column	1963	AMCD01 - Flare
AM100	402.001	Tank	1982	AMCD01 - Flare
<b>Amides (DMF, MMF, and DMAC)</b>				
DMF01	421.004	Tank	RIK <sup>2</sup> 2018	None
DMF02	402.001	Reactor	1981	AMCD01 - Flare
DMF03	402.001	Heat Exchanger	2013	AMCD01 - Flare
DMF04	402.001	Heat Exchanger	2014	AMCD01 - Flare
DMF05	402.001	Heat Exchanger	2000	AMCD01 - Flare
DMF06	402.001	Heat Exchanger	1988	AMCD01 - Flare
DMF07	402.001	Heat Exchanger	1969	AMCD01 - Flare
DMF08	402.001	Tank	Orig. <sup>1</sup> 1963 RIK <sup>2</sup> 1988	AMCD01 - Flare
DMF09	402.001	Heat Exchanger	1993	AMCD01 - Flare
DMF10	402.001	Filter	1979	AMCD01 - Flare
DMF11	402.001	Tank	1976	AMCD01 - Flare
DMF12	402.001	Tank	1976	AMCD01 - Flare
DMF13	402.001	Tank	1963	AMCD01 - Flare
DMF14	402.001	Heat Exchanger	1982	AMCD01 - Flare
DMF15	402.001	Distillation Column	1963	AMCD01 - Flare

<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Control Device</b>
DMF16	402.001	Heat Exchanger	1983	AMCD01 - Flare
DMF17	402.001	Heat Exchanger	2012	AMCD01 - Flare
DMF18	402.001	Heat Exchanger	RIK <sup>2</sup> 2021	AMCD01 - Flare
DMF19	402.001	Heat Exchanger	RIK <sup>2</sup> 2021	AMCD01 - Flare
DMF20	402.001	Distillation Column	1963	AMCD01 - Flare
DMF21	402.001	Heat Exchanger	2012	AMCD01 - Flare
DMF22	402.001	Heat Exchanger	2014	AMCD01 - Flare
DMF23	402.001	Demister Pad	1960	AMCD01 - Flare
DMF24	402.001	Heat Exchanger	1960	AMCD01 - Flare
DMF25	402.001	Heat Exchanger	1960	None
DMF26	402.001	Tank	1969	None
DMF27	421.004	Filter	1985	None
DMF28	421.004	Tank	Out of Service	None
DMF29	402.001	Storage Vessel S-113	2014 RIK <sup>2</sup>	AMCD01 - Flare
DMF30	421.004	Tank	Before 1978	None
DMF31	421.004	Tank	Out of Service	None
DMF32	DMF32	Storage Vessel S-102	2014 RIK <sup>2</sup>	None <sup>3</sup>
DMF33	421.004	Tank	Out of Service	None
DMF34	421.004	Tank	1976	None
DMF35	421.004	Tank	1977	None
DMF36	421.004	Tank	Out of Service	None
DMF37	421.004	Storage Vessel S-110	2014 RIK <sup>2</sup>	None
DMF38	421.004	Tank	Out of Service	None
DMF39	421.004	Tank	Out of Service	None
DMF40	421.004	Tank	1977	None
DMF41	421.004	Tank	1977	None
DMF42	421.004	Loading Racks	Before 1960	None
DMF43	421.004	Loading Racks	Before 1960	None
DMAC01	432.002	Tank	RIK <sup>2</sup> 2021	None
DMAC02	402.001	Reactor	1960	AMCD01 - Flare
DMAC03	402.001	Heat Exchanger	1960	AMCD01 - Flare
DMAC04	402.001	Heat Exchanger	1960	AMCD01 - Flare



<b>Emission Unit ID</b>	<b>Emission Point ID</b>	<b>Emission Unit Description</b>	<b>Year Installed</b>	<b>Control Device</b>
DMAC05	402.001	Column	RIK <sup>2</sup> 2020	AMCD01 - Flare
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
DMAC22	432.001	Heat Exchanger	1960	None

<sup>1</sup>Orig. – Original

<sup>2</sup>RIK – Replacement in kind

<sup>3</sup>Emissions from Storage Vessel S-102 shall be directed to AMCD01 flare control when in methanol overhead service.

## 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.

<b>Permit Number</b>	<b>Date of Issuance</b>
R13-3230C	September 15, 2021

## 2.0 General Conditions

### 2.1 Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

### 2.2 Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NSPS</b>	New Source Performance Standards
<b>CBI</b>	Confidential Business Information	<b>PM</b>	Particulate Matter
<b>CEM</b>	Continuous Emission Monitor	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CES</b>	Certified Emission Statement	<b>pph</b>	Pounds per Hour
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>ppm</b>	Parts per Million
<b>CO</b>	Carbon Monoxide	<b>PSD</b>	Prevention of Significant Deterioration
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>psi</b>	Pounds per Square Inch
<b>DAQ</b>	Division of Air Quality	<b>SIC</b>	Standard Industrial Classification
<b>DEP</b>	Department of Environmental Protection	<b>SIP</b>	State Implementation Plan
<b>FOIA</b>	Freedom of Information Act	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>HAP</b>	Hazardous Air Pollutant	<b>TAP</b>	Toxic Air Pollutant
<b>HON</b>	Hazardous Organic NESHAP	<b>TPY</b>	Tons per Year
<b>HP</b>	Horsepower	<b>TRS</b>	Total Reduced Sulfur
<b>lbs/hr or lb/hr</b>	Pounds per Hour	<b>TSP</b>	Total Suspended Particulate
<b>LDAR</b>	Leak Detection and Repair	<b>USEPA</b>	United States Environmental Protection Agency
<b>m</b>	Thousand	<b>UTM</b>	Universal Transverse Mercator
<b>MACT</b>	Maximum Achievable Control Technology	<b>VEE</b>	Visual Emissions Evaluation
<b>mm</b>	Million	<b>VOC</b>	Volatile Organic Compounds
<b>mmBtu/hr</b>	Million British Thermal Units per Hour		
<b>mmft<sup>3</sup>/hr or mmcf/hr</b>	Million Cubic Feet Burned per Hour		
<b>NA or N/A</b>	Not Applicable		
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		
<b>NO<sub>x</sub></b>	Nitrogen Oxides		

### **2.3. Permit Expiration and Renewal**

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.  
**[45CSR§30-5.1.b.]**
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.  
**[45CSR§30-4.1.a.3.]**
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.  
**[45CSR§30-6.3.b.]**
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.  
**[45CSR§30-6.3.c.]**

### **2.4. Permit Actions**

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.  
**[45CSR§30-5.1.f.3.]**

### **2.5. Reopening for Cause**

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
- a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
  - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
  - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
  - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

**[45CSR§30-6.6.a.]**

## **2.6. Administrative Permit Amendments**

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.  
**[45CSR§30-6.4.]**

## **2.7. Minor Permit Modifications**

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.  
**[45CSR§30-6.5.a.]**

## **2.8. Significant Permit Modification**

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.  
**[45CSR§30-6.5.b.]**

## **2.9. Emissions Trading**

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.  
**[45CSR§30-5.1.h.]**

## **2.10. Off-Permit Changes**

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
  - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
  - c. The change shall not qualify for the permit shield.
  - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
  - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

**[45CSR§30-5.9.]**

## **2.11. Operational Flexibility**

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

**[45CSR§30-5.8]**

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

**[45CSR§30-5.8.a.]**

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

**[45CSR§30-5.8.c.]**

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

**[45CSR§30-2.39]**

## **2.12. Reasonably Anticipated Operating Scenarios**

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.
- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
  - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
  - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

## **2.13. Duty to Comply**

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

## **2.14. Inspection and Entry**

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
  - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

## **2.15. Schedule of Compliance**

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
  - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

## **2.16. Need to Halt or Reduce Activity not a Defense**

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

## **2.17. Emergency**

- 2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

[45CSR§30-5.7.a.]

- 2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.

[45CSR§30-5.7.b.]

- 2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and

variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

[45CSR§30-5.7.e.]

