PERMIT NO. 2843-013-0001-S-03-0
ISSUANCE DATE:

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality Permit

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name:	**Stepan Company**
Facility Address:	**951 Bankhead Hwy** **Winder, Georgia 30680 Barrow County**
Mailing Address:	**951 Bankhead Hwy** **Winder, Georgia 30680**
Facility AIRS Number:	**04-13-013-00001**

is issued a Permit for the following:

Operation of a specialty chemical production facility. This Permit is issued for the purpose of establishing practically enforceable emission limitations such that the facility will not be considered a major source with respect to Title V of the Clean Air Act Amendments of 1990.

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 27495 dated April 9, 2020 and updated on June 2, 2020, December 17, 2020, and December 17, 2021; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **31** pages.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

_____
Richard E. Dunn, Director
Environmental Protection Division

EQUIPMENT LIST

Batch Reaction Processes and Associated Equipment					
Emission Units				**Associated Control Devices**	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
R01*	Alkoxylation process reactor (8,000 gallons) including catch tanks and heat exchangers	1990	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-R01	Scrubber (1998)
T-3300	31,780-gallon storage tank (typically holds propylene oxide), pressurized vessel, maximum true vapor pressure of 10.99 psia	1998	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(vv) Avoidance of 40 CFR Part 70 40 CFR 60 Subpart A 40 CFR 60 Subpart Kb	SCR-R01	Scrubber (1998)
T-3400*	31,780-gallon storage tank (typically holds ethylene oxide), pressurized vessel, maximum true vapor pressure of contents: 20.2 psia	1998	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(vv) Avoidance of 40 CFR Part 70 40 CFR 60 Subpart A 40 CFR 60 Subpart Kb	SCR-R01	Scrubber (1998)
T-3400 (Cleaning)*	Vapor space purge emission from tank cleaning – Controlled (Maintenance Activities)	1998	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70 40 CFR 60 Subpart A 40 CFR 60 Subpart Kb	SCR-R01	Scrubber (1998)
T-3400 (Cleaning Fugitive)*	Vapor space purge emission from tank cleaning – Uncontrolled (Maintenance Activities)	1998	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70 40 CFR 60 Subpart A 40 CFR 60 Subpart Kb	None	None
UNLOAD*	Railcar Unloading of EtO/PO	--	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-R01	Scrubber (1998)
Equipment Fugitive EtO*	Ethylene oxide fugitive emissions from piping components	--	Avoidance of 40 CFR Part 70	LDAR	Leak Detection and Repair Program
Line Purges*	Ethylene oxide emissions from purging of lines – Controlled (Maintenance Activities)	--	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-R01	Scrubber (1998)
Line Purges (Fugitive)*	Ethylene oxide emissions from purging of lines – Uncontrolled (Maintenance Activities)	--	Avoidance of 40 CFR Part 70	None	None
R02	Esterification process reactor (6,000 gallons) including process tanks, heat exchangers, and condenser(s).	1978	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-NAOHR02	Scrubber (1978)
R04	Intermediate esterification process reactor (8.000 gallons) including process tanks, heat exchangers, and condenser(s).	2009	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-NAOHR02	Scrubber (1978)
R05	Process which includes a reactor (8,500 gallons), heat exchangers, and condenser(s).	2001	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-NAOHR02	Scrubber (1978)
DMS	Railcar/Truck Dimethyl Sulfate Unloading	--	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-8126	DMS Storage Scrubber
T-126	25,000-gallon process vessel (typically holds Dimethyl Sulfate), pressurized vessel	1992	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCR-8126	DMS Storage Scrubber
--	R05 Solids – Bag Dump Station	--	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	None	None
--	R05 Solids Conveying Cyclone to R05 Reactor	--	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	None	None

