

West Virginia Department of Environmental Protection

Austin Caperton
Cabinet Secretary

Title V Operating Permit Revision



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

Permit Action Number: MM01 **SIC:** 2869
Name of Permittee: Allnex USA Inc.
Facility Name/Location: Willow Island Plant
County: Pleasants
Facility Address: 252 Heilman Avenue, Belmont, WV 26134

Description of Permit Revision: The purpose of this modification is to facilitate the installation of a Heavies Tank Wagon Loading Point and a new DMF Flush Tank. Both new emission points were added in R13-2473N.

Title V Permit Information:

Permit Number: R30-07300030-2018
Issued Date: September 5, 2018
Effective Date: September 19, 2018
Expiration Date: September 5, 2023

Directions To Facility: From Interstate 77, Exit 179, take State Route 2 north approximately 10 miles. Plant site is on the left (river side) of State Route 2, two miles south of Belmont, WV.

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

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

Laura M. Crowder
Director

November 4, 2019
Date Issued

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
V545	MEC-014	Heavies Tank Wagon Loading Point Trailer Spot No. 1	2019	5,000 gallons	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
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	
V104	UDM-001	DMF Flush Tank (Flush refining Vacuum Pumps J010/J110 when they go offline)	2019	110 gallons	None
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	

¹Can also vent through UAM-002 when TMI to TMU Process or TMI Distillation Process is operating.

²Can also vent through UAM-002 when TMI to TMU Process is Operating.

³Can also vent through UAM-002 when TMI Distillation Process is Operating.

⁴Emissions from these emission units vent to another emission unit and do not vent directly to the atmosphere.

⁵Can 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
R13-2473 MN	June 25, 2018 August 20, 2019

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
Charleston, WV 25304

US EPA:

~~Section Chief Associate Director~~
~~Office of Air Enforcement and Compliance~~
~~Assistance (3AP20)~~
U. S. Environmental Protection Agency
Region III
Enforcement and Compliance Assurance
Division Air Section (3ED21)
1650 Arch Street
Philadelphia, PA 19103-2029

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, [MEC-014](#), 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, [UDM-001](#), 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.]

APPENDIX A (Emission Limits)

Emission Point	Source	Pollutant	Emission Limit	
			pph	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	1.8	7.9
		NO _x	2.2	9.4
		PM	0.2	0.9
		SO ₂	0.1	0.1
		VOC	0.2	0.7
MEC-013	U002	VOC	0.7	0.1
		THAP	0.4	0.1
UTM-002	V100 or V200	VOC	0.1	0.1
UTM-002	V501	VOC	0.2	0.1
		THAP	0.1	0.1
Emission Limits when TMI to TMU Process is On-Line				
TMI-002	V085A	VOC	0.1	0.10
		THAP	0.1	0.10
TMI-003	V060A	VOC	0.4	0.20
		THAP	0.3	0.15
TMI-005	V060B	VOC	0.4	0.20
		THAP	0.3	0.15
UAM-001 or UAM-002	C102	VOC	2.0	0.90
		THAP	1.8	0.75
<u>UDM-001</u>	<u>V104</u>	<u>VOC</u>	<u>0.1</u>	<u>0.1</u>
		<u>THAP</u>	<u>0.1</u>	<u>0.1</u>
Emission Limits when Methanol Recovery Operation is On-Line				
MEC-001	V516	VOC	0.64	0.10
		THAP	0.64	0.10
MEC-006	V582, V574, V500A-C	VOC	0.70	0.50
		THAP	0.70	0.50
MEC-007	V578, V535	VOC	0.39	0.30
		THAP	0.39	0.30
MEC-008	P590A/B	VOC	0.10	0.10
		THAP	0.10	0.10

Emission Point	Source	Pollutant	Emission Limit	
			pph	tpy
MEC-014	V545	VOC THAP	0.3 0.3	0.3 0.2
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 <i>or</i> UAM-002	P051A/B, C102/E120	VOC THAP	0.3 0.2	0.20 0.10
UDM-001	V104	VOC THAP	0.1 0.1	0.1 0.1
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
UDM-001	V104	VOC THAP	0.1 0.10	0.1 0.1
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