## **2.18. Federally-Enforceable Requirements**

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

## **2.19. Duty to Provide Information**

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

## **2.20. Duty to Supplement and Correct Information**

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

## **2.21. Permit Shield**

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:



- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

## **2.22. Credible Evidence**

- 2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B. and 45CSR38]

## **2.23. Severability**

- 2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

## **2.24. Property Rights**

- 2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.

[45CSR§30-5.1.f.4]

## **2.25. Acid Deposition Control**

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
- b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
- c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.  
**[45CSR§30-5.1.a.2.]**

### 3.0 Facility-Wide Requirements

#### 3.1 Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. [45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. [45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

**[40 C.F.R. 82, Subpart F]**

- 3.1.8. **Risk Management Plan.** This stationary source, as defined in 40 C.F.R. § 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

**[40 C.F.R. 68]**

### **3.2. Monitoring Requirements**

- 3.2.1. None.

### **3.3. Testing Requirements**

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary 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. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
  - a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
  - b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
  - c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

- 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, R13-3230, 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.]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.  
[45CSR§§30-4.4. and 5.1.c.3.D.]
- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.  
[45CSR§30-5.1.c.3.E.]
- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

#### DAQ:

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

#### US EPA:

Section Chief  
U. S. Environmental Protection Agency  
Region III  
Enforcement and Compliance Assurance  
Division  
Air Section (3ED21)  
1650 Arch Street  
Philadelphia, PA 19103-2029

#### DAQ Compliance and Enforcement<sup>1</sup>:

[DEPAirQualityReports@wv.gov](mailto:DEPAirQualityReports@wv.gov)

<sup>1</sup>For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

- 3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.  
[45CSR§30-8.]
- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on

site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

**DAQ:**  
[DEPAirQualityReports@wv.gov](mailto:DEPAirQualityReports@wv.gov)  
[45CSR§30-5.3.e.]

**US EPA:**  
[R3\\_APD\\_Permits@epa.gov](mailto:R3_APD_Permits@epa.gov)

- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

**DAQ:**  
[DEPAirQualityReports@wv.gov](mailto:DEPAirQualityReports@wv.gov)  
[45CSR§30-5.1.c.3.A.]

- 3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

- 3.5.10. **Reports of excess emissions.** Except as provided in 3.5.11, the owner or operator of any facility containing sources subject to 45CSR§21-5. shall, for each occurrence of excess emissions expected to last more than 7 days, within 1 business day of becoming aware of such occurrence, supply the Director by letter with the following information:

- a. The name and location of the facility;
- b. The subject sources that caused the excess emissions;
- c. The time and date of first observation of the excess emissions; and
- d. The cause and expected duration of the excess emissions.
- e. For sources subject to numerical emission limitations, the estimated rate of emissions (expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions; and
- f. The proposed corrective actions and schedule to correct the conditions causing the excess emissions.

[45CSR13, R13-3230 5.5.1, 45CSR§21-5.2]

- 3.5.11. **Variance.** If the provisions of 45CSR21 cannot be satisfied due to repairs made as the result of routine maintenance or in response to the unavoidable malfunction of equipment, the Director may permit the owner or operator of a source subject to this regulation to continue to operate said source for periods not to exceed 10 days upon specific application to the Director. Such application shall be made prior to the making of repairs and, in the case of equipment malfunction, within 24 hours of the equipment malfunction. Where repairs will take in excess of 10 days to complete, additional time periods may be granted by the Director. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. During such time periods, the owner or operator shall take all reasonable and practicable steps to minimize VOC emissions. [45CSR13, R13-3230 5.1.2, 45CSR§21-9.3]

### 3.6. Compliance Plan

- 3.6.1. None.

### 3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

None.



## 4.0 Methylamines: Monomethylamine (MMA), Dimethylamine (DMA), Trimethylamine (TMA), and Ammonia Storage

### 4.1. Limitations and Standards

- 4.1.1. **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: AM26, AM22, AM88, and AM02*) [45CSR34; 40 C.F.R. §§63.113(a), 63.113(a)(1), and 63.113(a)(1)(i)]
- 4.1.2. **Group 1 Storage Vessel (Closed Vent System and Control Device).** For each Group 1 storage vessel storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the owner or operator shall reduce hazardous air pollutants emissions to the atmosphere by operating and maintaining a closed vent system and the Amine Flare (AMCD01) in accordance with 4.1.2.1 through 4.1.2.5. [45CSR13, R13-3230 4.1.1.a, 45CSR34; 40 C.F.R. §§63.119(a)(1) and 63.119(e)]
- 4.1.2.1. The control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater. The Amine Flare (AMCD01) shall meet the specifications described in the general control device requirements of 40 C.F.R. §63.11(b), which are: [45CSR13, R13-3230 4.1.1.c, 45CSR34; 40 C.F.R. §§63.119(e)(1)]
- i. The Amine Flare shall be operated at all times when emissions may be vented to it. [45CSR34; 40 CFR §63.11(b)(3); 45CSR13, R13-3230, 4.1.1.c.i]
  - ii. The Amine Flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in Appendix A of Part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22. [45CSR34; 40 CFR §63.11(b)(4); 45CSR13, R13-3230, 4.1.1.c.ii]
  - iii. The Amine Flare shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [45CSR34; 40 CFR §63.11(b)(3); 45CSR13, R13-3230, 4.1.1.c.iii]
  - iv. The net heating value of the effluent being combusted by the Amine Flare shall be no less than 7.45 mega joule (MJ)/standard cubic meter (200 Btu/scf) [45CSR34; 40 CFR §63.11(b)(6)(ii); 45CSR13, R13-3230, 4.1.1.c.iv]
  - v. The Amine Flare shall be operated with an exit velocity less than 18.3 m/sec (60 ft/sec). The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip. [45CSR34; 40 CFR §63.11(b)(7)(i); 45CSR13, R13-3230, 4.1.1.c.v]
- 4.1.2.2. Reserved.
- 4.1.2.3. Periods of planned routine maintenance of the Amine Flare, during which the control device does not meet the specifications of 4.1.2.1 shall not exceed 240 hours per year. [45CSR13, R13-3230 4.1.1.d, 45CSR34; 40 C.F.R. §63.119(e)(3)]

4.1.2.4. The specifications and requirements in 4.1.2.1 for control devices do not apply during periods of planned routine maintenance. [45CSR34; 40 C.F.R. §63.119(e)(4)]

4.1.2.5. The specifications and requirements in 4.1.2.1 for control devices do not apply during a control system malfunction. [45CSR34; 40 C.F.R. §63.119(e)(5)]

*(Emission Unit: AM82)*

4.1.3. **Group 1 Storage Vessel (Fixed Roof and Internal Floating Roof).** For each Group 1 storage vessel storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the owner or operator shall reduce hazardous air pollutants emissions to the atmosphere by operating and maintaining a fixed roof and internal floating roof, as defined in 40 C.F.R. §63.111, in accordance with 4.1.3.1 through 4.1.3.6. [45CSR34; 40 C.F.R. §§63.119(a)(1) and 63.119(b)]

4.1.3.1. The internal floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in 4.1.3.1.a through 4.1.3.1.c. [45CSR34; 40 C.F.R. §63.119(b)(1)]

a. During an initial fill. [45CSR34; 40 C.F.R. §63.119(b)(1)(i)]

b. After the vessel has been completely emptied and degassed. [45CSR34; 40 C.F.R. §63.119(b)(1)(ii)]

c. When the vessel is completely emptied before being subsequently refilled. [45CSR34; 40 C.F.R. §63.119(b)(1)(iii)]

4.1.3.2. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical. [45CSR34; 40 C.F.R. §63.119(b)(2)]

4.1.3.3. Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device shall consist of one of the devices listed in 4.1.3.3.a through 4.1.3.3.c. [45CSR34; 40 C.F.R. §63.119(b)(3)]

a. A liquid-mounted seal as defined in 40 C.F.R. §63.111. [45CSR34; 40 C.F.R. §63.119(b)(3)(i)]

b. A metallic shoe seal as defined in 40 C.F.R. §63.111. [45CSR34; 40 C.F.R. §63.119(b)(3)(ii)]

c. Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous seals. [45CSR34; 40 C.F.R. §63.119(b)(3)(iii)]