***Sources of ethylene oxide (EtO) emissions.**

Continuous Process Lines

Emission Units				Associated Control Devices	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
R-1002	Sulfonation I Process Line – includes sulfur burner, sulfur dioxide and sulfur trioxide coolers, air dryers, converter, sulfonator (or reactor), separators, acid gas absorbers, process scrubbers and process mist eliminators.	1977	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	SCP-DRY1 SCP-DEM11 SCP-DEM12 SCP-NAOH1 SCP-TAIL1	Dry Scrubber (1977) Dry Scrubber Demister 1 (1977) Dry Scrubber Demister 2 (1977) Caustic Scrubber (2019) Tail Gas Demister (2019)
R420	Sulfonation II Process Line – includes sulfur burner, sulfur dioxide and sulfur trioxide coolers, air dryers, converter, sulfonator (or reactor), separators, acid gas absorbers, process scrubbers and process mist eliminators.	1992	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 60 Subpart A 40 CFR 60 Subpart RRR Avoidance of 40 CFR Part 70	SCP-DRY2 SCP-DEM21 SCP-DEM22 SCP-NAOH2 SCP-TAIL2	Dry Scrubber (1992) Dry Scrubber Demister 1 (1992) Dry Scrubber Demister 2 (1992) Caustic Scrubber (2020) Tail Gas Demister (2020)
VS	Stripping System Condenser Vacuum System Vent	2021	391-3-1-02(2)(e) 391-3-1-.02(2)(b) 40 CFR 60 Subpart A 40 CFR 60 Subpart NNN Avoidance of 40 CFR Part 70	None	N/A

Batch Neutralizers

Emission Units				Associated Control Devices	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
R-BN1	Reactor #1 (8,000 gallons)	1984	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	None	None
R-BN2	Reactor #2 (8,000 gallons)	1987			
R-BN3	Reactor #3 (17,000 gallons)	1989			
R-BN4	Reactor #4 (17,000 gallons)	1989			
T-550	7,400-gallon HVP Reblend Process Tank	1994			

Blenders

Emission Units				Associated Control Devices	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
R-BL1	Blender #1 (10,000 gallons) equipped with a venturi scrubber that operates as process equipment. Also included is a Silverson Mixer and Supersack Loader.	1977	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	None	None
R-BL2	Blender #2 (10,000 gallons)	1977			
R-BL3	Blender #3 (1,000 gallons)	1988			

Oxidation Treatment Tanks

Emission Units				Associated Control Devices	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
R-2476	Oxidation Treatment Tank (30,000 gallons)	2021	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	None	None
R-2478	Oxidation Treatment Tank (30,000 gallons)	2021			

Cooling Towers					
Emission Units				**Associated Control Devices**	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
CT1	Oxide Cooling Tower	1992	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	None	None
CT2	Sulfonation II Process Line Cooling Tower	1992			
CT	Stripping System Cooling Tower	2021			

Wastewater Treatment Plant					
Emission Units				**Associated Control Devices**	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
WWTP	Wastewater Treatment Plant	--	391-3-1-02(2)(e) 391-3-1-.02(2)(b) Avoidance of 40 CFR Part 70	None	N/A

Fuel Burning Sources					
Emission Units				**Associated Control Devices**	
Source Code	**Description**	**Install Date**	**Applicable Requirements/Standards**	**Source Code**	**Description**
BLR	800 Break Horsepower natural gas-fired boiler	2021	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart Dc	None	None
E-001	16.7 MMBtu/hr (400 hp) Steam Generator Boiler #1 [Source Code #4] Natural gas fired only	1977	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
E-002	16.7 MMBtu/hr (400 hp) Steam Generator Boiler #2 [Source Code #8] Natural gas fired only	1985	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
E-005	9.99 MMBtu/hr Hot Oil Heater Natural gas indirect fired only This hot oil heater provides heat energy to the R02 Esterification Kettle and the R04 Quaternary Reactor	2006	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
GEN1	536.4 hp (400 kW) Diesel-fired Standby emergency generator	1996	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ	None	None
GEN2	469.35 hp (350 kW) Diesel-fired Standby emergency generator	2016	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart IIII 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ	None	None
FP1	215 hp Diesel-fired Standby Fire Water Pump Engine	1978	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ	None	None
FP2	215 hp Diesel-fired Standby Fire Water Pump Engine	1978	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ	None	None

