West Virginia Department of Environmental Protection
Division of Air Quality
Austin Caperton
Cabinet Secretary

Permit to Operate

Pursuant to
Title V
of the Clean Air Act

Issued to:
Allnex USA Inc.
Willow Island
Urethanes Manufacturing Unit
R30-07300030-2018

William F. Durham
Director, Division of Air Quality

Issued: September 5, 2018 • Effective: September 19, 2018
Expiration: September 5, 2023 • Renewal Application Due: March 5, 2023

Permit Number: **R30-07300030-2018**
Permittee: **Allnex USA Inc.**
Facility Name: **Willow Island Plant**
Permittee Mailing Address: **252 Heilman Avenue, Belmont, WV 26134**

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.

Facility Location: Willow Island, Pleasants County, West Virginia
Facility Mailing Address: 252 Heilman Avenue, Belmont, WV 26134
Telephone Number: (304) 665-1644
Type of Business Entity: Corporation
Facility Description: Urethanes Manufacturing
SIC Codes: 2899 (primary), 2869
UTM Coordinates: 473.66 km Easting • 4,356.34 km Northing • Zone 17

Permit Writer: Mike Egnor

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

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	Design Capacity	Control Device
C002[4]	No direct vent	First Pass Column	1974	8,200 gallons	None
C020[4]		Water Stripper	1987	1,800 gallons	None
C030[4]		MeC Stripper	1974	9,000 gallons	None
C507[4]		Trimer Removal Column	1989	596 gallons	None
E007[4]		First Pass Overhead Condenser	1987	700,000 BTU/hr	None
E008[4]		First Pass Spray Condenser Cooler	1987	28,000 BTU/hr	None
E013[4]		Storage Tank Cooler	1999	50 Tons	None
E015[4]		Cracking Column Overhead Condenser	1987	1.98 MMBTU/hr	None
E016[4]		Catalyst Heater	1996	152,000 BTU/hr	None
E021A/B[4]		Circulated Liquid Coolers	1987	150,000 BTU/hr	None
E035[4]		TMXDI Condenser	1987	269,000 BTU/hr	None
E036A/B[4]		Circulated Methanol Coolers	2016	200,000 BTU/hr	None
E051[4]		Evaporator Condenser	1996	196 ft^2	None
E107[4]		Water Cooled Oil Cooler	2009	4.77 MM Btu/hr	None
E525[4]		Methanol Column Cooler	1987	971,000 BTU/hr	None
E528[4]		MeC Letdown Condenser	1987	1.4 MMBTU/hr	None
E538[4]		Methanol Column Feed Cooler	1987	4.5 MMBTU/hr	None
E541[4]		Methanol Column Cooler	1975	1.34 MMBTU/hr	None
E570[4]		MeC Condenser	2017	1.0 MMBTU/hr	None
E580[4]		Methanol Circulating Cooler	1987	275,000 BTU/hr	None
H026[4]		Chilled Oil Refrigeration System	1987	47 tons	None
H027[4]		Chilled Oil Refrigeration System	2010	160 tons	None
H040[4]		Wiped Film Evaporator	1996	53 ft^2	None
H055[4]		Hot Oil Heater	1996	300 KW	None
H550[4]		MeC Evaporator	1987	1.0 MMBTU/hr	None
R010[4]		Cracking Reactor and Column	1987	5,900 gallons	None
V001[4]		Secondary MeC Stripper	1987	450 gallons	None
V161[4]		Evaporator Bottoms Receiver	1996	85 gallons	None
V420[4]		Cracking Column Secondary Condenser	1987	560 gallons	None
V513[4]		Bottoms Neutralization Tank	1975	10,000 gallons	None
V516[4]		Methanol Storage Tank (transfers from railcars or tank trucks)	1988	17,500 gallons	Vapor return line B001 and 2.5 psig conservation vent.
V530[4]		MeC Reactor	2005	3,350 gallons	None
V552[4]		Evaporator Bottoms Pot	1987	80 gallons	None
V003	DIP-001	Reactant Storage Tank	1974 Installed 2018 Modified (replaced transfer pumps)	660,000 gallons	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
V508	MEC-002	Urea/Methanol Slurry Tank	1974	8,300 gallons	E522
V518		Methanol Feed Tank	1974	6,300 gallons	
V516	MEC-001	Methanol Storage Tank (transfers from process vessels)	1988	17,500 gallons	None
M507	MEC-003	Urea Rotary Air Lock	1987	NA	None
U001		Drum Filling Station	2016	50 gpm	
V514	MEC-004	Bottoms Heavies Box	NA	350 gallons	None
V554	MEC-005	Evaporator Bottoms Receiver	1974	3,325 gallons	None
V500A-C	MEC-006	Recovered Methanol Rail Cars	NA	20,000 gallons	V582
V510		By-product Methanol Rail Car	2018 Modified (replaced transfer pump)	20,000 gallons	
V574		MeC Condenser Receiver	1987	140 gallons	
V599A-E		Crude MeC Rail Cars	NA	20,000 gallons	
V535	MEC-007	Intermediate Product Receiver	1975 Modified 7/14/87	11,000 gallons	None
V578		Methanol Spray Condenser Receiver	1987	200 gallons	
V577	MEC-008	Methanol Spray Condenser	1987	800 gallons	P590A/B
C539/E540	MEC-009	Methanol Column/Methanol Secondary Condenser	1975/2017	5,100 gallons /149.2 ft2	H599
V584	MEC-010	Crude MeC Storage Tank	1975 Modified 3/15/87	18,000 gallons	V583
H530	MEC-011	Hot Oil Heater	1987	21.8 MMBTU/hr	None
V515	MEC-012	Flare Purge Tote	2008	300 gallons	None
U002	MEC-013	Drumming Station	2011	90 gpm	None
V085A	TMI-002	Fresh Methanol Tank Wagon	NA	5,000 gallons	None
V060A	TMI-003	Finished TMU Tank Wagon	NA	5,000 gallons	None
V060B	TMI-005	Finished TMU Tank Wagon	NA	5,000 gallons	None
V102	TMX-003	Caustic Storage Tank	1986	6,570 gallons	None
V107	TMX-004	Sulfuric Acid Storage Tank	1987	6,570 gallons	None

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
C120	UAM-001	Second Pass Column	1974	7,100 gallons	C102/E120
E024		Second Pass Overhead Condenser			
J001/J101[2]		Production Vacuum System	1987	500 CFM	
J010/J110[1]		Refining Vacuum System	2016	742 CFM	
P001A/B		Catalyst Recovery Vacuum System	1996	400 CFM	
R001[2]		Addition Reactor (during TMI to TMU production)	1987	11,900 gallons	
V009[1]		First Pass Overhead Receiver	1987	550 gallons	
V004		Catalyst Feed Tank	1987	1,250 gallons	
V005		First Pass Spray Condenser	1987	510 gallons	
V010[5]		Methanol Surge Tank	1974 Modified 10/2/87	10,700 gallons	
V012		Recovered Catalyst Storage Tank	1975 Modified 11/18/99	15,000 gallons	
V016[2]		Crude TMXDU Surge Tank (during TMI to TMU production)	1974	19,000 gallons	
V019[1]		TMI Surge Tank / Crude TMXDI Tank	1974 Modified 7/23/87	11,400 gallons	
V022		Circulating Liquid Tank	1987	535 gallons	
V026[3]		Second Pass Column Overhead Receiver	1987	130 gallons	
V032		Methanol Spray Condenser	1987	3,100 gallons	
V033[1]		Recovered Methanol Tank	1987	1,977 gallons	
V036		TMXDI Product Receiver	1987	500 gallons	
V039[1]		Crude TMI Storage Tank	1995	100,000 gallons	
V059[3]		Supercrude TMI Storage Tank	1976 Modified 3/22/00	50,000 gallons	
V080A		Secondary Condensate Tank Wagon	NA	5,000 gallons	
V080B[3]		Recovered TMXDI Tank Wagon (during TMI Distillation)	NA	5,000 gallons	
V085[1]		Fresh DMF Tank Wagon	NA	5,000 gallons	
V085B[2]		Heavy Polymer Tank Wagon	NA	5,000 gallons	
V110A[3]		Fourth Pass Bottoms Tank Wagon	NA	5,000 gallons	
V110B[3]		Fifth Pass Bottoms Tank Wagon	NA	5,000 gallons	
V110C[3]		Sixth Pass Overhead Tank Wagon	NA	5,000 gallons	
V112		Cracking Column Overhead Receiver	1987	300 gallons	
V116[1]		First Pass Circulating Liquid Tank	1988	220 gallons	
V150		Methanol Receiver	1996	20 gallons	
V152		Distillate Receiver	1996	300 gallons	
V185[1]		Spent DMF Tank Wagon	NA	5,000 gallons	
E022	UAM-002	Water Stripper Overhead Condenser	1987	12MMBTU/hr	P051A/B
E032		MeC Stripper Overheads Receiver/Condenser	1974	1,300 gallons	
V555	UAM-002	DMF Waste Tank Wagon	2008	5,000 gallons	C102/E120/P051A/B
V560		Recovered DMF Tank Wagon	2008	5,000 gallons	