4.1.3.4. Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. [45CSR34; 40 C.F.R. §63.119(b)(4)]

4.1.3.5. Each internal floating roof shall meet the specifications listed in 4.1.3.5.a through 4.1.3.5.g. [45CSR34; 40 C.F.R. §63.119(b)(5)]

a. Each opening in a noncontact internal floating roof except for the automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface. [45CSR34; 40 C.F.R. §63.119(b)(5)(i)]

- b. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover or lid. The cover or lid shall be equipped with a gasket. [45CSR34; 40 C.F.R. §63.119(b)(5)(ii)]
- c. Each penetration of the internal floating roof for the purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least 90 percent of the opening. [45CSR34; 40 C.F.R. §63.119(b)(5)(iii)]
- d. Each automatic bleeder vent shall be gasketed. [45CSR34; 40 C.F.R. §63.119(b)(5)(iv)]
- e. Each rim space vent shall be gasketed. [45CSR34; 40 C.F.R. §63.119(b)(5)(v)]
- f. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [45CSR34; 40 C.F.R. §63.119(b)(5)(vi)]
- g. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [45CSR34; 40 C.F.R. §63.119(b)(5)(vii)]

4.1.3.6. Each cover or lid on any opening in the internal floating roof shall be closed (i.e., no visible gaps), except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed. Rim space vents are to be set open only when the internal floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. [45CSR34; 40 C.F.R. §63.119(b)(6)]

*(Emission Unit: AM78)*

4.1.4. **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 4.1.5 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: AM83 and AM90)* [45CSR34; 40 C.F.R. §§63.133(a), (a)(2), and (a)(2)(i)]

4.1.5. **Group 1 Wastewater Tanks.** To comply with the requirements of 4.1.4, the fixed roof shall meet the requirements of 4.1.5.1, the control device shall meet the requirements of 4.1.5.2, and the closed-vent system shall meet the requirements of 4.1.5.3. [45CSR34; 40 C.F.R. §63.133(b)]

4.1.5.1. The fixed-roof shall meet the following requirements: [45CSR34; 40 C.F.R. §63.133(b)(1)]

- a. Except as provided in 4.1.5.4, 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)(1)(i)]
- 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)(1)(ii)]

- 4.1.5.2. 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(c)(3)]**
- 4.1.5.3. Except as provided in 4.1.5.4, 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)]**
- 4.1.5.4. 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)]**

*(Emission Units: AM83 and AM90)*

- 4.1.6. **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(c) 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.

*(Methylamines: purge column tails, di column tails, tails from the vent recovery system, and knockout pot discharge; DMF: filter wash and liquid from the Filtrate Tank) [45CSR34; 40 C.F.R. §63.138(e)(2) and Table 9 of 40 C.F.R. 63, Subpart G]*

- 4.1.7. **Group 1 Process Wastewater Streams.** Residual removed from the Group 1 wastewater streams shall be controlled for air emissions by complying with 4.1.4 and by recycling the residual to the production process. *(Emission Unit: AM90) [45CSR34; 40 C.F.R. §§63.138(k) and (k)(1)]*
- 4.1.8. **Maintenance Wastewater.** Each owner or operator of a source subject to 40 C.F.R. 63, Subpart F shall comply with the requirements of 4.1.8.1 through 4.1.8.3 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)]**
- 4.1.8.1. 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)]**
- 4.1.8.2. The owner or operator shall modify and update the information required by 4.1.8.1 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(c)]**
- 4.1.8.3. The owner or operator shall implement the procedures described in 4.1.8.1 and 4.1.8.2 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)]**
- 4.1.9. **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), 63.165 (Standards: Pressure relief devices in gas/vapor 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, 63.165, 63.166, 63.168, 63.169, and 63.174]**
- 4.1.10. **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. **[45CSR13, R13-3230 5.1.3, 45CSR§§21-37.3 through 37.8 and 37.1.c (State-Enforceable only)]**
- 4.1.11. 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 flares AMCD01 and AMCD02, the 45CSR§6-4.1 hourly particulate emission limits are 9.5 lb/hr and 2.72 lb/hr, respectively.

*(Emission Points: 402.001 and AE.001)* **[45CSR§6-4.1]**

- 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 for Methylamines and Methanol Storage:
- 4.1.14.1. The facility 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 Attachment A; and shall continue to comply with such emission reduction requirements and the emission limits set forth in Attachment A. Compliance with the emission limits set forth in Attachment A 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 R13-3230 for the Methylamines Process and Methanol Storage are provided in APPENDIX A of this permit. **[45CSR13, R13-3230 5.1.4.1, 45CSR§21-40 (State-Enforceable only)]**
- 4.1.14.2. At all times, including periods of start-up, shutdown, and malfunction, the facility shall maintain and operate the VOC emitting sources and associated air pollution control devices in a manner consistent with good air pollution control practices for minimizing emissions. Compliance with the emission limits set forth in Attachment A shall be demonstrated at all times unless exception periods are provided for in accordance with this paragraph. The facility 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 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 cannot be met during routine start-ups, shutdowns, or routine maintenance activities, and the facility submitted an operation and VOC emissions mitigation plan for such periods within 180 days of September 10, 1997, it contains the information outlined in Attachment B of this permit. The Director may require reasonable revisions to the facility'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 facility'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 facility maintains test, monitoring, operating, and maintenance records containing sufficient information and detail to enable the facility 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. **[45CSR13, R13-3230 5.1.4.2, 45CSR§21-40 (State-Enforceable only)]**
- 4.1.15. **40 C.F.R. 63, Subpart EEEE for Equipment Leaks.** For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year, you must comply with the applicable requirements under 40 C.F.R. Part 63, Subpart TT (control level 1), Subpart UU (control level 2), or Subpart H. Pumps, valves, and sampling connectors that are insulated to provide protection against persistent sub-freezing temperatures are subject to the "difficult to monitor" provisions in the applicable subpart selected by the owner or operator. (*Methanol line from main header to 25 & 39 Spots, MMF overheads loading spot, and DMF line to drum plant*) **[45CSR34; 40 C.F.R. §63.2346(c)]**

- 4.1.16. **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, R13-3230, 4.1.4; 45CSR§13-5.11]

## 4.2. Monitoring Requirements

- 4.2.1. **Group 1 Process Vents.** To demonstrate compliance with 4.1.1 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: AM26, AM22, AM88, and AM02*) [45CSR34; 40 C.F.R. §§63.114(a) and 63.114(a)(2)]

- 4.2.2. **Group 1 Process Vents.** The permittee shall comply with 4.2.2.1 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)]

- 4.2.2.1. 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 4.4.1.3. 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: AM26, AM22, AM88, and AM02*)

- 4.2.3. **Group 1 Storage Vessel (Closed Vent System and Control Device).** To demonstrate compliance with 4.1.2 (storage vessel equipped with a closed vent system and control device) using a flare, the owner or operator shall comply with the requirements in 4.2.3.1 through 4.2.3.4. [45CSR34; 40 C.F.R. §63.120(e)]

- 4.2.3.1. The owner or operator shall demonstrate compliance with the requirements of 4.1.2.3 (planned routine maintenance of a flare, during which the flare does not meet the specifications of 4.1.2.1, shall not exceed 240 hours per year) by including in each Periodic Report required by 40 C.F.R. §63.152(c) the information specified in 40 C.F.R. §63.122(g)(1). [45CSR34; 40 C.F.R. §63.120(e)(3)]

- 4.2.3.2. The owner or operator shall continue to meet the general control device requirements specified in 40 C.F.R. §63.11(b) which include that the permittee shall continuously monitor the presence of a flame for the Amines Flare. Periods when the pilot flare for the flare is absent, the permittee shall record the date, time and duration that the flame was absent. [45CSR13, R13-3230 Condition 4.2.1, 45CSR34; 40 C.F.R. §63.120(e)(4)]

- 4.2.3.3. Except as provided in 4.2.3.4, each closed vent system shall be inspected as specified in 40 C.F.R. §63.148. The inspections required to be performed in accordance with 40 C.F.R. §63.148(c) shall be done during filling of the storage vessel. [45CSR13, R13-3230 Condition 4.2.2, 45CSR34; 40 C.F.R. §63.120(e)(5)]

Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in 40 CFR §63.148(e).