Storage Tanks						
Equipment Group	**Source Code**	**Capacity (gallons)**	**Contents**	**Control Device**	**Installation Date**	**Maximum True Vapor Pressure (psia)**
--	T-077	10,000	Not a VOL	N/A	1978	--
--	T-9035.2	8,000	Not a VOL	N/A	2014	--
--	T-139	21,300	VOL	N/A	2020	varies
--	T-8592	30,000	Organic Liquid Mixture	N/A	2021	0.0001
--	T-8593	30,000				
--	T-8597	30,000				
--	T-8599	30,000				
--	T-8600	30,000				
--	T-8601	30,000				
--	T-8594	30,000	Organic Liquid Mixture	N/A	2021	0.00002
--	T-8598	30,000				
--	V-2465	7,500	Organic Liquid Mixture	N/A	2021	0.0002
--	V-2485	7,500				
--	V-2486	7,500				
--	V-2487	7,500				
Equipment Group 1: Tanks which contain VOL with a maximum true vapor pressure between 0.19 and 2.2 psia. Each of these storage tanks has a storage capacity less than 151m^3 (39,890 gallons).						
1	T-029	10,000	VOL	N/A	1978	≥ 0.19 psia but < 2.2 psia
1	T-030	10,000	VOL	N/A	1978	≥ 0.19 psia but < 2.2 psia
1	T-058	10,000	VOL	N/A	1979	≥ 0.19 psia but < 2.2 psia
1	T-060	10,000	VOL	N/A	1979	≥ 0.19 psia but < 2.2 psia
1	T-061	10,000	VOL	N/A	1979	≥ 0.19 psia but < 2.2 psia
1	T-073	10,000	VOL	N/A	1978	≥ 0.19 psia but < 2.2 psia
1	T-074	10,000	VOL	N/A	1978	≥ 0.19 psia but < 2.2 psia
1	T-075	10,000	VOL	N/A	1978	≥ 0.19 psia but < 2.2 psia
1	T-076	10,000	VOL	N/A	1978	≥ 0.19 psia but < 2.2 psia
1	T-053	14,000	VOL	N/A	1977	≥ 0.19 psia but < 2.2 psia
1	T-082	25,000	VOL	N/A	2010	≥ 0.19 psia but < 2.2 psia
1	T-012	30,000	VOL	N/A	1989	≥ 0.19 psia but < 2.2 psia
1	T-120	30,000	VOL	N/A	1990	≥ 0.19 psia but < 2.2 psia
1	T-121	30,000	VOL	N/A	1990	≥ 0.19 psia but < 2.2 psia
1	T-130	30,000	VOL	N/A	1995	≥ 0.19 psia but < 2.2 psia
Equipment Group 2: Tanks which contain VOL with a maximum true vapor pressure between 2.2 and 4.0 psia.						
2	T-080	10,000	VOL	N/A	1978	≥ 2.2 psia but < 4.0 psia
2	T-136	10,000	VOL	N/A	2003	≥ 2.2 psia but < 4.0 psia
2	T-137	22,500	VOL	N/A	2008	≥ 2.2 psia but < 4.0 psia
2	T-122	30,000	VOL	N/A	1990	≥ 2.2 psia but < 4.0 psia
2	T-124	30,000	VOL	N/A	1990	≥ 2.2 psia but < 4.0 psia

1. General Requirements

1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, 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 Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source.

1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere.

1.3 The Permittee shall submit a Georgia Air Quality Permit application to the Division prior to the commencement of any modification, as defined in 391-3-1-.01(pp), which may result in air pollution and which is not exempt under 391-3-1-.03(6). Such application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. The application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity and pollutant emission rates of the plant before and after the change, and the anticipated completion date of the change.

1.4 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and shall be retained for at least five (5) years following the date of entry.