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
R001	UAM-003	Addition Reactor (during TMXDI production)	1987	11,900 gallons	K360
V016		Crude TMXDU Surge Tank (during TMXDI production)	1974 Modified 7/23/87	19,000 gallons	
V024		Water Stripper Overhead Receiver	1987	130 gallons	
V160	USM-012	Standby Storage Tank (Inactive per application R13-2473J)	1976 Modified 7/23/87	37,600 gallons	None
V006	UAM-004	TMXDU Purge Container	NA	400 gallons	None
V105	UAM-005	Sulfuric Acid Calibration Tank	1987	50 gallons	None
V038	UAM-006	Recovered MeC Storage Tank	1974 Modified 7/27/87	13,000 gallons	None
V007	UAM-007	Water Stripper TMXDI Overheads Tank Wagon	2008	5,000 gallons	None
V550	UAM-007	Water Stripper DMF Overheads Tank Wagon	2008	5,000 gallons	None
V401	UAM-008	Water Stripper Overheads Storage Tank	1979	10,235 gallons	None
V080B	UCM-005	Recovered TMXDI Tank Wagon (during TMXDI production)	NA	5,000 gallons	None
V121A	UCM-007	Catalyst Decanting Tank Wagon	NA	5,000 gallons	None
V121B/C		Bottoms Tank Wagons	NA	5,000 gallons	
V101	USM-003	TMXDI Storage Tank	1974	12,600 gallons	None
V201	USM-004	TMXDI Storage Tank	1974	10,000 gallons	None
V301	USM-005	TMXDI Storage Tank	1974	12,600 gallons	None
V020	USM-006	TMI Storage Tank	1975	4,000 gallons	None
V002	USM-007	Cooling Oil Storage Tank	1987	6,600 gallons	None
V320	USM-008	Chilled Oil Surge Tank	1974 Modified 7/23/87	17,000 gallons	None
V132	USM-010	Hot Oil Storage/Expansion Tank	1974	18,000 gallons	None
V031	USM-011	Catalyst Storage Tank	1987	6,750 gallons	None
V100	UTM-002	TMXDI Trailer Loading	NA	5,000 gallons	None
V130		Finished TMI Tank Wagon	NA	5,000 gallons	
V200		Reactant Tank Wagon	NA	5,000 gallons	
V501		Crude MeC Tank Wagon	NA	5,000 gallons	
V545		Heavies Tank Wagon	NA	5,000 gallons	

[1]Can also vent through UAM-002 when TMI to TMU Process or TMI Distillation Process is operating.
[2]Can also vent through UAM-002 when TMI to TMU Process is Operating.
[3]Can also vent through UAM-002 when TMI Distillation Process is Operating.
[4]Emissions from these emission units vent to another emission unit and do not vent directly to the atmosphere.
[5]Can also vent through UAM-002 when DMF Recovery Process is operating

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 R13-2473. The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2473M	June 25, 2018

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

CAAA	Clean Air Act Amendments	**NO_x**	Nitrogen Oxides
CBI	Confidential Business Information	**NSPS**	New Source Performance Standards
CEM	Continuous Emission Monitor		
CES	Certified Emission Statement	**PM**	Particulate Matter
C.F.R. *or* CFR	Code of Federal Regulations	**PM_{10}**	Particulate Matter less than 10μm in diameter
CO	Carbon Monoxide		
C.S.R. *or* CSR	Codes of State Rules	**pph**	Pounds per Hour
DAQ	Division of Air Quality	**ppm**	Parts per Million
DEP	Department of Environmental Protection	**PSD**	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	**psi**	Pounds per Square Inch
HAP	Hazardous Air Pollutant	**SIC**	Standard Industrial Classification
HON	Hazardous Organic NESHAP		
HP	Horsepower	**SIP**	State Implementation Plan
lbs/hr *or* lb/hr	Pounds per Hour	**SO_2**	Sulfur Dioxide
LDAR	Leak Detection and Repair	**TAP**	Toxic Air Pollutant
m	Thousand	**TPY**	Tons per Year
MACT	Maximum Achievable Control Technology	**TRS**	Total Reduced Sulfur
		TSP	Total Suspended Particulate
mm	Million	**USEPA**	United States Environmental Protection Agency
mmBtu/hr	Million British Thermal Units per Hour		
$mmft^3$/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour	**UTM**	Universal Transverse Mercator
NA *or* N/A	Not Applicable	**VEE**	Visual Emissions Evaluation
NAAQS	National Ambient Air Quality Standards	**VOC**	Volatile Organic Compounds
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

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.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and 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]

3.1.9. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[45CSR§7-5.1.]

3.1.10. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.
[45CSR§7-5.2.]

3.1.11. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2473, R13-2473A, R13-2473B, R13-2473C, R13-2473D, R13-2473E, R13-2473F and R13-2473G, R13-2473H, R13-2473I, R13-2473J, R13-2473K, R13-2473L, R13-2473M, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.
[45CSR13, R13-2473, 2.5.1.]

3.2. Monitoring Requirements

3.2.1. *Reserved*

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. **Record of Monitoring.** 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, R13-2473, 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., 45CSR13, R13-2473, 3.4.1.]

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.]

3.4.4. The permittee shall monitor all fugitive particulate emission sources as required by 3.1.9. To ensure that a system to minimize fugitive emissions has been installed or implemented. Records shall be maintained on site stating the types of fugitive particulate capture and/or suppression systems used, the times these systems were inoperable, and the corrective actions taken to repair these systems.
[45CSR§30-5.1.c.]

3.4.5. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures as required by 3.1.10 applied at the facility.
[45CSR§30-5.1.c.]

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 57th Street SE

US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance (3AP20)
U. S. Environmental Protection Agency

Charleston, WV 25304

Region III
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]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
[45CSR§30-5.3.e.]

US EPA:
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

[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.]

3.6. 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.

45CSR17	To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter. Per 45CSR§17-6.1, the Urethanes manufacturing unit is not subject to 45CSR17 because it is subject to the fugitive particulate matter emission requirements of 45CSR7.

40 C.F.R. 60, Subpart K	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. There are no petroleum liquid storage tanks in the Urethanes manufacturing unit.
40 C.F.R. 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 19, 1978, and Prior to July 23, 1984. There are no petroleum liquid storage tanks in the Urethanes manufacturing unit.
40 CFR 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. Tank size or vapor pressures of the stored chemicals are below the applicability thresholds of 40 C.F.R. part 60 Subpart Kb.
40 C.F.R. 60 Subpart VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. The Urethanes manufacturing unit does not produce as intermediates or final products any of the materials listed in 40 C.F.R. § 60.489.
40 C.F.R. 60 Subpart DDD	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry. The Urethanes manufacturing unit does not manufacture polypropylene, polyethylene, polystyrene, or polyethylene terephthalate for which this rule applies.
40 C.F.R. 60 Subpart III	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes. The Urethanes manufacturing unit does not produce any of the chemicals listed in 40 C.F.R. § 60.617 as a product, co-product, by-product, or intermediate.
40 C.F.R. 60 Subpart NNN	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The Urethanes manufacturing unit does not produce any of the chemicals listed in 40 C.F.R. § 60.667 as a product, co-product, by-product, or intermediate.
40 C.F.R. 60 Subpart RRR	Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. The Urethanes manufacturing unit does not produce any of the chemicals listed in 40 C.F.R. § 60.707 as a product, co-product, by-product, or intermediate.
40 C.F.R. 63 Subpart F **40 C.F.R. 63 Subpart G** **40 C.F.R. 63 Subpart H**	National Emission standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON)." 40 C.F.R. 63, Subparts F, G, and H do not apply to manufacturing process units that do not meet the criteria in 40 C.F.R. §§ 63.100 (b) (1), (b) (2), and (b) (3). The Urethanes Unit is only subject to the requirements of 40 C.F.R. 63, Subpart F, G, H as they apply under 40 C.F.R. 63, Subpart FFFF (MON).