- i. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
- ii. Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in 40CFR§63.148(d)(3).

**[45CSR13, R13-3230 Condition 4.2.2, 45CSR34; 40 CFR §63.148(d)]**

4.2.3.4. 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. §63.120(e)(6)]**

*(Emission Unit: AM82)*

4.2.4. **Group 1 Storage Vessel (Fixed Roof and Internal Floating Roof).** To demonstrate compliance with 4.1.3 (storage vessel equipped with a fixed roof and internal floating roof), the owner or operator shall comply with the requirements of 4.2.4.1 through 4.2.4.7. **[45CSR34; 40 C.F.R. §63.120(a)]**

4.2.4.1. The owner or operator shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified in 4.2.4.2 and 4.2.4.3. **[45CSR34; 40 C.F.R. §63.120(a)(1)]**

4.2.4.2. For vessels equipped with a single-seal system, the owner or operator shall perform the inspections specified in 4.2.4.2.a and 4.2.4.2.b. **[45CSR34; 40 C.F.R. §63.120(a)(2)]**

- a. Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every 12 months. **[45CSR34; 40 C.F.R. §63.120(a)(2)(i)]**
- b. Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed, and at least once every ten years. **[45CSR34; 40 C.F.R. §63.120(a)(2)(ii)]**

4.2.4.3. For vessels equipped with a double-seal system as specified in 4.1.3.3.c, the owner or operator shall perform either the inspection required in 4.2.4.3.a or the inspections required in both paragraphs 4.2.4.3.b and 4.2.4.3.c. **[45CSR34; 40 C.F.R. §63.120(a)(3)]**

- a. The owner or operator shall visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed and at least once every 5 years; or **[45CSR34; 40 C.F.R. §63.120(a)(3)(i)]**
- b. The owner or operator shall visually inspect the internal floating roof and the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months. **[45CSR34; 40 C.F.R. §63.120(a)(3)(ii)]**
- c. Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the vessel is emptied and degassed and at least once every 10 years. **[45CSR34; 40 C.F.R. §63.120(a)(3)(iii)]**

4.2.4.4. If during the inspections required by 4.2.4.2.a or 4.2.4.3.b, the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or



there are visible gaps between the seal and the wall of the storage vessel, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If a failure that is detected during inspections required by 4.2.4.2.a or 4.2.4.3.b cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical. **[45CSR34; 40 C.F.R. §63.120(a)(4)]**

4.2.4.5. Except as provided in 4.2.4.6, for all the inspections required by 4.2.4.2.b, 4.2.4.3.a, and 4.2.4.3.c, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Administrator the opportunity to have an observer present. **[45CSR34; 40 C.F.R. §63.120(a)(5)]**

4.2.4.6. If the inspection required by 4.2.4.2.b, 4.2.4.3.a, or 4.2.4.3.c is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel, the owner or operator shall notify the Administrator at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to refilling. **[45CSR34; 40 C.F.R. §63.120(a)(6)]**

4.2.4.7. If during the inspections required by 4.2.4.2.b, 4.2.4.3.a, or 4.2.4.3.c, the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with organic HAP. **[45CSR34; 40 C.F.R. §63.120(a)(7)]**

*(Emission Unit: AM78)*

4.2.5. **Group 1 Process Wastewater Streams.** To demonstrate compliance with requirement 4.1.6, the permittee shall continuously monitor the total organic carbon (TOC) of the column bottoms and the wastewater mass flow rate. The maximum TOC of the column bottoms shall not exceed 2,500 ppm. 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. *(Methylamines: purge column tails, di column tails, tails from the vent recovery system, and knockout pot discharge; DMF: filter wash and liquid from the Filtrate Tank)* **[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]**

4.2.6. For the purpose of determining compliance with the opacity limits set forth in Sections 4.1.12 and 4.1.13 for flares AMCD01 and AMCD02 (Emission Points 402.001 and AE.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 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 Points: 402.001 and AE.001*) [45CSR§30-5.1.c]

### 4.3. Testing Requirements

- 4.3.1. **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]
- 4.3.2. **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. [45CSR13, R13-3230 5.3.1, 45CSR§§21-37.1.c and 37.9 (State-Enforceable only)]
- 4.3.3. The permittee shall comply with all applicable provisions of 45CSR§21-41 regarding test methods and compliance procedures to demonstrate compliance with 4.1.14, except as otherwise approved by the Director. [45CSR13, R13-3230 5.3.2, 45CSR§21-41]
- 4.3.4. 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 Points: 402.001 and AE.001*) [45CSR§6-7.1]

### 4.4. Recordkeeping Requirements

- 4.4.1. **Group 1 Process Vents.** To demonstrate compliance with 4.1.1 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)]
- 4.4.1.1. Continuous records of the equipment operating parameters specified to be monitored under 4.2.1 and listed in table 3 of 40 C.F.R. 63, Subpart G. For flares, the 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

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

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]**

4.4.1.2. 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)]**

4.4.1.3. Hourly records of whether the flow indicator specified under 4.2.2.1 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: AM26, AM22, AM88, and AM02)*

4.4.2. **Group 1 Process Vents.** Each owner or operator subject to the control provisions for Group 1 process vents in 4.1.1 shall: **[45CSR34; 40 C.F.R. §63.117(a)]**

4.4.2.1. Keep an up-to-date, readily accessible record of the data specified in 4.4.2.1.a through 4.4.2.1.c 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: AM26, AM22, AM88, and AM02)*

- 4.4.3. **Group 1 Storage Vessels.** Each owner or operator of a Group 1 storage vessel 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 1 status and is in operation. (*Emission Units: AM78 and AM82*) [45CSR13, R13-3230 Condition 4.4.4, 45CSR34; 40 C.F.R. §63.123(a)]
- 4.4.4. **Group 1 Storage Vessel (Closed Vent System and Control Device).** The permittee shall keep in a readily accessible location a record of the measured values of the parameters monitored in accordance with Condition 4.2.3.2 as well as a record of the planned routine maintenance performed on the control device including the duration of each time the control device does not meet the specifications of 4.1.2.1 due to the planned routine maintenance. Such record shall include the information specified in 4.4.4.1 and 4.4.4.2. [45CSR13, R13-3230 Conditions 4.4.5.a and b, 45CSR34; 40 C.F.R. §63.123(f) and 63.123(f)(2)]
- 4.4.4.1. The first time of day and date the requirements of 4.1.2.1 were not met at the beginning of the planned routine maintenance, and [45CSR13, R13-3230 Condition 4.4.5.b.i, 45CSR34; 40 C.F.R. §63.123(f)(2)(i)]
- 4.4.4.2. The first time of day and date the requirements of 4.1.2.1 were met at the conclusion of the planned routine maintenance. [45CSR13, R13-3230 Condition 4.4.5.b.ii, 45CSR34; 40 C.F.R. §63.123(f)(2)(ii)]  
(*Emission Unit: AM82*)
- 4.4.5. **Group 1 Storage Vessel (Fixed Roof and Internal Floating Roof).** An owner or operator who elects to comply with 4.1.3 shall keep a record that each inspection required by 4.2.4 was performed. (*Emission Unit: AM78*) [45CSR34; 40 C.F.R. §63.123(c)]
- 4.4.6. **Group 1 Storage Vessel (Fixed Roof and Internal Floating Roof).** An owner or operator who elects to utilize an extension in emptying a storage vessel in accordance with 4.2.4.4, shall keep in a readily accessible location the documentation specified in 4.2.4.4. (*Emission Unit: AM78*) [45CSR34; 40 C.F.R. §63.123(g)]
- 4.4.7. **Group 1 Process Wastewater Streams.** Records of the total organic carbon (TOC) for the steam stripper and the wastewater feed mass flow rate shall be recorded continuously on a distributive control system (DCS). (*Methylamines: purge column tails, di column tails, tails from the vent recovery system, and knockout pot discharge; DMF: filter wash and liquid from the Filtrate Tank*) [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**]
- 4.4.8. **Maintenance Wastewater.** The owner or operator shall maintain a record of the information required by 4.1.8.1 and 4.1.8.2 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)]
- 4.4.9. **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]
- 4.4.10. **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. **[45CSR13, R13-3230 5.4.1, 45CSR§§21-37.1.c and 37.10 (State-Enforceable only)]**