1.5 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

2. Allowable Emissions

Emissions Limits

2.1 The Permittee shall not discharge or cause the discharge into the atmosphere from the entire facility any gases which contain volatile organic compounds (VOC) in the amount equal to or in excess of 100 tons during any consecutive 12-month period.
[Avoidance of 40 CFR Part 70]

2.2 The Permittee shall not discharge, or cause the discharge, into the atmosphere from Sulfonation I Process Line sulfur dioxide (SO_2) in amount exceeding 1.0 pound per hour.
[Avoidance of 40 CFR Part 70]

2.3 The Permittee shall not discharge, or cause the discharge, into the atmosphere from Sulfonation I Process Line sulfuric acid mist (SAM) in amount exceeding 0.05 pound per hour.
[391-3-1-.03(2)(c)]

2.4 The Permittee shall not discharge, or cause the discharge, into the atmosphere from Sulfonation II Process Line SO_2 in amount exceeding 2.0 pounds per hour.
[Avoidance of 40 CFR Part 70]

2.5 The Permittee shall not discharge, or cause the discharge, into the atmosphere from Sulfonation II Process Line SAM in amount exceeding 0.25 pound per hour.
[391-3-1-.03(2)(c)]

Ethylene Oxide Handling

2.6 The Permittee shall limit the unloading of ethylene oxide at the facility to no more than one (1) railcar per 24-hour period.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

2.7 The Permittee shall limit the unloading of ethylene oxide at the facility to no more than 100 railcars per consecutive 12-month period.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

2.8 The Permittee shall limit the manufacture of products using ethylene oxide in Reactor R01 such that the reactor vents no more than four (4) batches during any 24-hour period.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

2.9 The Permittee shall limit the manufacture of products using ethylene oxide in Reactor R01 to no more than 1,200 batches during any consecutive 12-month period.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

2.10 The Permittee shall reduce ethylene oxide emissions from Reactor R01 and EtO Storage Tank T-3400 by at least 99.5 % when emissions are routed as required by Conditions 4.4, 4.5, and 4.6.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

Manufacturing Processes

2.11 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from all process equipment any gases which exhibit visible emissions, the opacity of which is equal to or greater than 40 percent, unless otherwise specified.
[391-3-1-.02(2)(b)(1)]

2.12 The Permittee shall not cause, let, suffer, permit, or allow the emissions from any source particulate matter in total quantities equal to or exceeding the allowable rate as calculated using the applicable equation below, unless otherwise specified in this Permit.
[391-3-1-.02(2)(e)(1)]

a. $E = 4.1P^{0.67}$, for process input weight rate up to and including 30 tons per hour;

b. $E = 55P^{0.11} - 40$, for process input weight rate in excess of 30 tons per hour.

Where:
E = allowable emission rate in pounds per hour;
P = process input weight rate in tons per hour.

40 CFR 60 Subpart NNN

2.13 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - "General Provisions" and 40 CFR 60 Subpart NNN - "Standards of Performance for Volatile Organic Compounds (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations," for operation of Stripping System Condenser Vent VS.
[40 CFR 60 Subparts A and NNN]

2.14 The Permittee shall comply with Condition 2.13 for the operation of Stripping System Condenser Vent VS by doing one of the following:
[40 CFR 60.662]

a. Reduce emissions of total organic compounds (TOC) (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 parts per million by volume (ppmv), on a dry basis corrected to 3 percent oxygen, whichever is less stringent.; or

b. Maintain a Total Resource Effectiveness (TRE) index value greater than 1.0 without use of VOC emission control.

40 CFR 60 Subpart RRR

2.15 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - “General Provisions” and Subpart RRR – “Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes” as they apply to Sulfonation II Process Line R420.
[40 CFR 60 Subparts A and RRR]

2.16 The Permittee shall maintain a total resource effectiveness (TRE) value greater than 1.0 without use of a VOC emission control device for the affected facility, Sulfonation II Process Line R420. For purposes of this Condition, the term affected facility shall mean the combination of the Sulfonation II Process Line R420 reactor and cyclone/acid-gas separator system immediately downstream of the reactor.
[40 CFR 60.700(b) and 40 CFR 60.702(c)]

Fuel-Burning Equipment

2.17 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - "General Provisions" and 40 CFR 60 Subpart Dc - "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," for operation of the Boiler BLR.
[40 CFR 60.40c]

2.18 The Permittee shall not cause, let, suffer, permit, or allow emissions of NO_X, from Boiler BLR, exceeding 30 ppm at 3 percent O_2, dry basis during the period May 1 through September 30 of each year.
[391-3-1-.02(2)(lll)]