40 C.F.R. Part 63 Subpart DD	National Emission Standards for Hazardous Air Pollutants From Off-Site Waste and Recovery Operations. The Urethanes manufacturing unit does not receive off-site materials as specified in paragraph 40 C.F.R. § 63.680 (b) and the operations are not one of the waste management operations or recovery operations as specified in 40 C.F.R. §§ 63.680 (a) (2) (i) through (a) (2) (vi).
40 C.F.R. Part 63 Subpart JJJ	National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins. The Urethanes manufacturing unit does not produce the materials listed in 40 C.F.R. § 63.1310.
40 C.F.R. Part 63 Subpart PPPP	National Emission standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products. The Urethanes manufacturing unit does not produce an intermediate or final product that meets the definition of "surface coated" plastic part.
40 C.F.R. Part 63 Subpart WWWW	National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production. The Urethanes manufacturing unit does not engage in reinforced plastics composites production as defined in 40 C.F.R. § 63.5785 and does not manufacture composite material as defined in 40 C.F.R. § 63.5935.
40 C.F.R. Part 64	The Urethanes Unit does not have any pollutant specific emissions units (PSEU) at this facility that satisfy all of the applicability criteria requirements of 40 CFR § 64.2 (a), i.e., that: 1) have pre-control regulated pollutant potential emissions (PTE) equal to or greater than the "major" threshold limits to be classified as a major source; 2) are subject to an emission limitation or standard and; 3) have a control device to achieve compliance with such emission limitation or standard. Therefore, the Urethanes Unit is not subject to the Compliance Assurance Monitoring (CAM) rule.

4.0. Urethanes Manufacturing Source-Specific Requirements [Emission Points ID (DIP-001, MEC-001, MEC-002, MEC-003, MEC-004, MEC-005, MEC-006, MEC-007, MEC-008, MEC-009, MEC-010, MEC-011, MEC-012, MEC-013, TMI-002, TMI-003, TMI-005, TMX-003, TMX-004, UAM-001, UAM-002, UAM-003, UAM-004, UAM-005, UAM-006, UAM-007, UAM-008, UCM-005, UCM-007, USM-003, USM-004, USM-005, USM-006, USM-007, USM-008, USM-010, USM-011, UTM-002)]

4.1. Limitations and Standards

4.1.1. Maximum allowable emissions to the atmosphere from the Urethanes Business Unit shall not exceed the limitations set forth in Appendix A, dependent upon the process(es) currently in operation in the Urethanes Business Unit.
[45CSR13, R13-2473, 4.1.1. and Appendix A]

4.1.2. If the permittee emits greater than 50 pounds per calendar year of any Hazardous Air Pollutants (HAPs) other than Methanol (CAS 67-56-1) and Dimethyl Formamide (CAS 68-12-2) from any emission point listed in Section 4.1.1 and Appendix A, the permittee shall provide written notification to the Director within thirty (30) days after such emissions. This written notification shall include the potential to emit (in pph and tpy) for each new HAP species from each of the emission points listed in Section 4.1.1 and Appendix A. The permittee shall not emit 2 pph or 5 tpy or more of any HAP or combination of HAPs in excess of the limits established in Section 4.1.1 without obtaining a modification of R13-2473.
[45CSR13, R13-2473, 4.1.2]

4.1.3. Compliance with the emission limits set forth in section 4.1.1 and Appendix A shall be demonstrated by calculating emissions for every product/process in the Urethanes Business Unit using appropriate engineering calculations, process models, and actual process data. When these emissions are calculated, each emission point listed in Appendix A shall be included in the calculation and accounted for in the actual emissions record. The calculations shall be maintained current for all processes, process modifications and new variants. The Director of the Division of Air Quality may specify or may approve other valid methods for compliance determination when he/she deems it appropriate and necessary.
[45CSR13, R13-2473, 4.1.3.]

4.1.4. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 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 R13-2473 or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR13, R13-2473, 4.1.4.]

4.1.5. During all periods of normal operations, process vent air emissions from the emission sources and equipment listed in Section 1.0 shall be routed to and controlled by the associated control devices listed in Section 1.0 prior to venting emissions to the atmosphere. However, the control devices listed in Section 1.0 may be bypassed to perform maintenance and/or repair activities for periods up to 72 hours per calendar year per control device, with the bypass hours counted only when the listed emission group(s) in Appendix B are operating and venting to the respective control device during a bypass event.
[45CSR13, R13-2473, 4.1.5.]

4.1.6. Emissions to the atmosphere from the following emission sources subject to 45CSR7 – "To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations" shall not exceed the emission limitations set forth in Sections 4.1.13 and 4.1.14, and shall not exceed opacity limitations listed in Sections 4.1.11 and 4.1.12.

Table 4.1.6. 45CSR7 Sources Emission Limits

Product or Process Name	Emission Point ID	Source ID	Pollutant
TMXDI and Crude TMI Production	TMX-003	V102	PM_{10} Opacity
TMXDI and Crude TMI Production	TMX-004	V107	H_2SO_4 Opacity
TMXDI and Crude TMI Production	UAM-005	V105	H_2SO_4 Opacity
Methyl Carbamates	MEC-003	M507	PM_{10} Opacity

[45CSR13, R13-2473, 4.1.6.]

4.1.7. The control devices listed in Appendix B shall be operated in accordance with the required monitoring parameters and inspected and maintained in accordance with the Inspection & Preventive Maintenance schedules listed in Appendix B. Missed readings for each control device monitoring parameter data element specified in Appendix B shall not exceed 5% of the total required readings in a rolling twelve (12) month period.
[45CSR13, R13-2473, 4.1.7.]

4.1.8. The permittee shall comply with all applicable requirements of 40 C.F.R. 63, Subpart EEEE – "National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)" (OLD MACT).
[45CSR13, R13-2473, 4.1.8.]

4.1.9. The Urethanes Manufacturing Unit has been determined to be subject to the following requirements of 40 C.F.R. 63, Subpart FFFF - "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing" (MON MACT):

a. **General Requirements.** The permittee shall comply with all applicable general requirements specified in Table 12 to 40 C.F.R. 63, Subpart FFFF and 40 C.F.R. §§63.2450 and 63.2540.
[45CSR34; 40 C.F.R. §§63.2450 and 63.2540; Table 12 to 40 C.F.R. 63, Subpart FFFF]

b. **Continuous Process Vents.** The permittee shall comply with each emission limit in Table 1 to Subpart FFFF and each applicable requirement specified in 40 C.F.R. §63.2455 for the continuous process vents.

Group 1 Continuous Process Vents. For Group 1 continuous process vents, the permittee has chosen to reduce emissions of total organic HAP by venting emissions through a closed vent system to a flare. *(MCPU 15- Emission Unit ID C539- Flare ID H599)*

Therefore, the requirements of 40 C.F.R. §63.2450(e)(2) apply.

(e) *Requirements for control devices.*

(2) Except when complying with § 63.2485, if you reduce organic HAP emissions by venting emissions through a closed-vent system to a flare, you must meet the requirements of § 63.982(b) and the requirements referenced therein.

