West Virginia Department of Environmental Protection
Division of Air Quality

Jim Justice
Governor

Austin Caperton
Cabinet Secretary

Permit to Operate

Pursuant to

Title V

of the Clean Air Act

Issued to:

CYTEC Industries, Inc.
Willow Island Plant
Surfactants (Part 1 of 3)
R30-07300003-2017

William F. Durham
Director

Issued: August 21, 2017 • Effective: September 4, 2017
Expiration: August 21, 2022 • Renewal Application Due: February 21, 2022

Permit Number: **R30-07300003-2017**
Permittee: **CYTEC Industries, Inc.**
Facility Name: **Willow Island Plant**
Manufacturing Unit: **Surfactants (Part 1 of 3)**
Mailing Address: **#1 Heilman Avenue, Willow Island, WV 26134-9801**

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:	#1 Heilman Avenue, Willow Island, WV 26134-9801
Telephone Number:	(304) 665-3485
Type of Business Entity:	Corporation
Facility Description:	Surfactants Manufacturing
SIC Codes:	2869 (primary), 2843 (secondary), 2899 (tertiary)
UTM Coordinates:	474.00 km Easting • 4,356.00 km Northing • Zone 17

Permit Writer: Beena Modi

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 Point ID	Control Device	Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed
04BE	None	1-4T2	Addition/Mix Tank	760 gallons	1998
04CE Industrial Hygiene Vent for Surfactants	None	1-2SF1	Pressure Filter Sampling Port	6,000 acfm (blower)	The Industrial Hygiene Vent was installed in 1998. The emission sources vented to the IH vent have various installation dates
		1-3T1	Precoat Tank		
		1-3SF1	Pressure Filter Sampling Port		
		1-DRUM	Drumming Station		
		2-3K2	Reactor Sampling Port		
		2-2K2	Hold Tank Sampling Port		
		2-4K1	Prep Kettle Sampling Port		
		2-3K1	Sulfonation Reactor Manway Hood		
		2-3K1	Sulfonation Reactor Sampling Port		
		2-2K1	Esterification Reactor Manway Hood		
		2-2K1	Esterification Reactor Sampling Port		
		1-2T3	Precoat Tank Manway Hood		
		1-4SF1	Pressure Filter Sampling Port		
		WH-4T1	Drumming Tank Sampling Port		
		2-3HOP1	Solids Charging Hopper		
		3-DRUM	Drumming Station		

Emission Point ID	Control Device	Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed
04DE	Seal Pot 3-4T2 Caustic Scrubber 3-4SC1 Water Scrubber 3-4SC2	2-3K2, 3-2CD2, 3-2CD3	Reactor and Condensers	8,100 gallons	1998
		2-2K2, 3-2CD2, 3-2CD3	Reactor and Condensers	8,100 gallons	1998
		2-4T3	Drum Dryer/Feed Hold Tank	9,135 gallons	1998
		3-2VP1	Vacuum Pump System	5 mmHg	1998
		1-2T4	Alcohol Receiver	3,918 gallons	1998
		2-4K1, 3-4CD1,	Prep Kettle and Condenser	16,460 gallons	1998
		3-4T1	Decanter	590 gallons	1998
		3-4VJ1, 3-4VJ2, 3-4VJ3	Vacuum Jets	5 mmHg	2010
		3-2T1	Decanter	520 gallons	1976
		3-2VJ1, 3-2VJ2, 3-2VJ3, RF-2CD2, RF-2CD3, RF-2CD4	Vacuum Jets and Condensers	5 mmHg	1976
		1-2T1	Alcohol Receiver	2,070 gallons	1976
		3-4T3	Scrubber Liquor Recirculation Tank	930 gallons	1998
		WH-4T1	Drumming Tank	13,515 gallons	1998
		1-4T1	Alcohol Receiver	2,000 gallons	1998
		1-2T2	Hot Well	178 gallons	1976
		1-4T3	Hot Well	187 gallons	2010
		2-2K1, 3-2CD1	Esterification Reactor and Condenser	12,000 gallons	1976
		2-3K1, 3-3CD1	Sulfonation Reactor and Condenser	12,000 gallons	1976
08CE	None	1-2ST1	Hold Tank	1,145 gallons	1976
03BE	Dust Collector 3-3DC1	3-3BS1	MBS Silo	100,000 lbs	2004
04AE	Dust Collector 3-4DC1	3-4BS1	Sodium Sulfite Silo	100,000 lbs	2004
05BE	Dust Collectors WH-4DC1 WH-4DC2	WH-4BB1, WH-4BB2	Bulk Bag Unloaders	30,000 lb/hr	2015
05AE	Dust Collector 3-4DC2	3-4BS2	MBS Silo	100,000 lbs	1998
08BE	None	1-4SF1	Pressure Filter Manway Hood	700 gallons	1998