2.19 The Permittee shall only combust natural gas in Boilers E-001, E-002, and BLR and Hot Oil Heater E-005.
[Avoidance of 40 CFR Part 70; Avoidance of 40 CFR Part 63 Subpart JJJJJJ and 391-3-1-.02(2)(g) Subsumed]

2.20 The Permittee shall not cause, let, suffer, permit, or allow any emissions from Hot Oil Heater E-005 which contain fly ash and/or other particulate matter in amounts equal to or exceeding 0.5 pounds per million BTU heat input.
[391-3-1-.02(2)(d)(2)(i)]

2.21 The Permittee shall not cause, let, suffer, permit, or allow any emissions from Boilers E-001, E-002, and BLR, each, which contain fly ash and/or other particulate matter in amounts equal to or exceeding the rate derived from $P = 0.5(10/R)^{0.5}$ where R equals heat input rate in million BTU per hour and P equals the allowable emission rate in pounds per million BTU.
[391-3-1-.02(2)(d)(2)(ii)]

2.22 The Permittee shall not cause, let, suffer, permit, or allow the emissions from Boilers E-001, E-002, and BLR and Hot Oil Heater E-005 visible emissions the opacity of which is equal to or greater than twenty (20) percent except for one six minute period per hour of not more than twenty-seven (27) percent opacity
[391-3-1-.02(2)(d)(3)]

Storage Tanks

2.23 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - "General Provisions" and 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" for Tanks T-122, T-124, T-137, T-3300, T-3400, and T-139.
[40 CFR 60 Subparts A and Kb]

2.24 Storage Tanks T-3300 and T-3400 shall each be equipped with a closed vent system and control device meeting the following specifications in accordance with 40 CFR 60.112b(a)(3):
[40 CFR 60.112b(a)(3)]

a. The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspection, as determined in part 60, subpart VV, 40 CFR 60.485(b); and

b. The control device shall be designed and operate to reduce inlet VOC emissions by 95 percent or greater.

2.25 The Permittee may not transfer or cause or allow the transfer of any volatile organic liquid other than gasoline from any delivery vessel into a stationary storage tank of capacity greater than 4,000 gallons unless the tank is equipped with submerged fill pipes in accordance with Georgia Rule 391-3-1-.02(2)(vv).
[391-3-1-.02(2)(vv)]

Emergency Generators and Fire Water Pump Engines

2.26 The Permittee shall only fire diesel fuel in Emergency Generators GEN1 and GEN2 or Fire Water Pump Engines FP1 and FP2 that contains a fuel sulfur content of 0.0015 weight percent or less.
[Avoidance of 40 CFR Part 70; 391-3-1-.02(2)(g) Subsumed]

2.27 The Permittee shall operate Emergency Generators GEN1 and GEN2 and Fire Water Pump Engines FP1 and FP2 only when electric power from the local utility is not available and each emergency generator or fire pump engine must operate less than 200 hours during any consecutive 12-month period.
[391-3-1-.02(2)(mmm)(4)(i)]

2.28 The Permittee shall not discharge, or cause the discharge, into the atmosphere, from Emergency Generators GEN1 and GEN2 or Fire Water Pump Engines FP1 and FP2, any gases which exhibit visible emissions, the opacity of which is equal to or greater than 40 percent, unless otherwise specified.
[391-3-1-.02(2)(b)1.]

3. Fugitive Emissions

3.1 The Permittee shall take all reasonable precautions to prevent fugitive dust from becoming airborne from any operation, process, handling, and transportation or storage facility. The opacity from any fugitive dust source shall not equal or exceed twenty percent. Reasonable precautions that should be taken to prevent dust from becoming airborne include, but are not limited to, the following:
[391-3-1-.02(2)(n)]

a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

b. Application of asphalt, water, or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces that can give rise to airborne dusts;

c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods can be employed during sandblasting or other similar operations;

d. Covering, at all times when in motion, open-bodied trucks, transporting materials likely to give rise to airborne dust; and

e. The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.

4. Process & Control Equipment

4.1 Routine maintenance shall be performed on all air pollution equipment. Maintenance records shall be recorded in a permanent form suitable and available for inspection or submittal to the Division. The records shall be retained for at least five (5) years following the date of such maintenance.