§ 63.982(b)

(b) *Closed vent system and flare.* Owners or operators that vent emissions through a closed vent system to a flare shall meet the requirements in § 63.983 for closed vent systems; § 63.987 for flares; § 63.997 (a), (b) and (c) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of §§ 63.998 and 63.999. No other provisions of this subpart apply to emissions vented through a closed vent system to a flare.

The MON regulation further elaborates on flare compliance assessments within 40 C.F.R. §63.2450(f) by stating the following:

(f) *Requirements for flare compliance assessments.*

(1) As part of a flare compliance assessment required in § 63.987(b), you have the option of demonstrating compliance with the requirements of § 63.11(b) by complying with the requirements in either § 63.11(b)(6)(i) or § 63.987(b)(3)(ii).

(2) If you elect to meet the requirements in § 63.11(b)(6)(i), you must keep flare compliance assessment records as specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) Keep records as specified in § 63.998(a)(1)(i), except that a record of the heat content determination is not required.

(ii) Keep records of the flare diameter, hydrogen content, exit velocity, and maximum permitted velocity. Include these records in the flare compliance report required in § 63.999(a)(2).

[45CSR34, 40 C.F.R. §63.2455; Table 1 to Subpart FFFF, Emission Point ID (MEC-009)]

c. **Storage Tanks.** The permittee shall comply with either the vapor balancing alternative of 40 C.F.R. §63.2470(e) or the emission limits of Table 4 to Subpart FFFF for each applicable Urethanes Group 1 storage tank in accordance with the applicable requirements of 40 C.F.R. §63.2470.

Group 1 Storage Tanks. For Group 1 storage tanks that do not have a halogenated vent stream, the permittee has chosen to comply with the vapor balancing alternative requirements of 40 C.F.R. §63.2470(e) and thus 40 C.F.R. §63.1253(f). *(MCPU 15 – Emission Unit ID No. V516)*

The conditions of 40 C.F.R. §63.2470(e) are stated as follows:

(e) *Vapor balancing alternative.* As an alternative to the emission limits specified in Table 4 to this subpart, you may elect to implement vapor balancing in accordance with § 63.1253(f), except as specified in paragraphs (e)(1) through (3) of this section.

(1) When § 63.1253(f)(6)(i) refers to a 90 percent reduction, 95 percent applies for the purposes of this subpart.

(2) To comply with § 63.1253(f)(6)(i), the owner or operator of an offsite cleaning or reloading facility must comply with §§ 63.2445 through 63.2550 instead of complying with § 63.1253(f)(7)(ii), except as specified in paragraph (e)(2)(i) or (ii) of this section.

(i) The reporting requirements in § 63.2520 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(ii) As an alternative to complying with the monitoring, recordkeeping, and reporting provisions in §§ 63.2445 through 63.2550, the owner or operator of an offsite cleaning or reloading facility may comply as specified in § 63.2535(a)(2) with any other subpart of this part 63 which has monitoring, recordkeeping, and reporting provisions as specified in § 63.2535(a)(2).

(3) You may elect to set a pressure relief device to a value less than the 2.5 pounds per square inch gage pressure (psig) required in § 63.1253(f)(5) if you provide rationale in your notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times.

(4) You may comply with the vapor balancing alternative in § 63.1253(f) when your storage tank is filled from a barge. All requirements for tank trucks and railcars specified in § 63.1253(f) also apply to barges, except as specified in § 63.2470(e)(4)(i).

(i) When §63.1253(f)(2) refers to pressure testing certifications, the requirements in 40 CFR §61.304(f) apply for barges.

The conditions of 40 C.F.R. §63.1253(f) are stated as follows:

(f) *Vapor balancing alternative.* As an alternative to the requirements in paragraphs (b) and (c) of this section, the owner or operator of an existing or new affected source may implement vapor balancing in accordance with paragraphs (f)(1) through (7) of this section.

(1) The vapor balancing system must be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the railcar or tank truck from which the storage tank is filled.

(2) Tank trucks and railcars must have a current certification in accordance with the U.S. Department of Transportation (DOT) pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR §173.31 for railcars.

(3) Hazardous air pollutants must only be unloaded from tank trucks or railcars when vapor collection systems are connected to the storage tank's vapor collection system.

(4) No pressure relief device on the storage tank, or on the railcar, or tank truck shall open during loading or as a result of diurnal temperature changes (breathing losses).

(5) Pressure relief devices on affected storage tanks must be set to no less than 2.5 psig at all times to prevent breathing losses. The owner or operator shall record the setting as specified in § 63.1259(b)(12) and comply with the requirements for each pressure relief valve in paragraphs (f)(5)(i) through (iii) of this section:

(i) The pressure relief valve shall be monitored quarterly using the method described in § 63.180(b).

(ii) An instrument reading of 500 ppmv or greater defines a leak.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of § 63.1255(g)(4)(i) through (iv).

(6) Railcars or tank trucks that deliver HAP to an affected storage tank must be reloaded or cleaned at a facility that utilizes one of the control techniques in paragraph (f)(6)(i) through (ii) of this section:

(i) The railcar or tank truck must be connected to a closed-vent system with a control device that reduces inlet emissions of HAP by 90 percent by weight or greater; or

(ii) A vapor balancing system designed and operated to collect organic HAP vapor displaced from the tank truck or railcar during reloading must be used to route the collected HAP vapor to the storage tank from which the liquid being transferred originated.

(7) The owner or operator of the facility where the railcar or tank truck is reloaded or cleaned must comply with the requirements in paragraph (f)(7)(i) through (iii) of this section:

(i) Submit to the owner or operator of the affected storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the affected storage tank giving at least 90 day notice that the certifying entity is

rescinding acceptance of responsibility for compliance with the requirements of this paragraph (b)(7).

(ii) If complying with paragraph (f)(6)(i) of this section, demonstrate initial compliance in accordance with § 63.1257(c), demonstrate continuous compliance in accordance with § 63.1258, keep records as specified in § 63.1259, and prepare reports as specified in § 63.1260.

(iii) If complying with paragraph (f)(6)(ii) of this section, keep records of:

(A) The equipment to be used and the procedures to be followed when reloading the railcar or tank truck and displacing vapors to the storage tank from which the liquid originates, and

(B) Each time the vapor balancing system is used to comply with paragraph (f)(6)(ii) of this section.

[45CSR34, 40 C.F.R. §63.2470; Table 4 to Subpart FFFF, Equipment ID (V516)]

d. **Equipment Leak Detection and Repair (LDAR) Program.** The permittee shall comply with each applicable requirement of 40 C.F.R. §63.2480 and Table 6 to Subpart FFFF, and either Part 63 Subpart H, Part 63 Subpart UU or Part 65 Subpart F for the applicable Urethanes equipment components that are in organic HAP service.

As defined within the October 3, 2008 Notification of Compliance Status (NOCS) report, the permittee has elected to utilize the compliance methods of Part 63, Subpart H to specify their LDAR requirements.

[45CSR34, 40 C.F.R. §63.2480; Table 6 to Subpart FFFF]

e. **Wastewater Streams.** The permittee shall comply with the applicable requirements of 40 C.F.R. §§63.105, 63.132 through 63.148, 63.2485 and Table 7 to Subpart FFFF for the Urethanes wastewater streams.

[45CSR34, 40 C.F.R. §63.2485; Table 7 to Subpart FFFF, Equipment ID (C020, V515)]

f. **Heat Exchange Systems.** The permittee shall comply with the applicable requirements of 40 C.F.R. §§63.104, 63.2490 and Table 10 to Subpart FFFF for the Urethanes cooling/heat exchange systems.

[45CSR34, 40 C.F.R. §63.2490; Table 10 to Subpart FFFF, Equipment ID (E528, E538, E540, E541, and E525)]

[45CSR13, R13-2473, 4.1.9]

4.1.10. Reserved

4.1.11. The permittee shall not cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in Section 4.1.12. Process source operations subject to the opacity limitation are indicated in Section 4.1.6.

[45CSR13, R13-2473, 4.1.11, 45CSR§7-3.1, Emission Point ID(s) (TMX-003, MEC-003, UAM-005, TMX-004)]

4.1.12. The opacity provisions of Section 4.1.11 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.

[45CSR13, R13-2473, 4.1.12, 45CSR§7-3.2, Emission Point ID(s) (TMX-003, MEC-003, UAM-005, TMX-004)]

4.1.13. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A.