Emission Point ID	Control Device	Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed
07BE	Scrubber 3-3SC1	2-3DD1	Double Drum Dryer	750 lb/hr	2012
TS-1E	None	TS-1	Truck Loading Station	300 gpm	1976
TS-2E	None	TS-2	Truck Loading Station	300 gpm	1976
TS-3E	None	TS-3	Truck Loading Station	300 gpm	1976
TS-4E	None	TS-4	Truck Loading Station	300 gpm	1998
TS-5E	None	TS-5	Truck Loading Station	300 gpm	1998
RS-1E	None	RS-1	Railcar Loading Station	300 gpm	1975
RS-2E	None	RS-2	Railcar Loading Station	300 gpm	1998
RS-3E	None	RS-3	Railcar Loading Station	300 gpm	1998
021E	None	S-1T1	OT-75 Storage Tank	26,662 gallons	1977
019E	None	S-2T1	MA-80I Storage Tank	25,000 gallons	1976
015E	None	S-3T1	OT-35 Unwashed Storage Tank	27,555 gallons	1976
013E	None	S-4T1	2-EH Storage	32,314 gallons	1976
011E	None	S-5T1	MIBC Storage Tank	25,000 gallons	1994
009E	None	S-T-5	23A Storage Tank	25,000 gallons	1989
0A7E	None	S-T-3 Compartment A	IBOH Storage Tank	6,000 gallons	1988
0B7E	None	S-T-3 Compartment B	DEM Storage Tank	7,750 gallons	1988
0C7E	None	S-T-3 Compartment C	PG or DEG Storage Tank	7,750 gallons	1988
0D7E	None	S-T-3 Compartment D	IPAL or PG Storage Tank	6,000 gallons	1988
005E	None	S-8T1	OT-35W Storage Tank	27,535 gallons	1998
003E	None	S-7T1	MAA Storage Tank	31,712 gallons	1977
022E	None	S-1T2	OT-GPG Storage Tank	25,000 gallons	1976
020E	None	S-2T2	OT-70PG Storage Tank	25,000 gallons	1976
016E	None	S-3T2	2-EH Storage Tank	32,587 gallons	1976
014E	None	S-4T2	OT-35W Storage Tank	10,760 gallons	1975
012E	None	S-5T2	Storage Tank	10,000 gallons	1994
010E-1	None	S-6T2 Compartment A	Armeen Storage Tank	6,820 gallons	1998
010E-2	None	S-6T2 Compartment B	Armeen Storage Tank	13,200 gallons	1998
010E-3	None	S-6T2 Compartment C	Armeen Storage Tank	6,820 gallons	1998

Emission Point ID	Control Device	Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed
008E	None	S-7T2	OT-75 Storage Tank	27,535 gallons	1998
026E	None	W-T5	Effluent Equalization Hold Tank	27,535 gallons	1998
A28E	None	N-1T1 Compartment A	DSS 70% in 23A Storage Tank	7,350 gallons	2007
B28E	None	N-1T1 Compartment B	DSS 70% in 23A Storage Tank	7,750 gallons	2007
C28E	None	N-1T1 Compartment C	DSS 70% in 23A Storage Tank	7,750 gallons	2007
D28E	None	N-1T1 Compartment D	DSS 70% in 23A Storage Tank	7,850 gallons	2007

1.2. Active R13, R14, and R19 Permits

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

Permit Number	Date of Issuance
R13-2120I	April 7, 2015

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

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]

3.2. Monitoring Requirements

3.2.1. None.

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

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

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A. and 45CSR13, R13-2120, 4.4.1]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

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

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance (3AP20)
U. S. Environmental Protection Agency
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:	**US EPA:**
DEPAirQualityReports@wv.gov	R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

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.

a. 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 Surfactants manufacturing unit.

b. 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 Surfactants manufacturing unit.