- 4.4.11. The permittee shall maintain records of all monitoring data required by Section 4.2.6 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 Points: 402.001 and AE.001*) **[45CSR§30-5.1.c]**
- 4.4.12. **40 C.F.R. 63, Subpart EEEE for Transfer Racks.** For each transfer rack that loads organic liquids, but is not subject to control based on the criteria specified in Table 2 to 40 C.F.R. 63, Subpart EEEE, items 7 through 10, the permittee must keep documentation, including the records specified in 40 C.F.R. §63.2390(d), that verifies the transfer rack is not required to be controlled under 40 C.F.R. 63, Subpart EEEE. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to 40 C.F.R. §63.10(b)(1), including records stored in electronic form in a separate location. **[45CSR34; 40 C.F.R. §§63.2343(c), 63.2343(c)(3), and 63.2390(a)]**
- 4.4.13. The permittee shall maintain a copy of the most recent compliance determination for the Amine Flare with the specification in 40 CFR §63.11(b) at the facility. **[45CSR13, R13-3230 Condition 4.4.6]**
- 4.4.14. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures. **[45CSR13, R13-3230 Condition 4.4.2]**
- 4.4.15. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, 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, R13-3230 Condition 4.4.3]

#### 4.5. Reporting Requirements

- 4.5.1. 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(c)]
- 4.5.2. 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)]
- 4.5.3. **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 4.4.2.1.a through 4.4.2.1.c shall be reported in the next Periodic Report as specified in 40 C.F.R. §63.152(c). (*Emission Units: AM26, AM22, AM88, and AM02*) [45CSR34; 40 C.F.R. §63.117(a)(3)]
- 4.5.4. **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(c)]
- 4.5.4.1. 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)]
- 4.5.4.2. Reports of the times and durations of all periods recorded under 4.4.1.3 when the gas stream is diverted to the atmosphere through a bypass line. [45CSR34; 40 C.F.R. §63.118(f)(3)]
- 4.5.4.3. Reports of the times and durations of all periods recorded under 4.4.1.2 in which all pilot flames of a flare were absent. [45CSR34; 40 C.F.R. §63.118(f)(5)]  
(*Emission Units: AM26, AM22, AM88, and AM02*)
- 4.5.5. **Group 1 Storage Vessel (Closed Vent System and Control Device)** An owner or operator who elects to comply with 4.1.2 by installing a closed vent system and control device shall submit, as part of the next Periodic Report required by 40 C.F.R. §63.152(c), the information specified in 4.5.5.1 and 4.5.5.2. [45CSR13, R13-3230, Condition 4.5.1; 45CSR34; 40 C.F.R. §§63.122(g) and 63.152(c)]
- 4.5.5.1. As required by 4.2.3.1, the Periodic Report shall include the information specified in 4.5.5.1.a and 4.5.5.1.b for those planned routine maintenance operations that would require the control device not to meet the requirements of 4.1.2.1. [45CSR13, R13-3230 Condition 4.5.1.a, 45CSR34; 40 C.F.R. §63.122(g)(1)]
- a. A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods. [45CSR13, R13-3230, Condition 4.5.1.a.i, 45CSR34; 40 C.F.R. §63.122(g)(1)(i)]
- b. A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of 4.1.2.1, due to planned routine maintenance. [45CSR13, R13-3230 Condition 4.5.1.a.ii, 45CSR34; 40 C.F.R. §63.122(g)(1)(ii)]

4.5.5.2. For the Amines Flare, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in 40 C.F.R. §63.11(b) and shall include the information specified in 4.5.5.2.a and 4.5.5.2.b. **[45CSR13, R13-3230 Condition 4.5.1.b, 45CSR34; 40 C.F.R. §63.122(g)(3)]**

a. Identification of the flare which does not meet the general requirements specified in 40 C.F.R. §63.11(b), and **[45CSR13, R13-3230 Condition 4.5.1.b.i, 45CSR34; 40 C.F.R. §63.122(g)(3)(i)]**

b. Reason the flare did not meet the general requirements specified in 40 C.F.R. §63.11(b). **[45CSR13, R13-3230 Condition 4.5.1.b.ii, 45CSR34; 40 C.F.R. §63.122(g)(3)(ii)]**

*(Emission Unit: AM82)*

4.5.6. **Group 1 Storage Vessel (Fixed Roof and Internal Floating Roof).** An owner or operator who elects to comply with 4.1.3 by using a fixed roof and an internal floating roof shall submit, as part of the Periodic Report required under 40 C.F.R. §63.152(c), the results of each inspection conducted in accordance with 4.2.4 in which a failure is detected in the control equipment. **[45CSR34; 40 C.F.R. §63.122(d)]**

4.5.6.1. For vessels for which annual inspections are required under 4.2.4.2.a or 4.2.4.3.b, the specifications and requirements listed in 4.5.6.1.a through 4.5.6.1.c apply. **[45CSR34; 40 C.F.R. §63.122(d)(1)]**

a. A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel. **[45CSR34; 40 C.F.R. §63.122(d)(1)(i)]**

b. Except as provided in 4.5.6.1.c, each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied. **[45CSR34; 40 C.F.R. §63.122(d)(1)(ii)]**

c. If an extension is utilized in accordance with 4.2.4.4, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in 4.2.4.4; and describe the date the storage vessel was emptied and the nature of and date the repair was made. **[45CSR34; 40 C.F.R. §63.122(d)(1)(iii)]**

4.5.6.2. For vessels for which inspections are required under 4.2.4.2.b, 4.2.4.3.a, or 4.2.4.3.c, the specifications and requirements listed in 4.5.6.2.a and 4.5.6.2.b apply. **[45CSR34; 40 C.F.R. §63.122(d)(2)]**

a. A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area. **[45CSR34; 40 C.F.R. §63.122(d)(2)(i)]**

b. Each Periodic Report required under 40 C.F.R. §63.152(c) shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made. **[45CSR34; 40 C.F.R. §63.122(d)(2)(ii)]**

*(Emission Unit: AM78)*

- 4.5.7. **Group 1 Storage Vessel (Fixed Roof and Internal Floating Roof).** In order to afford the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator of the refilling of a storage vessel that has been emptied and degassed. For storage vessels equipped with an internal floating roof as specified in 4.1.3, the notification shall meet the requirements of either 4.2.4.5 or 4.2.4.6, as applicable. (*Emission Unit: AM78*) [45CSR34; 40 C.F.R. §§63.122(h)(1) and 63.122(h)(1)(i)]
- 4.5.8. **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 daily average value of the total organic carbon (TOC) was outside the range established in 4.2.5. (*Methylamines: purge column tails, di column tails, tails from the vent recovery system, and knockout pot discharge; DMF: filter wash and liquid from the Filtrate Tank*) [45CSR34; 40 C.F.R. §63.146(d)(3)]
- 4.5.9. **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]
- 4.5.10. **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. [45CSR13, R13-3230 5.5.2, 45CSR§§21-37.1.c, 37.11, and 5.2 (State-Enforceable only)]
- 4.5.11. **40 C.F.R. 63, Subpart EEEE.** If one or more of the following events occur since the filing of the Notification of Compliance Status or the last Compliance report, the permittee shall submit a subsequent Compliance report. Subsequent Compliance reports shall contain the information specified in 40 C.F.R. §§63.2386(c)(1), (c)(2), (c)(3), and, as applicable, the information in 40 C.F.R. §§63.2386(d)(3) and (d)(4).
- 4.5.11.1. Any storage tank or transfer rack became subject to control under 40 C.F.R. 63, Subpart EEEE; or
- 4.5.11.2. Any storage tank equal to or greater than 18.9 cubic meters (5,000 gallons) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of 40 C.F.R. 63, Subpart EEEE; or
- 4.5.11.3. Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or
- 4.5.11.4. Any of the information required in 40 C.F.R. §§63.2386(c)(1) through (c)(3) has changed.
- [45CSR34; 40 C.F.R. §§63.2343(b)(2), (c)(2), and (d); 40 C.F.R. §§63.2386(d)(3) and (d)(4)]

## 4.6. Compliance Plan

- 4.6.1. None.