Emission Point ID No.	45CSR7 Maximum Allowable Particulate Emission Limit
	lb/hr
TMX-003	28.0
MEC-003	8.0

Compliance with the 45CSR§7-4.1 hourly emission limit for TMX-003 and MEC-003 shall be demonstrated through compliance with the more stringent hourly particulate emission limit set forth in Section 4.1.1.
[45CSR13, R13-2473, 4.1.13, 45CSR§7-4.1, Emission Point ID(s) (TMX-003, MEC-003)]

4.1.14. Mineral acids shall not be released from any type source operation or duplicate source operation or from all pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity given in Table 4.1.14. Process source operations subject to the mineral acid concentration limitation are indicated in Section 4.1.6.

Table 4.1.14. Mineral Acid Stack Gas Concentration Limitations

Mineral Acid	Allowable Stack Gas Concentration (mg/dscm)
Sulfuric Acid Mist (H_2SO_4)	35
Nitric Acid Mist and/or Vapor (HNO_3)	70
Hydrochloric Acid Mist and/or Vapor (HCl)	210
Phosphoric Acid Mist and/or Vapor (H_3PO_4)	3

[45CSR13, R13-2473, 4.1.14, 45CSR§7-4.2, Emission Point ID(s) (TMX-004, UAM-005)]

4.1.15. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in Sections 4.1.13 and 4.1.14 may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the permittee and approved by the Director.
[45CSR13, R13-2473, 4.1.15, 45CSR§7-9.1, Emission Point ID(s) (TMX-003, TMX-004, UAM-005, MEC-003)]

4.1.16. Maintenance operations shall be exempt from the provisions of 45CSR§7-4, and the emission limitations set forth in Sections 4.1.13. and 4.1.14., provided that, at all times the owner or operator conducts maintenance operations in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director, which may include, but not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.
[45CSR13, R13-2473, 4.1.16, 45CSR§7-10.3, Emission Point ID(s) (TMX-003, TMX-004, UAM-005, MEC-003)]

4.1.17. The following equipment, listed in Table 4.1.17 in the Urethanes Manufacturing Unit is used on an as-needed basis and may not be operated for extended periods of time. This equipment is exempt from R13-2473, Section 2.14, but remains subject to R13-2473 Section 3.1.5. Written notification shall be provided to the Director in the event of permanent shutdown of this equipment.

Table 4.1.17. Intermittent Use Equipment

Equipment ID	Source Description
None	

[45CSR13, R13-2473, 4.1.17.]

4.1.18. 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:

Emissions (lb/hr) = F x 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
Less than 15,000 lbs/hr	5.43
15,000 lbs/hr or greater	2.72

H599: 5.43 x 0.49 tons/hr = 2.66 lbs/hr allowable PM

Compliance with the 45CSR§6-4.1 hourly emission limit for H599 shall be demonstrated through compliance with the more stringent hourly particulate emission limit set forth in Section 4.1.1.

[45CSR§6-4.1, Equipment ID (H599)]

4.1.19. 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. *(H599)*

[45CSR§6-4.3, Equipment ID (H599)]

4.1.20. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average. *(H530)*

[45CSR§2-3.1, Equipment ID (H530)]

4.1.21. No person shall cause, suffer, allow or permit the discharge of particulate matter into the open air from all fuel burning units located at one plant, measured in terms of pounds per hour in excess of the amount determined as follows:

For Type 'b' fuel burning units, the product of 0.09 and the total design heat inputs for such units in million B.T.U.'s per hour, provided however that no more than six hundred (600) pounds per hour of particulate matter shall be discharge into the open air from all such units.

H530: 21.8 MMBtu/hr * 0.09 = 1.96 lb/hr total allowable PM

Compliance with the 45CSR§2-4.1.b hourly emission limit for H530 shall be demonstrated through compliance with the more stringent hourly particulate emission limit set forth in Section 4.1.1.

[45CSR§2-4.1.b, Equipment ID (H530)]

4.1.22. No person shall cause, suffer, allow or permit the discharge of sulfur dioxide into the open air from all stacks located at one plant, measured in terms of pounds per hour, in excess of the amount determined as follows:

For type 'b' and Type 'c' fuel burning units, the product of 3.1 and the total design heat inputs for such units discharging through those stacks in million BTU's per hour.

H530: 21.8 MMBtu/hr * 3.1 = 67.6 lb/hr total allowable SO_2

Compliance with the 45CSR§10-3.1.e hourly emission limit for H530 shall be demonstrated through compliance with the more stringent hourly sulfur dioxide limit set forth in Section 4.1.1.
[45CSR§10-3.1.e, Equipment ID (H530)]

4.1.23. The process heater (H530) has been determined to be subject to the requirements of 40 C.F.R. 63, subpart DDDDD - "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

In accordance with §63.7495(b) the existing source compliance date is January 31, 2016. At this time the permittee shall abide by the work practice standards defined within Table 3 of 40 C.F.R. 63, subpart DDDDD. The applicable sections of Table 3 are listed as work practice conditions 3 and 4.

Condition 3 requires annual tune-ups. These requirements are listed in Condition 4.1.24.

Condition 4 lists a one-time energy assessment in accordance with the specifications listed within Table 3, Conditions 4(a)-(h).
[45CSR34; 40 C.F.R. §63.7495(b); §63.7500(a)(1); Table 3, Equipment ID (H530)]

4.1.24. For the process heater (H530), the Permittee must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (i) through (vi) of this Condition. The Permittee must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown);

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (vi)(A) through (C) of this Condition,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

[45CSR34; 40 C.F.R. §§63.7540(a)(10)(i) through (vi) (H530)]

4.2. Monitoring Requirements

4.2.1. The permittee shall perform monitoring of all equipment parameters listed in Appendix B per the minimum data collection frequency and per the data averaging period as indicated.

[45CSR13, R13-2473, 4.2.1.]

4.2.2. For the purpose of determining compliance with the opacity limits of 45CSR§§7-3.1 and -3.2, the permittee shall conduct visible emission checks or opacity monitoring and recordkeeping for all emission points and equipment subject to an opacity limit, including those emission sources listed in Table 4.1.6.

Monitoring shall be conducted initially at least once per month with a maximum of forty-five (45) days between consecutive readings. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emission checks or opacity monitoring once per calendar quarter. If visible emissions or opacity are observed during a quarterly monitoring from an emission point(s), then that emission point(s) with observed emissions or opacity shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring shall be allowed to again conduct quarterly visible emission checks or opacity monitoring only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point.

These checks shall be conducted by personnel trained in the practices and limitations of 40CFR60 Appendix A, Method 9 or Method 22, or 45CSR7A, during periods of operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. For observations of visible emissions from any emission point(s) which follows a water scrubber, when condensed water vapor is present in the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible; the observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct an opacity reading using the procedures and requirements of 45CSR7A within seventy-two (72) hours of the first signs of visible emissions. A 45CSR7A evaluation shall not be required if the visible emission condition is corrected within seventy-two (72) hours after the visible emission and the sources are operating at normal conditions.

[45CSR13, R13-2473, 4.2.2, Emission Point ID(s) (TMX-003, MEC-003, UAM-005, TMX-004)]

4.2.3. The permittee shall monitor and record monthly the following data pertaining to any control device bypass events per Section 4.1.5: Identification of the control device bypassed, the date and the duration of the bypass,

the nature of the repair or maintenance conducted, and the quantity of regulated air pollutants emitted during the bypass time period.

[45CSR13, R13-2473, 4.2.3.]

4.2.4. For the purpose of determining compliance with the opacity limits of Sections 4.1.19 [45CSR§6-4.3] and 4.1.20 [45CSR§2-3.1], the permittee shall conduct visible emission checks or opacity monitoring and recordkeeping for all emission points and equipment subject to an opacity limit.