c. 40 C.F.R. 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." 40 C.F.R. 60, Subpart Kb, as amended on October 15, 2003, applies to each storage vessel with a capacity greater than or equal to 75 m^3 that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. Subpart Kb also does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kPa or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa. There are no storage tanks in the Surfactants manufacturing unit which are subject to 40 C.F.R. 60, Subpart Kb. Tanks S-1T1, S-1T2, S-2T1, S-2T2, S-3T2, S-4T1, S-4T2, and S-7T1 were constructed prior to July 23, 1984. Tanks 1-4T2, S-5T2, S-6T2 (Compartment A), S-6T2 (Compartment B), S-6T2 (Compartment C), S-T-3 (Compartment A), S-T-3 (Compartment B), S-T-3 (Compartment C), S-T-3 (Compartment D), N-1T1 (Compartment A), N-1T1 (Compartment B), N-1T1 (Compartment C), and N-1T1 (Compartment D) were constructed after July 23, 1984, but have a capacity less than 75 m^3. Tanks S-3T1 (modified 1992), S-5T1, S-7T2, S-8T1, S-T-5, and W-T5 were constructed or modified after July 23, 1984, but have a capacity greater than or equal to 75 m^3 but less than 151 m^3 and store a liquid with a maximum true vapor pressure less than 15.0 kPa.

d. 40 C.F.R. 60, Subpart VV - "Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry." The Surfactants manufacturing unit does not produce as intermediates or final products any of the materials listed in 40 C.F.R. §60.489.

e. 40 C.F.R. 60, Subpart DDD – "Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry." The Surfactants manufacturing unit does not manufacture polypropylene, polyethylene, polystyrene, or poly(ethylene terephthalate) for which this rule applies.

f. 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 Surfactants 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.

g. 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 Surfactants 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.

h. 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 Surfactants 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.

i. 40 C.F.R. 61, Subpart V – "National Emission Standards for Equipment Leaks (Fugitive Emissions Sources)." Applies to sources in VHAP service as defined in 40 C.F.R. §61.241. VHAP service involves chemicals that are not used in a manner that qualifies them under the rule in the Surfactants manufacturing unit.

j. 40 C.F.R. 63, Subparts F and G – "National Emission standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry (HON)." 40 C.F.R. 63, Subparts F and G 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).

k. 40 C.F.R. 63, Subpart DD – "National Emission Standards for Hazardous Air Pollutants From Off-Site Waste and Recovery Operations." The Surfactants 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).

l. 40 C.F.R. 63, Subpart JJJ – "National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins." The Surfactants manufacturing unit does not produce the materials listed in 40 C.F.R. §63.1310.

m. 40 C.F.R. 63, Subpart PPPP – "National Emission standards for Hazardous Air Pollutants: Surface Coating of Plastic Parts and Products." The Surfactants manufacturing unit does not produce an intermediate or final product that meets the definition of "surface coated" plastic part.

n. 40 C.F.R. 63, Subpart WWWW – "National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production." The Surfactants 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.

o. 40 C.F.R. 63, Subpart DDDDD – "National Emissions Standards for Hazardous Air Pollutants: Industrial/Commercial/Institutional Boilers and Process Heaters." The Surfactants manufacturing unit does not own or operate an industrial, commercial, or institutional boiler or process heater as defined in 40 C.F.R. §63.7575.

p. 40 C.F.R. 64 – "Compliance Assurance Monitoring." Per 40 C.F.R. §64.2(a)(3), emission points 04DE, 03BE, 04AE, 05BE and 05AE are not subject to the CAM Rule because pre-control device emissions from these sources are less than 100 tons per year. Although pre-control device emissions for emission point 07BE are greater than 100 tons per year, this emission unit is exempted by 40 C.F.R. §64.2(b)(1)(vi) because an existing continuous compliance determination method was specified in the initial Title V permit.

q. 45CSR2 – "To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers." The Surfactants manufacturing unit does not contain any fuel burning units.

r. 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 Surfactants manufacturing unit is not subject to 45CSR17 because it is subject to the fugitive particulate matter emission requirements of 45CSR7.