## 5.0 Amides: Dimethylformamide (DMF), Monomethylformamide (MMF), Dimehtylacetamide (DMAC)

### 5.1. Limitations and Standards

- 5.1.1. **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: DMF03, DMF09, DMF13, DMF18, and DMF22*) [45CSR34; 40 C.F.R. §§63.113(a), 63.113(a)(1), and 63.113(a)(1)(i)]
- 5.1.2. **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: DMF26*) [45CSR34; 40 C.F.R. §63.113(e)]
- 5.1.3. **Group 1 Storage Vessels (Closed Vent System and Control Device).** For each Group 1 storage vessel storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the owner or operator shall reduce hazardous air pollutants emissions to the atmosphere by operating and maintaining a closed vent system and the Amines Flare (AMCD01) in accordance with 5.1.3.1 through 5.1.3.6. [45CSR13, R13-3230 Condition 4.1.1.a, 45CSR34; 40 C.F.R. §§63.119(a)(1) and 63.119(e)]
- 5.1.3.1. The control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater. Since a flare is used as the control device, it shall meet the specifications described in the general control device requirements of 40 C.F.R. §63.11(b), which are: [45CSR13, R13-3230 Condition 4.1.1.c, 45CSR34; 40 C.F.R. §§63.119(e)(1)]
- i. The Amine Flare shall be operated at all times when emissions may be vented to it. [45CSR34; 40 CFR §63.11(b)(3); 45CSR13, R13-3230, 4.1.1.c.i]
  - ii. The Amine Flare shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in Appendix A of Part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22. [45CSR34; 40 CFR §63.11(b)(4); 45CSR13, R13-3230, 4.1.1.c.ii]
  - iii. The Amine Flare shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [45CSR34; 40 CFR §63.11(b)(3); 45CSR13, R13-3230, 4.1.1.c.iii]
  - iv. The net heating value of the effluent being combusted by the Amine Flare shall be no less than 7.45 mega joule (MJ)/standard cubic meter (200 Btu/scf). [45CSR34; 40 CFR §63.11(b)(6)(ii); 45CSR13, R13-3230, 4.1.1.c.iv]
  - v. The Amine Flare shall be operated with an exit velocity less than 18.3 m/sec (60 ft/sec). The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip. [45CSR34; 40 CFR §63.11(b)(7)(i); 45CSR13, R13-3230, 4.1.1.c.v]

5.1.3.2. Reserved.

5.1.3.3. Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of 5.1.3.1 shall not exceed 240 hours per year. **[45CSR13, R13-3230 Condition 4.1.1.d, 45CSR34; 40 C.F.R. §63.119(e)(3)]**

5.1.3.4. The specifications and requirements in 5.1.3.1 for control devices do not apply during periods of planned routine maintenance. **[45CSR34; 40 C.F.R. §63.119(e)(4)]**

5.1.3.5. The specifications and requirements in 5.1.3.1 for control devices do not apply during a control system malfunction. **[45CSR34; 40 C.F.R. §63.119(e)(5)]**

5.1.3.6. The permittee shall connect the atmospheric vent from Tank DMF29 to the closed vent system as required in Condition 5.1.3 by April 25, 2017. **[45CSR13, R13-3230 Condition 4.1.1.b]**

*(Emission Units: DMF28, DMF29, DMF32, DMF33, and DMF31)*

5.1.4. **Group 2 Storage Vessels.** For each Group 2 storage vessel, the owner or operator shall comply with the recordkeeping requirements in 5.4.5. *(Emission Units: DMF37, DMF40, and DMF41)* **[45CSR34; 40 C.F.R. §63.119(a)(3)]**

5.1.4.1. The Permittee shall comply with the following requirements for Storage Vessel DMF37:

- a. The vessel shall only store organic liquids that have a maximum true vapor pressure no greater than 0.7 kPa (0.102 psia). Satisfying this requirement means this vessel is classified as a Group 2 vessel under Subpart G of Part 63.
- b. VOC emissions from the vessel shall not exceed 0.9 tons per year.
- c. HAP emissions from the vessel shall not exceed 0.9 tons per year.

**[45CSR13, R13-3230 Condition 4.1.2]**

5.1.5. **Group 2 Transfer Operations.** For each Group 2 transfer rack, the owner or operator shall maintain records as required in 5.4.7. *(Emission Units: DMF43 and DMF42)* **[45CSR34; 40 C.F.R. §63.126(c)]**

5.1.6. **Group 1 Process Wastewater Streams.** DMF wastewater streams that are Group 1 include the filter wash and liquid from the Filtrate Tank. These streams are treated by the Methylamines Process Wastewater Stripper System and the applicable limitations and standards are provided in 4.1.4, 4.1.5, 4.1.6, and 4.1.7.

5.1.7. **Maintenance Wastewater.** Each owner or operator of a source subject to 40 C.F.R. 63, Subpart F shall comply with the requirements of 5.1.7.1 through 5.1.7.3 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)]**

5.1.7.1. 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)]**
- 5.1.7.2. The owner or operator shall modify and update the information required by 5.1.7.1 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(c)]**
- 5.1.7.3. The owner or operator shall implement the procedures described in 5.1.7.1 and 5.1.7.2 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)]**
- 5.1.8. **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” for the Dimethylformamide (DMF) and Monomethylamide (MMF) Process Units. The pertinent equipment leak standards include 40 C.F.R. §§63.162 (Standards: General), 63.163 (Standards: Pumps in light liquid service), 63.165 (Standards: Pressure relief devices in gas/vapor 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, 63.165, 63.166, 63.168, 63.169, and 63.174]**
- 5.1.9. **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. **[45CSR13, R13-3230 5.1.3, 45CSR§§21-37.3 through 37.8 and 37.1.c (State-Enforceable only)]**
- 5.1.10. Flare AMCD01 (Emission Point 402.001) is shared with the Methylamines Process Unit. Limitations and Standards for Flare AMCD01 are provided in 4.1.11, 4.1.12, 4.1.13, and 4.1.16. Monitoring, Testing, and Recordkeeping are provided in 4.2.6, 4.3.4, and 4.4.11.
- 5.1.11. The permittee shall comply with the following applicable requirements for Dimethylformamide (DMF).
- 5.1.11.1. The facility 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 Attachment A; and shall continue to comply with such emissions reduction requirements and the emission limits set forth in Attachment A. Compliance with the emission limits set forth in Attachment A 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 R13-3230 for Dimethylformamide (DMF) are provided in APPENDIX A of this permit. **[45CSR13, R13-3230 5.1.4.1, 45CSR§21-40 (State-Enforceable only)]**

5.1.11.2. At all times, including periods of start-up, shutdown, and malfunction, the facility shall maintain and operate the VOC emitting sources and associated air pollution control devices in a manner consistent with good air pollution control practices for minimizing emissions. Compliance with the emission limits set forth in Attachment A shall be demonstrated at all times unless exception periods are provided for in accordance with this paragraph. The facility 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 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 cannot be met during routine start-ups, shutdowns, or routine maintenance activities, and the facility submitted an operation and VOC emissions mitigation plan for such periods within 180 days of September 10, 1997, it contains the information outlined in Attachment B of this permit. The Director may require reasonable revisions to the facility'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 facility'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 facility maintains test, monitoring, operating, and maintenance records containing sufficient information and detail to enable the facility 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. **[45CSR13, R13-3230 5.1.4.2, 45CSR§21-40 (State-Enforceable only)]**

5.1.12. The permittee shall comply with the following requirements for Storage Vessel S-102:

a. Tank S-102 may store either methanol overheads or DMF.

i. While the tank is in methanol overheads storage, the emissions shall be routed to the flare control in condition 5.1.3.

ii. While the tank is in DMF storage, tank emissions may vent to the atmosphere.