Monitoring shall be conducted initially at least once per month with a maximum of forty-five (45) days between consecutive readings. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emission checks or opacity monitoring once per calendar quarter. If visible emissions or opacity are observed during quarterly monitoring from an emission point(s), then that emission point(s) with observed emissions or opacity shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring shall be allowed to again conduct quarterly visible emission checks or opacity monitoring only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point.

These checks shall be conducted by personnel trained in the practices and limitations of 40 C.F.R. 60, Appendix A, Method 9 or Method 22 during periods of operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. For observations of visible emissions from any emission point(s) which follows a water scrubber, when condensed water vapor is present in the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible; the observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct an opacity reading using the procedures and requirements of 40 C.F.R. 60, Appendix A, Method 9 within seventy-two (72) hours of the first signs 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.
[45CSR§30-5.1.c, Emission Point ID(s) (MEC-009, MEC-011)]

4.2.5. The permittee shall perform all required monitoring in compliance with the applicable general provisions of Subpart FFFF, per 40 C.F.R. §§63.2450 and 63.2540 and Table 12 to Subpart FFFF, and Part 63 Subpart A.

Specific flare monitoring is listed within §63.987(c) for H599, as defined within 4.1.9.b, which are as follows:
(c) *Flare monitoring requirements.* Where a flare is used, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting that at least one pilot flame or the flare flame is present. Flare flame monitoring and compliance records shall be kept as specified in § 63.998(a)(1) and reported as specified in § 63.999(a).

The Group 1 storage tank, V516 has vapor balancing monitoring requirements specified within §63.1253(f)(5), as defined within 4.1.9.c, which are reiterated here as follows:
§63.1253(f)(5):
(5) Pressure relief devices on affected storage tanks must be set to no less than 2.5 psig at all times to prevent breathing losses. The owner or operator shall record the setting as specified in § 63.1259(b)(12) and comply with the requirements for each pressure relief valve in paragraphs (f)(5)(i) through (iii) of this section:

(i) The pressure relief valve shall be monitored quarterly using the method described in § 63.180(b).

(ii) An instrument reading of 500 ppmv or greater defines a leak.

(iii) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of § 63.1255(g)(4)(i) through (iv).

[45CSR34, 40 C.F.R. §63.2450, §63.2470, §63.2540, §63.987(c), §63.1253(f)(5); Table 12 to Subpart FFFF; 40 C.F.R. Part 63, Subpart A, Equipment ID (V516, H599)]

4.3. Testing Requirements

4.3.1. *Reserved*

4.4. Recordkeeping Requirements

4.4.1. The owner or operator shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner to be established by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request. Where appropriate the owner or operator of a fuel burning units(s) may maintain such records in electronic form.

[45CSR§2-8.3.c. and 45CSR§2-8.3.d., *H530*]

4.4.2. **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, R13-2473, 4.4.2]

4.4.3. **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.

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

f. The cause of the malfunction.

g. Steps taken to correct the malfunction.

h. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-2473, 4.4.3]

4.4.4. The emission/discharge estimation models and calculation methodologies developed in Section 4.1.3. as well as production records for each calendar month shall be maintained on site for a period of five (5) years. Certified copies of these records shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.
[45CSR13, R13-2473, 4.4.4]

4.4.5. The permittee shall maintain on site for a period of five (5) years a tabulation of actual emissions/discharges generated using those methods specified in Section 4.1.3, over the most recent continuous rolling twelve (12) calendar month period, showing emission/discharge totals for the regulated air pollutants listed in Sections 4.1.1 and 4.1.3. Certified copies of these records shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.
[45CSR13, R13-2473, 4.4.5]

4.4.6. Records of all monitoring data required by Section 4.2.1 shall be maintained on site as follows:

a. All monitoring data required by Section 4.2.1, as specified in Appendix B, shall be maintained on site for a period of no less than five (5) years. Such records may include strip charts, electronic data system records, and hand-written data forms. Certified copies of these records shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

b. For each out-of-range occurrence of a monitoring parameter value for the averaging period specified in Appendix B, records stating the starting date/time and duration of the control device's out-of-range alarm or reading, the cause of the out-of-range parameter, and any corrective actions taken, shall be maintained on site for a period of no less than five (5) years from the date of monitoring, sampling, or measurement. Certified copies of these records shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

c. Missed readings for each scrubber monitoring parameter data element specified in Appendix B shall be recorded and compared to the maximum allowable missed readings limitation in Section 4.1.7. A rolling consecutive twelve (12) month tabulation of missing readings for each scrubber monitoring parameter element shall be maintained on site for a period of no less than five (5) years. Certified copies of these records shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

d. In the event that an applicable rule or regulation (such as the MON MACT) requires monitoring more stringent than that required by Section 4.2.1, the more stringent provisions shall apply. Any such required monitoring data shall be maintained on site for a period of no less than five (5) years. Certified copies of these records shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

[45CSR13, R13-2473, 4.4.6]

4.4.7. Per the monitoring required by Section 4.2.2, records shall be maintained documenting the date and time of each visible emission check, the name of the responsible observer, the results of the check, and, if necessary, all corrective actions taken. Should an opacity reading be required per 45CSR7A, records shall be maintained per the procedures of 45CSR§7A-2.
[45CSR13, R13-2473, 4.4.7, Emission Point ID(s) (TMX-003, MEC-003, UAM-005, TMX-004)]

4.4.8. Compliance with Sections 4.4.2 and 4.4.3 may be shown by keeping similar records required by the requirements of the Startup, Shutdown, and Malfunction Plan as contained in 40CFR63 Subpart A and as may be amended by specific MACT subpart requirements.

[45CSR13, R13-2473, 4.4.8]

4.4.9. Records of each visible emission observation and each Method 9 evaluation conducted in accordance with 4.2.4 shall be maintained on site for a period of no less than five (5) years. The visible emission observation records shall include, but not be limited to, the date, time, name of the emission unit, the applicable visible emissions requirements, the results of the observations, what action(s), if any, was/were taken, and the name of the certified Method 9 observer.
[45CSR§30-5.1.c., Emission Point ID(s) (MEC-009, MEC-011)]

4.4.10. The Urethanes Manufacturing Unit has been determined to be subject to only the following recordkeeping requirements of 40 C.F.R. Part 63 Subpart EEEE – "National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)" (OLD MACT).

1. For each storage tank subject to 40 C.F.R. Part 63 Subpart EEEE having a capacity of less than 18.9 cubic meters (5,000 gallons) and for each transfer rack subject to this subpart that only unloads organic liquids (i.e., no organic liquids are loaded at any of the transfer racks), you must keep documentation that verifies that each storage tank and transfer rack identified in 40 C.F.R. § 63.2343 (a) is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) 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. The documentation may consist of identification of the tanks and transfer racks identified in 40 C.F.R. § 63.2343 (a) on a plant site plan or process and instrumentation diagram (P&ID).

2. You must keep records of the total actual annual facility-level organic liquid loading volume as defined in 40 C.F.R. § 63.2406 through transfer racks to document the applicability, or lack thereof, of the emission limitations in Table 2 to 40 C.F.R. Part 63 Subpart EEEE, items 7 through 10.

[45CSR34; 40 C.F.R. §§ 63.2343 (a), 63.2390 (a), 63.2390 (d)]

4.4.11. **40 C.F.R. 63, Subpart FFFF.** The permittee shall maintain records in accordance with 40 C.F.R. §§63.2450, 63.2525, 63.2540, and Table 12 to Subpart FFFF, and any records required by Part 63, Subpart A, and as applicable in referenced Subparts F, G, H, SS, UU, WW, and GGG of Part 63, and 40 CFR Part 65, Subpart F.

Recordkeeping requirements specific to the flare, H599 and its associated closed vent system are specified within 40 C.F.R. 63, subpart SS as follows.

§ 63.998 Recordkeeping requirements.

(a) *Compliance assessment, monitoring, and compliance records* —

(1) *Conditions of flare compliance assessment, monitoring, and compliance records.* Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of flare compliance assessments performed pursuant to § 63.987(b).