4.0 Surfactants (Emission Points: 04BE, 04CE, 04DE, 08CE, 03BE, 04AE, 05BE, 05AE, 08BE, 07BE, TS-1E, TS-2E, TS-3E, TS-4E, TS-5E, RS-1E, RS-2E, RS-3E, 021E, 019E, 015E, 013E, 011E, 009E, 0A7E, 0B7E, 0C7E, 0D7E, 005E, 003E, 022E, 020E, 016E, 014E, 012E, 010E-1, 010E-2, 010E-3, 008E, 026E, A28E, B28E, C28E, and D28E)

4.1. Limitations and Standards

4.1.1. Emissions generated from the Surfactants Manufacturing Unit[1] shall be limited as follows:

Pollutant	Hourly Emissions[2] (lb/hr)	Annual Emissions (TPY)
Particulate Matter	15.7	0.9
Sulfur Dioxide	0.7	0.24
Volatile Organic Compounds	92.09	26.9

[1] Emissions from the Surfactants Manufacturing Unit shall be limited to the equipment and associated emission points listed in Section 1.1.

[2] Includes short duration peak emissions for "worst-case" batch activities and does not represent a continuous emission rate. Therefore, annual emissions are not based on the hourly rate taken 8,760 hours per year.

[45CSR13, R13-2120, 4.1.1]

4.1.2. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except for 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. *(04CE, 05BE and 07BE)* **[45CSR§§7-3.1 and 3.2; 45CSR13, R13-2120, 4.1.2]**

4.1.3. 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 of 45CSR7.

Emission Point ID No.	45CSR7 Maximum Allowable Particulate Emission Limit lb/hr
04CE	5
05BE	22
07BE	0.90

[45CSR§7-4.1; 45CSR13, R13-2120, 4.1.3]

4.1.4. Emissions vented through Emission Point ID 04DE shall be routed to and controlled by devices 3-4T2, 3-4SC1, 3-4SC2 prior to emission to the atmosphere. **[45CSR13, R13-2120, 4.1.4]**

4.1.5. The Seal Pot, designated as Control Device 3-4T2, shall be designed and operated to achieve a minimum control efficiency of 50% for volatile organic compounds. **[45CSR13, R13-2120, 4.1.5]**

4.1.6. The Caustic Scrubber, designated as Control Device 3-4SC1, shall be designed and operated to achieve a minimum control efficiency of 97.5% for sulfur dioxide. **[45CSR13, R13-2120, 4.1.6]**

4.1.7. The Scrubber, designated as Control Device 3-4SC2, shall be designed and operated to achieve a minimum control efficiency of 85% for volatile organic compounds. **[45CSR13, R13-2120, 4.1.7]**

4.1.8. Emissions from the MBS Silo, Equipment ID No. 3-3BS1, shall be vented to and controlled by the Baghouse designated as Control Device 3-3DC1. **[45CSR13, R13-2120, 4.1.8]**

4.1.9. Emissions from the Sulfite Silo, Equipment ID No. 3-4BS1, shall be vented to and controlled by the Baghouse designated as Control Device 3-4DC1. **[45CSR13, R13-2120, 4.1.9]**

4.1.10. Emissions from the MBS Silo, Equipment ID No. 3-4BS2, shall be vented to and controlled by the Baghouse designated as Control Device 3-4DC2. **[45CSR13, R13-2120, 4.1.10]**

4.1.11. The Baghouses (Control Device IDs 3-3DC1, 3-4DC1, and 3-4DC2) shall be designed and operated to achieve a minimum control efficiency of 99.5% for particulate matter. **[45CSR13, R13-2120, 4.1.11]**

4.1.12. The control devices listed below shall be operated in accordance with the listed monitoring parameter values and data averaging periods:

Control Device ID	Description	Monitoring Parameter[2]	Parameter Value[2]	Data Averaging Period[2]
3-4SC1	Caustic Scrubber	Scrubber Liquor % Caustic[1]	≥ 3.0%	Prior to Each Sulfonated Batch
		Scrubber Liquor Flow	≥ 6.2 gpm	Calendar Daily
3-4SC2	Water Scrubber	Scrubber Liquor Flow	≥ 3.8 gpm	Calendar Daily
3-4T2	Seal Pot	Scrubber Liquor Flow	≥ 1 gpm	Calendar Daily
3-3SC1	Drum Dryer Scrubber	Scrubber Liquor Flow	≥ 4.2 gpm	Calendar Daily

[1] % Caustic in Scrubber Liquor Recirculation Tank (3-4T3).
[2] The control device requirements listed above apply when the production process(es) are operating and venting to the listed control device.