*(Emission Unit: DMF32)* **[45CSR13, R13-3230 4.1.3]**

## 5.2. Monitoring Requirements

5.2.1. **Group 1 Process Vents.** To demonstrate compliance with 5.1.1 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: DMF03, DMF09, DMF13, DMF18, and DMF22)* **[45CSR34; 40 C.F.R. §§63.114(a) and 63.114(a)(2)]**

5.2.2. **Group 1 Process Vents.** The permittee shall comply with 5.2.2.1 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)]**

5.2.2.1. 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 5.4.1.3. 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: DMF03, DMF09, DMF13, DMF18, and DMF22)*

5.2.3. **Group 1 Storage Vessels (Closed Vent System and Control Device).** To demonstrate compliance with 5.1.3 (storage vessel equipped with a closed vent system and control device) using a flare, the owner or operator shall comply with the requirements in 5.2.3.1 through 5.2.3.4. [45CSR34; 40 C.F.R. §63.120(e)]

5.2.3.1. The owner or operator shall demonstrate compliance with the requirements of 5.1.3.3 (planned routine maintenance of a flare, during which the flare does not meet the specifications of 5.1.3.1, shall not exceed 240 hours per year) by including in each Periodic Report required by 40 C.F.R. §63.152(c) the information specified in 40 C.F.R. §63.122(g)(1). [45CSR34; 40 C.F.R. §63.120(e)(3)]

5.2.3.2. The owner or operator shall continue to meet the general control device requirements specified in 40 C.F.R. §63.11(b) which include that the permittee shall continuously monitor the presence of a flame for the Amines Flare. Periods when the pilot flare for the flare is absent, the permittee shall record the date, time and duration that the flame was absent. [45CSR13, R13-3230 Condition 4.2.1, 45CSR34; 40 C.F.R. §63.120(e)(4)]

5.2.3.3. Except as provided in 5.2.3.4, each closed vent system shall be inspected as specified in 40 C.F.R. §63.148. The inspections required to be performed in accordance with 40 C.F.R. §63.148(c) shall be done during filling of the storage vessel. [45CSR13, R13-3230 Condition 4.2.2, 45CSR34; 40 C.F.R. §63.120(e)(5)]

Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in 40 CFR §63.148(e).

- i. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
- ii. Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in 40CFR§63.148(d)(3). [45CSR13, R13-3230 Condition 4.2.2, 45CSR34; 40 CFR §63.148(d)]

5.2.3.4. 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. §63.120(e)(6)]

*(Emission Units: DMF28, DMF29, DMF32, DMF33, and DMF31)*

5.2.4. **Group 1 Process Wastewater Streams.** DMF wastewater streams that are Group 1 include the filter wash and liquid from the Filtrate Tank. These streams are treated by the Methylamines Process Wastewater Stripper System and the applicable monitoring requirements are provided in 4.2.5.

5.2.5. Flare AMCD01 (Emission Point 402.001) is shared with the Methylamines Process Unit. Monitoring Requirements for Flare AMCD01 are provided in 4.2.6.

### 5.3. Testing Requirements

- 5.3.1. **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) for the Dimethylformamide (DMF) and Monomethylformamide (MMF) process units. **[45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.180]**
- 5.3.2. **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. **[45CSR13, R13-3230 5.3.1, 45CSR§§21-37.1.c and 37.9 (State-Enforceable only)]**
- 5.3.3. The permittee shall comply with the applicable testing requirements of 45CSR§21-41 regarding test methods and compliance procedures to demonstrate compliance with 5.1.11, except as otherwise approved by the Director. **[45CSR13, R13-3230 5.3.2, 45CSR§21-41]**
- 5.3.4. Flare AMCD01 (Emission Point 402.001) is shared with the Methylamines Process Unit. Testing Requirements for Flare AMCD01 are provided in 4.3.4.

**5.4. Recordkeeping Requirements**

- 5.4.1. **Group 1 Process Vents.** To demonstrate compliance with 5.1.1 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)]**
  - 5.4.1.1. Continuous records of the equipment operating parameters specified to be monitored under 5.2.1 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

Control device	Parameters to be monitored	Recordkeeping and reporting requirements for monitored parameters
Flare	Presence of a flame at the pilot light [63.114(a)(2)]	1. Hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour.
		2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination – NCS.
		3. Record the times and durations of all periods when all pilot flames are absent or the monitor is not operating.
		4. Report the times and durations of all periods when all pilot flames of a flare are absent – PR.

All control devices	Presence of flow diverted to the atmosphere from the control device [63.114(d)(1)]	1. Hourly records of whether the flow indicator was operating and whether diversion was detected at any time during each hour. 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.
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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]**

5.4.1.2. 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)]**

5.4.1.3. Hourly records of whether the flow indicator specified under 5.2.2.1 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: DMF03, DMF09, DMF13, DMF18, and DMF22)*

5.4.2. **Group 1 Process Vents.** Each owner or operator subject to the control provisions for Group 1 process vents in 5.1.1 shall: **[45CSR34; 40 C.F.R. §63.117(a)]**

5.4.2.1. Keep an up-to-date, readily accessible record of the data specified in 5.4.2.1.a through 5.4.2.1.c 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: DMF03, DMF09, DMF13, DMF18, and DMF22)*

5.4.3. **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 5.1.2, 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: DMF26)* **[45CSR34; 40 C.F.R. §63.117(b)]**

5.4.4. **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 5.1.2 shall keep up-to-date, readily accessible records of: **[45CSR34; 40 C.F.R. §63.118(c)]**

- 5.4.4.1. Any process changes as defined in 40 C.F.R. §63.115(e); [45CSR34; 40 C.F.R. §63.118(c)(1)]
- 5.4.4.2. Any recalculation of the TRE index value pursuant to 40 C.F.R. §63.115(e). [45CSR34; 40 C.F.R. §63.118(c)(2)]  
(Emission Unit: DMF26)
- 5.4.5. **Group 1 and Group 2 Storage Vessels.** Each owner or operator of a Group 1 or Group 2 storage vessel 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 1 or Group 2 status and is in operation. (Emission Units: DMF28, DMF29, DMF32, DMF33, DMF31, DMF37, DMF40, and DMF41) [45CSR34; 40 C.F.R. §63.123(a); 45CSR13, R13-3230 Condition 4.4.4.]
- 5.4.6. **Group 1 Storage Vessels (Closed Vent System and Control Device).** The permittee shall keep in a readily accessible location a record of the measured values of the parameters monitored in accordance with Condition 5.2.3.2 as well as a record of the planned routine maintenance performed on the control device including the duration of each time the control device does not meet the specifications of 5.1.3.1 due to the planned routine maintenance. Such record shall include the information specified in 5.4.6.1 and 5.4.6.2. [45CSR13; R13-3230 Conditions 4.4.5.a and b, 45CSR34; 40 C.F.R. §§63.123(f) and 63.123(f)(2)]
- 5.4.6.1. The first time of day and date the requirements of 5.1.3.1 were not met at the beginning of the planned routine maintenance, and [45CSR13; R13-3230 Condition 4.4.5.b.i, 45CSR34; 40 C.F.R. §63.123(f)(2)(i)]
- 5.4.6.2. The first time of day and date the requirements of 5.1.3.1 were met at the conclusion of the planned routine maintenance. [45CSR13; R13-3230 Condition 4.4.5.b.ii, 45CSR34; 40 C.F.R. §63.123(f)(2)(ii)]  
(Emission Units: DMF28, DMF29, DMF32, DMF33, and DMF31)
- 5.4.7. **Group 2 Transfer Operations.** Each owner or operator of a Group 2 transfer rack shall record, update annually, and maintain the information specified in 5.4.7.1 through 5.4.7.3 in a readily accessible location on site: [45CSR34; 40 C.F.R. §63.130(f)]
- 5.4.7.1. An analysis demonstrating the design and actual annual throughput of the transfer rack; [45CSR34; 40 C.F.R. §63.130(f)(1)]
- 5.4.7.2. An analysis documenting the weigh-percent organic HAP's in the liquid loaded. Examples of acceptable documentation include but are not limited to analyses of the material and engineering calculations. [45CSR34; 40 C.F.R. §63.130(f)(2)]
- 5.4.7.3. An analysis documenting the annual rack weighted average HAP partial pressure of the transfer rack. [45CSR34; 40 C.F.R. §63.130(f)(3)]
- a. For Group 2 transfer racks that are limited to transfer of organic HAP's with partial pressures less than 10.3 kilopascals, documentation is required of the organic HAP's (by compound) that are transferred. The rack weighted average partial pressure does not need to be calculated. [45CSR34; 40 C.F.R. §63.130(f)(3)(i)]
- b. For racks transferring one or more organic HAP's with partial pressures greater than 10.3 kilopascals, as well as one or more organic HAP's with partial pressures less than 10.3 kilopascals, a rack weighted partial pressure shall be documented. The rack weighted average HAP partial pressure shall be weighted by the annual throughput of each chemical transferred. [45CSR34; 40 C.F.R. §63.130(f)(3)(ii)]  
(Emission Units: DMF43 and DMF42)