(i) *Flare compliance assessment records.* When using a flare to comply with this subpart, record the information specified in paragraphs (a)(1)(i)(A) through (C) of this section for each flare compliance assessment performed pursuant to § 63.987(b). As specified in § 63.999(a)(2)(iii)(A), the owner or operator shall include this information in the flare compliance assessment report.

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the flare compliance assessment; and

(C) All periods during the flare compliance assessment when all pilot flames are absent or, if only the flare flame is monitored, all periods when the flare flame is absent.

(ii) *Monitoring records.* Each owner or operator shall keep up to date and readily accessible hourly records of whether the monitor is continuously operating and whether the flare flame or at least one pilot flame is continuously present. For transfer racks, hourly records are required only while the transfer rack vent stream is being vented.

(iii) *Compliance records.*

(A) Each owner or operator shall keep records of the times and duration of all periods during which the flare flame or all the pilot flames are absent. This record shall be submitted in the periodic reports as specified in § 63.999(c)(3).

(B) Each owner or operator shall keep records of the times and durations of all periods during which the monitor is not operating.

(d) *Other records* —

(1) *Closed vent system records.* For closed vent systems the owner or operator shall record the information specified in paragraphs (d)(1)(i) through (iv) of this section, as applicable.

(i) For closed vent systems collecting regulated material from a regulated source, the owner or operator shall record the identification of all parts of the closed vent system, that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by § 63.983(b)(2)(ii) or (iii) of this section.

(ii) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall keep a record of the information specified in either paragraph (d)(1)(ii)(A) or (B) of this section, as applicable.

(A) Hourly records of whether the flow indicator specified under § 63.983(a)(3)(i) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(B) Where a seal mechanism is used to comply with § 63.983(a)(3)(ii), hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(iii) For a closed vent system collecting regulated material from a regulated source, when a leak is detected as specified in § 63.983(d)(2), the information specified in paragraphs (d)(1)(iii)(A) through (F) of this section shall be recorded and kept for 5 years.

(A) The instrument and the equipment identification number and the operator name, initials, or identification number.

(B) The date the leak was detected and the date of the first attempt to repair the leak.

(C) The date of successful repair of the leak.

(D) The maximum instrument reading measured by the procedures in § 63.983(c) after the leak is successfully repaired or determined to be nonrepairable.

(E) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(F) Copies of the Periodic Reports as specified in § 63.999(c), if records are not maintained on a computerized database capable of generating summary reports from the records.

(iv) For each instrumental or visual inspection conducted in accordance with § 63.983(b)(1) for closed vent systems collecting regulated material from a regulated source during which no leaks are

detected, the owner or operator shall record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(3) *Regulated source and control equipment start-up, shutdown and malfunction records.* (i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment used to comply with this part during which excess emissions (as defined in a referencing subpart) occur.

(ii) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing control device emissions to a backup control device (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(4) *Equipment leak records.* The owner or operator shall maintain records of the information specified in paragraphs (d)(4)(i) and (ii) of this section for closed vent systems and control devices if specified by the equipment leak provisions in a referencing subpart. The records specified in paragraph (d)(4)(i) of this section shall be retained for the life of the equipment. The records specified in paragraph (d)(4)(ii) of this section shall be retained for 5 years.

(i) The design specifications and performance demonstrations specified in paragraphs (d)(4)(i)(A) through (C) of this section.

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(B) The dates and descriptions of any changes in the design specifications.

(C) A description of the parameter or parameters monitored, as required in a referencing subpart, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(ii) Records of operation of closed vent systems and control devices, as specified in paragraphs (d)(4)(ii)(A) through (C) of this section.

(A) Dates and durations when the closed vent systems and control devices required are not operated as designed as indicated by the monitored parameters.

(B) Dates and durations during which the monitoring system or monitoring device is inoperative.

(C) Dates and durations of start-ups and shutdowns of control devices required in this subpart.

(5) *Records of monitored parameters outside of range.* The owner or operator shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Periodic Report.

Recordkeeping requirements specific to the V516 storage tank and the vapor balancing compliance alternative are specified within 40 C.F.R. 63, subpart GGG as follows:

§ 63.1259(b)(12)

(12) If the owner or operator elects to comply with the vapor balancing alternative in § 63.1253(f), the owner or operator must keep records of the DOT certification required by § 63.1253(f)(2) and the pressure relief vent setting and the leak detection records specified in § 63.1253(f)(5).

§ 63.1255(g)(4)(i) through (iv).

(4) *Monitoring records.* When each leak is detected as specified in paragraph (c) of this section and § 63.164, paragraph (e) of this section and § 63.169, and §§ 63.172 and 63.174, the following information shall be recorded and kept for 5 years (at least 2 years onsite, with the remaining 3 years either onsite or offsite):

(i) The instrument and the equipment identification number and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of the first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) The maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A, after the leak is successfully repaired or determined to be nonrepairable.

[45CSR34, 40 C.F.R. §63.2450; §63.2525; §63.2540, Table 12 to Subpart FFFF; §§63.998(a) and (d), §63.1259(b)(12), §§63.1255(g)(4)(i) through (iv), 40 C.F.R. Part 63, Subparts A, F, G, H, SS, UU, WW, GGG, 40 C.F.R. Part 65, Subpart F]

4.4.12. For the Hot Oil process heater (H530), the Permittee shall keep the following records:

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in § 63.10(b)(2)(viii).

[45CSR34, 40 C.F.R. §§63.7555(a)(1) and (2). (H530)]

4.5. Reporting Requirements

4.5.1. **40 C.F.R. 63, Subpart FFFF.** The permittee shall submit all required applicable reports and notifications per the requirements of 40 C.F.R. §§63.2450, 63.2515, 63.2520, 63.2540, Table 11 and Table 12 to Subpart FFFF, and Part 63 Subpart A.

The ongoing reporting requirements of §63.999(c) applicable to the Group 1 vents are as follows:

(c) *Periodic reports.*

(1) Periodic reports shall include the reporting period dates, the total source operating time for the reporting period, and, as applicable, all information specified in this section and in the referencing subpart, including reports of periods when monitored parameters are outside their established ranges.

(2) For closed vent systems subject to the requirements of § 63.983, the owner or operator shall submit as part of the periodic report the information specified in paragraphs (c)(2)(i) through (iii) of this section, as applicable.

(i) The information recorded in § 63.998(d)(1)(iii)(B) through (E);

(ii) Reports of the times of all periods recorded under § 63.998(d)(1)(ii)(A) when the vent stream is diverted from the control device through a bypass line; and

(iii) Reports of all times recorded under § 63.998(d)(1)(ii)(B) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

(3) For flares subject to this subpart, report all periods when all pilot flames were absent or the flare flame was absent as recorded in § 63.998(a)(1)(i)(C).

The ongoing reporting requirements of §63.1260(g) applicable to the Storage Tanks are as follows:

(2) Content of Periodic report. The owner or operator shall include the information in paragraphs (g)(2)(i) through (vii) of this section, as applicable.

(iii) For each inspection conducted in accordance with § 63.1258(h)(2) or (3) during which a leak is detected, the records specified in § 63.1259(i)(7) must be included in the next Periodic report.

(v) The information in paragraphs (g)(2)(v)(A) through (D) of this section shall be stated in the Periodic report, when applicable.

(A) No excess emissions.

(B) No exceedances of a parameter.

(C) No excursions.

(D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted.