[45CSR13, R13-2120, 4.1.12]

4.1.13. No person shall cause, suffer, allow, or permit visible emissions from any storage structure(s) associated with any manufacturing process (es) that pursuant to 4.1.17 is required to have a full enclosure and be equipped with a particulate matter control device. *(03BE, 04AE, 05AE)* **[45CSR§7-3.7; 45CSR13, R13-2120, 4.1.13]**

4.1.14. Emissions generated by the Double Drum Dryer, Equipment ID No. 2-3DD1, shall be vented to and controlled by the Scrubber designated as Control Device 3-3SC1. **[45CSR13, R13-2120, 4.1.14]**

4.1.15. The Scrubber, designated as Control Device 3-3SC1, shall be designed and operated to achieve a minimum control efficiency of 95% for volatile organic compounds and particulate matter. **[45CSR13, R13-2120, 4.1.15]**

4.1.16. **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 this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. **[45CSR13, R13-2120, 4.1.16]**

4.1.17. 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]**

4.1.18. 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]**

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

4.1.19.1. The permittee shall comply with each applicable requirement of 40 C.F.R. §63.2480 and Table 6 to 40 C.F.R. 63 Subpart FFFF, and either 40 C.F.R. 63 Subpart H, 40 C.F.R. 63 Subpart UU or 40 C.F.R.65 Subpart F for the applicable Surfactants equipment components that are in organic HAP service. **[45CSR34, 40 C.F.R. §63.2480; Table 6 to 40 C.F.R. 63 Subpart FFFF]**

4.1.19.2. The permittee shall comply with the applicable requirements of 40 C.F.R. §§63.104, 63.2490 and Table 10 to 40 C.F.R. 63 Subpart FFFF for the applicable Surfactants cooling/heat exchange systems. **[45CSR34, 40 C.F.R. §63.2490; Table 10 to 40 C.F.R. 63 Subpart FFFF] [System IDs – 92-3-2CD1, 92-2-2K1, 92-2-4K1, and 92-3-4CD1]**

4.2. Monitoring Requirements

4.2.1. For the purpose of determining compliance with the opacity limits in Condition 4.1.2 for emission points 04CE, 05BE and 07BE and Condition 4.1.13 for emission points 03BE, 04AE, and 05AE, the permittee shall conduct visible emission checks or opacity monitoring and recordkeeping for the emission point and equipment subject to any 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 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 40 C.F.R. 60, Appendix A, Method 9 or Method 22, or 45CSR7A, during periods

of normal operation of emission sources that vent from the referenced emission point(s) 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 hours after the visible emission and the sources are operating at normal conditions. **[45CSR13, R13-2120, 4.2.1; 45CSR§30-5.1.c]**

4.2.2. For the following control devices: Caustic Scrubber (3-4SC1), Water Scrubber (3-4SC2), Seal Pot (3-4T2), and Scrubber (3-3SC1), the permittee shall maintain and operate water/scrubbing liquor flow rate sensors with control panel alarms to ensure adequate water/scrubbing liquor flow rates. **[45CSR13, R13-2120, 4.2.2]**

4.2.3. The parameters set forth in 4.1.12. for the Caustic Scrubber (3-4SC1), Water Scrubber (3-4SC2), and Seal Pot (3-4T2) shall be verified prior to the start of each sulfonation production batch. Production shall not commence until all parameters are greater than or equal to their acceptable values. Conditions causing any parameter to be less than the compliance value will be corrected prior to the start of production. **[45CSR13, R13-2120, 4.2.3]**

4.2.4. The permittee shall conduct an annual preventative maintenance inspection, and cleaning, replacement, or refurbishment, as appropriate, of the bags, bag connections, and dust hoppers of the baghouses (Control Device IDs 3-3DC1, 3-4DC1, and 3-4DC2) at the specified emission points (03BE, 04AE, and 05AE), in order to ensure proper operation of the baghouses. **[45CSR13, R13-2120, 4.2.4.]**

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

4.2.5.1. The permittee shall conduct leak detection monitoring and repair of the applicable Surfactants equipment components that are in organic HAP service per the applicable requirements of 40 C.F.R. §63.2480 and Table 6 to 40 C.F.R. 63 Subpart FFFF, and either 40 C.F.R. 63 Subpart H, 40 C.F.R. 63 Subpart UU or 40 C.F.R. 65 Subpart F. **[45CSR34, 40 C.F.R. §63.2480; Table 6 to 40 C.F.R.63 Subpart FFFF]**