- 5.4.8. **Group 1 Process Wastewater Streams.** DMF and MMF wastewater streams that are Group 1 include the filter wash and liquid from the Filtrate Tank. These streams are treated by the Methylamines Process Wastewater Stripper System and the applicable recordkeeping requirements are provided in 4.4.7.
- 5.4.9. **Maintenance Wastewater.** The owner or operator shall maintain a record of the information required by 5.1.7.1 and 5.1.7.2 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)]
- 5.4.10. **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.) for the Dimethylformamide (DMF) and Monomethylformamide (MMF) process units. [45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.181]
- 5.4.11. **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. [45CSR13, R13-3230 5.4.1, 45CSR§§21-37.1.c and 37.10 (State-Enforceable only)]
- 5.4.12. Flare AMCD01 (Emission Point 402.001) is shared with the Methylamines Process Unit. Recordkeeping Requirements for Flare AMCD01 are provided in 4.4.11, 4.4.13, 4.4.14, and 4.4.15.
- 5.4.13 For the purpose of demonstrating compliance with the emission limits in Conditions 5.1.4.b and c, the permittee shall maintain records of the VOC and HAPs emissions from Tank DMF37 on a monthly and 12-month rolling basis.  
[45CSR13; R13-3230 Condition 4.4.7]

## 5.5. Reporting Requirements

- 5.5.1. 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(c)]
- 5.5.2. 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)]
- 5.5.3. **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 5.4.2.1.a though 5.4.2.1.c shall be reported in the next Periodic Report as specified in 40 C.F.R. §63.152(c). (*Emission Units: DMF03, DMF09, DMF13, DMF18, and DMF22*) [45CSR34; 40 C.F.R. §63.117(a)(3)]
- 5.5.4. **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(c)]

- 5.5.4.1. 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)]
- 5.5.4.2. Reports of the times and durations of all periods recorded under 5.4.1.3 when the gas stream is diverted to the atmosphere through a bypass line. [45CSR34; 40 C.F.R. §63.118(f)(3)]
- 5.5.4.3. Reports of the times and durations of all periods recorded under 5.4.1.2 in which all pilot flames of a flare were absent. [45CSR34; 40 C.F.R. §63.118(f)(5)]

*(Emission Units: DMF03, DMF09, DMF13, DMF18, and DMF22)*

- 5.5.5. **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)]

- 5.5.5.1. A description of the process change; [45CSR34; 40 C.F.R. §63.118(g)(1)]
- 5.5.5.2. 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 5.4.4; and [45CSR34; 40 C.F.R. §63.118(g)(2)]
- 5.5.5.3. 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: DMF26)*

- 5.5.6. **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)]

- 5.5.6.1. A description of the process change. [45CSR34; 40 C.F.R. §63.118(h)(1)]
- 5.5.6.2. The results of the recalculation of the TRE index value required under 40 C.F.R. §63.115(e) and recorded under 5.4.4, and [45CSR34; 40 C.F.R. §63.118(h)(2)]
- 5.5.6.3. 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: DMF26)*

- 5.5.7. **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 5.5.7.1 through 5.5.7.4 is met. [45CSR34; 40 C.F.R. §60.118(k)]

- 5.5.7.1. 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)]
- 5.5.7.2. 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)]

5.5.7.3. 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)]**

5.5.7.4. 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)]**

*(Emission Unit: DMF26)*

5.5.8. **Group 1 Storage Vessels (Closed Vent System and Control Device).** An owner or operator who elects to comply with 5.1.3 by installing a closed vent system and control device shall submit, as part of the next Periodic Report required by 40 C.F.R. §63.152(c), the information specified in 5.5.8.1 and 5.5.8.2. **[45CSR13; R13-3230 Condition 4.5.1, 45CSR34; 40 C.F.R. §§63.122(g) and 63.152(c)]**

5.5.8.1. As required by 5.2.3.1, the Periodic Report shall include the information specified in 5.5.8.1.a and 5.5.8.1.b for those planned routine maintenance operations that would require the control device not to meet the requirements of 5.1.3.1 as applicable. **[45CSR13; R13-3230 Condition 4.5.1.a, 45CSR34; 40 C.F.R. §63.122(g)(1)]**

a. A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods. **[45CSR13; R13-3230 Condition 4.5.1.a.i, 45CSR34; 40 C.F.R. §63.122(g)(1)(i)]**

b. A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of 5.1.3.1 due to planned routine maintenance. **[45CSR13; R13-3230 Condition 4.5.1.a.ii, 45CSR34; 40 C.F.R. §63.122(g)(1)(ii)]**

5.5.8.2. If a flare is used, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in 40 C.F.R. §63.11(b) and shall include the information specified in 5.5.8.2.a and 5.5.8.2.b. **[45CSR13; R13-3230 Condition 4.5.1.b, 45CSR34; 40 C.F.R. §63.122(g)(3)]**

a. Identification of the flare which does not meet the general requirements specified in 40 C.F.R. §63.11(b), and **[45CSR13; R13-3230 Condition 4.5.1.b.i, 45CSR34; 40 C.F.R. §63.122(g)(3)(i)]**

b. Reason the flare did not meet the general requirements specified in 40 C.F.R. §63.11(b). **[45CSR13; R13-3230 Condition 4.5.1.b.ii, 45CSR34; 40 C.F.R. §63.122(g)(3)(ii)]**

*(Emission Units: DMF28, DMF29, DMF32, DMF33, and DMF31)*

5.5.9. **Group 1 Process Wastewater Streams.** DMF and MMF wastewater streams that are Group 1 include the filter wash and liquid from the Filtrate Tank. These streams are treated by the Methylamines Process Wastewater Stripper System and the applicable reporting requirements are provided in 4.5.8.

5.5.10. **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.) for the Dimethylformamide (DMF) and Methylamine (MMF) process units. **[45CSR34; 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.182]**

- 5.5.11. **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. [**45CSR13, R13-3230 5.5.2, 45CSR§§21-37.1.c, 37.11, and 5.2 (State-Enforceable only)**]

## **5.6. Compliance Plan**

- 5.6.1. None.

**APPENDIX A -  
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

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

## ATTACHMENT B

### ROUTINE/NORMAL OPERATING & MAINTENANCE SCENARIOS RESULTING IN EXCESS EMISSIONS\*

Process Area Description and Identification Number	Emission Point Identification Number	Description of Excess Emission Scenario SU – Start-up SD – Shutdown M – Maintenance (Describe Activity)	Description of Controls and Measures used to Minimize VOC Emissions (During each Scenario)	Duration of Excess Emission Scenario (Hours)	Typical/Maximum Number of Events per Year /	Average/Peak VOC Emissions per Event (Pounds per Hour) /

\*Do not include malfunction scenarios