[45CSR34, 40 C.F.R. §63.2450; §63.2515, §63.2520; §63.2540, Table 11 and Table 12 to Subpart FFFF; 40 C.F.R. Part 63, Subpart A, §63.999(c), §63.1260(g), Equipment IDs (V516, H599)]

4.5.2. The Hot Oil process heater (H530) shall submit the following compliance reports related to the annual tune-up as follows:

(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to Condition 4.1.24. Include the date of the most recent burner inspection if it was not done annually and was delayed until the next scheduled or unscheduled unit shutdown.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

[45CSR34, 40 C.F.R. §§63.7550(b) and 63.7550(c)(1), (c)(5)(i) through (iii), (c)(5)(xiv) and (xvii). (H530)]

4.6. Compliance Plan

4.6.1. None

APPENDIX A (Emission Limits)

Emission Point	Source	Pollutant	Emission Limit pph	Emission Limit tpy
Emission Limits when any Urethanes Manufacturing Unit Process is On-Line				
DIP-001	V003	VOC	0.2	0.1
USM-007	V002	VOC	1.0	0.1
USM-008	V320	VOC	0.1	0.1
USM-010	V132	VOC	0.1	0.3
MEC-003	U001	VOC	0.1	0.1
MEC-011	H530	CO NO_X PM SO_2 VOC	1.8 2.2 0.2 0.1 0.2	7.9 9.4 0.9 0.1 0.7
MEC-013	U002	VOC THAP	0.7 0.4	0.1 0.1
UTM-002	V100 or V200	VOC	0.1	0.1
UTM-002	V501	VOC THAP	0.2 0.1	0.1 0.1
Emission Limits when TMI to TMU Process is On-Line				
TMI-002	V085A	VOC THAP	0.1 0.1	0.10 0.10
TMI-003	V060A	VOC THAP	0.4 0.3	0.20 0.15
TMI-005	V060B	VOC THAP	0.4 0.3	0.20 0.15
UAM-001 *or* UAM-002	C102	VOC THAP	2.0 1.8	0.90 0.75
Emission Limits when Methanol Recovery Operation is On-Line				
MEC-001	V516	VOC THAP	0.64 0.64	0.10 0.10
MEC-006	V582, V574, V500A-C	VOC THAP	0.70 0.70	0.50 0.50
MEC-007	V578, V535	VOC THAP	0.39 0.39	0.30 0.30
MEC-008	P590A/B	VOC THAP	0.10 0.10	0.10 0.10

Emission Point	Source	Pollutant	Emission Limit	
			pph	tpy
UTM-002	V545	VOC THAP	0.30 0.30	0.30 0.20
Emission Limits when DMF Recovery Operation is On-Line				
UAM-002	V555, V560, P051A/B, J001/J101	VOC THAP	0.1 0.1	0.1 0.1
UAM-003	V024	VOC THAP	0.1 0.1	0.1 0.1
UAM-007	V550	VOC THAP	0.4 0.4	0.1 0.1
UAM-001	V010	VOC THAP	0.1 0.1	0.1 0.1
Emission Limits when TMI Distillation Process is On-Line				
UAM-001 *or* UAM-002	P051A/B, C102/E120	VOC THAP	0.3 0.2	0.20 0.10
USM-006	V020	VOC	0.1	0.10
UTM-002	V130	VOC	0.1	0.10
Emission Limits when TMXDI and Crude TMI Production Process is On-Line				
MEC-006	V510, V582	VOC THAP	0.6 0.6	0.1 0.1
MEC-010	V583	VOC THAP	0.1 0.1	0.4 0.2
TMX-003	V102	PM	0.1	0.1
UAM-001	C102/E120	VOC THAP	1.75 1.75	5.6 5.6
UAM-002	P051A/B	VOC THAP	0.6 0.2	1.9 0.65
UAM-003	K360	VOC THAP	0.1 0.1	0.1 0.1
UAM-004	V006	VOC	0.2	0.1
UAM-006	V038	VOC THAP	0.3 0.1	0.8 0.1
UAM-007	V007	VOC THAP	0.6 0.6	2.0 2.0
UAM-008	V401	VOC THAP	0.1 0.1	0.1 0.1
UCM-005	V080B	VOC	0.1	0.1

Emission Point	Source	Pollutant	Emission Limit	
			pph	tpy
UCM-006	V070A/B	VOC	0.1	0.1
UCM-007	V121A-C	VOC	0.2	0.4
USM-003	V101	VOC	0.1	0.1
USM-004	V201	VOC	0.1	0.1
USM-005	V301	VOC	0.1	0.1
USM-011	V031	VOC	0.1	0.1
Emission Limits when Methyl Carbamate Process is On-Line				
MEC-001	V516	VOC THAP	4.7 4.6	0.1 0.1
MEC-002	E522, V508	VOC THAP	1.5 0.8	0.52 0.51
MEC-003	M507	PM	1.2	0.47
MEC-004	V514	VOC	0.1	0.01
MEC-005	V554	VOC	0.1	0.01
MEC-006	V599A-E, V574	VOC THAP	0.1 0.1	0.3 0.15
MEC-007	V578, V535	VOC THAP	1.8 1.76	2.2 2.1
MEC-008	P590A/B, V577	VOC THAP	0.6 0.6	2.00 2.00
MEC-009	H599, C539, E540	CO NO_X PM SO_2 VOC THAP	0.1 0.4 0.1 0.1 7.2 6.1	0.02 1.15 0.01 0.01 25.12 21.30
MEC-010	V584	VOC THAP	0.1 0.1	0.10 0.10
MEC-012	V515	VOC THAP	0.2 0.2	0.7 0.7

APPENDIX B – Control Devices Parametric Monitoring

Control Device ID	Description	Applicable Regulations	Emission Group(s)*	Monitoring Parameter	Parameter Value	Data Collection Frequency	Data Averaging Period	Inspection/ Preventative Maintenance Frequency
B001	Vapor Return Line	40 C.F.R. 63, Subpart FFFF – HAP	Methyl Carbamate	NA	NA	NA	NA	Annual
C102	DMF Scrubber	NA	TMI to TMU, TMI Distillation, TMXDI, DMF Recovery	Inlet scrubber liquor flowrate	≥ 6.5 gpm	15 minutes[1]	Calendar daily	Annual
C102	DMF Scrubber	NA	TMI to TMU, TMXDI	Methanol concentration of scrubber liquor[3]	≥ 20% by weight	Daily	Calendar daily	Annual
E120	Vent Condenser	NA	TMI to TMU, TMI Distillation, TMXDI, DMF Recovery	Outlet temperature	≤ 0 deg C	15 minutes[1]	Calendar daily	Annual
E522	Methanol Vent Condenser	NA	Methyl Carbamate	Refrigerated oil temperature at the condenser outlet	≤ -7 deg C	15 minutes[1]	Calendar daily	Annual
H599	Flare	45CSR6 –PM; 40 C.F.R. 63, Subpart FFFF – HAP	Methyl Carbamate	Pilot light flameout detection & automatic reignition system	Pilot light flame verification	Continuous	Not Applicable	Annual
K360	Scrubber	NA	TMXDI, DMF Recovery	Inlet water (liquor) flowrate	≥ 2.6 gpm	15 minutes[1]	Calendar daily	Annual
P051A/B	Graham Vacuum Pump	NA	TMXDI, DMF Recovery	Inlet water (liquor) flowrate	≥ 20.0 gpm	15 minutes[1]	Calendar daily	Annual
P590A/B	Water Ring Vacuum Pump	NA	Methyl Carbamate, Methanol Recovery[2]	Inlet water (liquor) flowrate	≥ 3.0 gpm	15 minutes[1]	Calendar daily	Annual
V032	Methanol Spray Condenser	NA	TMI to TMU	Recirculated methanol temperature	≤ -6 deg C	15 minutes[1]	Calendar daily	Annual
V032	Methanol Spray Condenser	NA	TMXDI	Recirculated methanol temperature	≤ -4 deg C	15 minutes[1]	Calendar daily	Annual
V577	Methanol Spray Condenser	NA	Methanol Recovery	Recirculated methanol temperature	≤ 6 deg C	15 minutes[1]	Calendar daily	Annual
V582	Scrubber	NA	Methanol Recovery, TMXDI	Inlet water (liquor) flowrate	≥2.6 gpm	15 minutes[1]	Calendar daily	Annual
V583	Scrubber	NA	TMXDI	Inlet water (liquor) flowrate	≥ 2.6 gpm	15 minutes[1]	Calendar daily	Annual

* The control device requirements apply when the listed emission groups (s) are operating and venting to the control device.
[1] Data logging is required at least once every fifteen (15) minutes. However, the permittee may revert to daily data collection if the electronic data historian system is non-functioning and/or being repaired.
[2] Only required when the water ring vacuum pump is needed to maintain vacuum service during the methanol recovery operation.
[3] If the parameter value is > 20%, the DMF scrubbing fluid shall be recharged with fresh DMF.