4.2.5.2. The permittee shall monitor the applicable Surfactants cooling/heat exchange systems per the applicable requirements of 40 C.F.R. §63.104, 63.2490 and Table 10 to 40 C.F.R. 63 Subpart FFFF. **[45CSR34, 40 C.F.R. §63.2490; Table 10 to 40 C.F.R. 63 Subpart FFFF] [System IDs – 92-3-2CD1, 92-2-2K1, 92-2-4K1, and 92-3-4CD1]**

4.2.5.3. The permittee shall perform all required monitoring in compliance with the applicable general provisions of 40 C.F.R. 63 Subpart FFFF, per 40 C.F.R. §§63.2450 and 63.2540 and Table 12 to 40 C.F.R. 63 Subpart FFFF, and 40 C.F.R. 63 Subpart A. **[45CSR34, 40 C.F.R. §§63.2450, 63.2540; Table 12 to 40 C.F.R. 63 Subpart FFFF; 40 C.F.R. 63 Subpart A]**

4.3. Testing Requirements

4.3.1. Compliance with the emission limits set forth in 4.1.1 for sulfur dioxide, shall be demonstrated, at the request of the Director, by utilizing EPA Reference Method 6 as specified in Appendix A of 40 C.F.R. 60. 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, R13-2120, 4.3.1]**

4.3.2. If requested by the Director, compliance with the particulate matter emission limits for emission point 04CE set forth in 4.1.1 shall be demonstrated by utilizing the test method outlined in 45CSR7A, 'Compliance Test Procedures For 45CSR7A – "To Prevent Particulate Air Pollution from Manufacturing Process Operations."' The permittee shall determine mass emission rates as well as visible emissions during these tests and said tests shall be conducted under conditions which represent "worst-case" emissions. The process of compliance determination for the storage silos having emission points 03BE, 04AE, and 05AE shall be demonstrated by having no visible emissions. 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, R13-2120, 4.3.2]**

4.4. Recordkeeping Requirements

4.4.1. **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, R13-2120, 4.4.2]**

4.4.2. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded.

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

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

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

[45CSR13, R13-2120, 4.4.3]

4.4.3. The permittee shall maintain records indicating the emission calculations/emission models used to demonstrate compliance with all point source emission limits for each emission point specified in Section 1.0. Compliance with the specified emission limits set forth in 4.1.1 shall be demonstrated by calculating emissions for every product in the Surfactants Manufacturing Unit using Emission Master emission modeling software, or other appropriate emission estimation models or calculation methodologies (e.g., ChemCAD,

PlantWare, USEPA's TANKS 4.0, etc.). When these emissions are calculated, each emission point listed in Section 1.0 which has emissions of PM, SO_2, or VOC shall be included in the calculation and accounted for in the emissions report. The models shall be maintained current for all processes, process modifications and new product variants. The Division of Air Quality may specify or may approve other valid methods for compliance determination when deemed appropriate and necessary. These records shall be maintained on site for a period of no less than five (5) years. **[45CSR13, R13-2120, 4.4.4]**

4.4.4. The data necessary to demonstrate compliance with the control device monitoring parameters required by 4.1.12, emission calculations required by 4.4.3, and detailed descriptions of any other compliance procedures, as well as accurate production records shall be maintained on site for a period of five (5) years and made available to the Director of the Division of Air Quality or his/her duly authorized representative upon request. **[45CSR13, R13-2120, 4.4.5]**

4.4.5. The permittee shall maintain quarterly emission reports calculated by the method described in 4.4.3. The quarterly emission reports shall be used to calculate a four quarter rolling total used to demonstrate compliance with the annual emission limits set forth in 4.1.1. The quarterly emission reports and four quarter rolling total shall be maintained on site for a period of five (5) years. **[45CSR13, R13-2120, 4.4.6]**

4.4.6. Records of each visible emission observation and each 45CSR7A evaluation conducted in accordance with 4.2.1 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 or method 22 trained observer. **[45CSR13, R13-2120, 4.4.7]**

4.4.7. For the following control devices: Caustic Scrubber (3-4SC1), Water Scrubber (3-4SC2), Seal Pot (3-4T2), and Scrubber (3-3SC1), records shall be maintained on site for a period of no less than five (5) years stating the date and time of each control device's low water/scrubbing liquor flow rate monitoring parameter excursion from the required value in 4.1.12, the cause of the monitoring parameter excursion, and all corrective actions taken. **[45CSR13, R13-2120, 4.4.8]**

4.4.8. Records of all monitoring data and support information required for the following control devices: Caustic Scrubber (3-4SC1), Water Scrubber (3-4SC2), Seal Pot (3-4T2), and Scrubber (3-3SC1), shall be maintained on site for a period of at least five (5) years from the date of monitoring, sampling, measurement, or reporting. Support information includes all calibration and maintenance records and all strip chart recordings for continuous monitoring instrumentation, and copies of all required reports. **[45CSR13, R13-2120, 4.4.9]**

4.4.9. For the Control Devices 3-3DC1, 3-4DC1, and 3-4DC2, records shall be maintained on site for a period of no less than five (5) years stating the date and time of each baghouse's annual preventative maintenance activity, the results of the annual preventative maintenance activity, and all corrective actions taken. **[45CSR13, R13-2120, 4.4.10]**

4.4.10. The permittee shall monitor all fugitive particulate emission sources as required by 4.1.17 to ensure that a system to minimize fugitive emissions has been installed or implemented. Records shall be maintained 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]**

4.4.11. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures as required by 4.1.18 applied at the facility. **[45CSR§30-5.1.c]**

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

4.4.12.1. For each storage tank subject to this subpart 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).

4.4.12.2. 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. 63, Subpart EEEE, items 7 through 10.

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

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

4.4.13.1. The permittee shall retain all required records to document compliance with the applicable provisions of the leak detection monitoring and repair program for Surfactants equipment components that are in organic HAP service per the requirements of 40 C.F.R. §63.2480 and Table 6 to 40 C.F.R. 63 Subpart FFFF, 40 C.F.R. §63.2520, and either 40 C.F.R. 63 Subpart H, 40 C.F.R. 63 Subpart UU or 40 C.F.R. 65 Subpart F. **[45CSR34, 40 C.F.R. §§63.2480, 63.2520; Table 6 to 40 C.F.R. 63 Subpart FFFF]**

4.4.13.2. The permittee shall retain the required records identified in 40 C.F.R. §63.104(f)(1)(i) through (f)(1)(iv) to document compliance with the applicable provisions of the Surfactants cooling/heat exchange systems per the requirements of 40 C.F.R. §§63.104, 63.2490 and Table 10 to 40 C.F.R. 63 Subpart FFFF, and 40 C.F.R. §63.2520. **[45CSR34, 40 C.F.R. §§63.2490, 63.2520; Table 10 to 40 C.F.R. 63 Subpart FFFF] [System IDs – 92-3-2CD1, 92-2-2K1, 92-2-4K1, and 92-3-4CD1]**

4.4.13.3. The permittee shall retain all required records to document compliance with the applicable general provisions of 40 C.F.R. 63 Subpart FFFF, per 40 C.F.R. §§63.2450, 63.2525, 63.2540, Table 12 to 40 C.F.R. 63 Subpart FFFF, and 40 C.F.R. 63 Subpart A. **[45CSR34, 40 C.F.R. §§63.2450, 63.2525, 63.2540; Table 12 to 40 C.F.R. 63 Subpart FFFF; 40 C.F.R. 63 Subpart A]**

4.4.13.4. The permittee shall retain all required records per 40 C.F.R. §63.2525(a), (b), (c), (e). **[45CSR34, 40 C.F.R. §63.2525] [04DE, 04CE, 08CE and 003E]**

4.5. Reporting Requirements

4.5.1. The permittee shall provide to the Director of the Division of Air Quality prior to the production of a new product, which involves any chemical or process change not addressed in application no. R13-2120, or any amendments thereto, sufficient documentation to demonstrate that the emission limits as set forth in this permit will not be exceeded. **[45CSR13, R13-2120, 4.5.1]**

4.5.2. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in 45CSR7 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 owner or operator and approved by the Director. **[45CSR§7-9.1; 45CSR13, R13-2120, 4.5.2]**

4.5.3. The Surfactants Manufacturing Unit has been determined to be subject to reporting requirements of 40 C.F.R. 63, Subpart FFFF - "National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing" (MON MACT). The permittee shall submit all required applicable reports and notifications per the requirements of 40 C.F.R. §§63.2515, 63.2520, 63.2540, Table 11 and Table 12 to 40 C.F.R. 63 Subpart FFFF, and 40 C.F.R. 63 Subpart A. **[45CSR34, 40 C.F.R. §§63.2515, 63.2520, 63.2540, Table 11 and Table 12 to 40 C.F.R. 63 Subpart FFFF; 40 C.F.R. 63 Subpart A]**

4.6. Compliance Plan

4.6.1. None.