4.2 A spare parts inventory for control equipment shall be maintained by the Permittee.

4.3 Malfunctioning components of air pollution control systems shall be repaired as expeditiously as possible.

Ethylene Oxide Handling

4.4 At all times during the operation of Alkoxylation Process Reactor R01, the Permittee shall route exhaust gases that contain ethylene oxide and/or propylene oxide to Scrubber SCR-R01.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

4.5 At all times during the operation of railcar unloading (Source Code UNLOAD) of ethylene oxide and propylene oxide, the Permittee shall route the exhaust gases from UNLOAD to Scrubber SCR-R01.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

4.6 At all times during the depressurization of the propylene oxide and ethylene oxide storage tanks (Source Codes T-3300 and T-3400), the Permittee shall route the exhaust gases from Tanks T-3300 and T-3400, each, to Scrubber SCR-R01.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

4.7 During the times when operation of Alkoxylation Process Scrubber SCR-R01 is required by Conditions 4.4 through 4.6, the Permittee shall operate Scrubber SCR-R01 in accordance with the following operating conditions. A "daily block average" is an average of the continuous measurements from 12:00 AM (day 1) to 12:00 AM (day 2).
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

a. Maintain the percent scrubbant range within 4 to 7 percent acid [inclusive], measured once per calendar week of operation.

b. Maintain the scrubbant volume flow rate, on a daily block average, greater than 35 gallons per minute (gpm).

c. Maintain the gas flow rate into the scrubber at a flow rate, on a daily block average, of less than 250 scfm.

Batch Process Lines

4.8 At all times during the operation of Alkoxylation Process Reactor R01, the Permittee shall route the exhaust gases from Reactor R01 to Scrubber SCR-R01.
[391-3-1-.02(6)(b)1.]

4.9 At all times during the operation of Process Vessel T-126, the Permittee shall route the exhaust gases from the process vessel to Scrubber SCR-8126.
[391-3-1-.02(6)(b)1.]

4.10 At all times during the operation of railcar and/or tank truck unloading (Source Code DMS) of dimethyl sulfate, the Permittee shall route the exhaust gases from DMS to Scrubber SCR-8126.
[391-3-1-.02(6)(b)1.]

4.11 At all times during the operation of the Esterification Process, which includes Reactor R02, the Permittee shall route the exhaust gases from Reactor R02 to Scrubber SCR-NAOHR02.
[391-3-1-.02(6)(b)1.]

4.12 At all times during the operation of the Intermediate Esterification Process, which includes Reactor R04, the Permittee shall route the exhaust gases from Reactor R04 to Scrubber SCR-NAOHR02.
[391-3-1-.02(6)(b)1.]

4.13 At all times during the operation of Reactor R05, the Permittee shall route the exhaust gases from Reactor R05 to Scrubber SCR-NAOHR02.
[391-3-1-.02(6)(b)1.]

4.14 During the times when operation of Esterification Process Scrubber SCR-NAOHR02 is required by Conditions 4.11 through 4.13, the Permittee shall operate the Scrubber SCR-NAOHR02 in accordance with the following operating conditions. A "daily block average" is an average of the continuous measurements from 12:00 AM (day 1) to 12:00 AM (day 2).
[391-3-1-.02(6)(b)1.]

a. Maintain the caustic above 5 percent, measured once per calendar week of operation.

b. Maintain the scrubbant volume flow rate, on a daily block average, greater than 20 gallons per minute (gpm).

Sulfonation I Process Line

4.15 At all times during the operation of Sulfonation I Process Line R-1002, the Permittee shall route the exhaust gases from the Sulfonation I Process Line Reactor through control equipment which includes Dry Scrubber SCP-DRY1, Dry Scrubber Demisters SCP-DEM11 and SCP-DEM12, Caustic Scrubber SCP-NAOH1, and Tail Gas Demister SCP-TAIL1. The Permittee may exhaust gases from the Sulfonation I Process Line Reactor through the acid absorber instead of the dry scrubber and two demisters before exhausting to the caustic scrubber and the tail gas demister.
[391-3-1-.02(6)(b)1.]

4.16 During times when the Sulfonation I Process Line R-1002 is in operation, the Permittee shall operate the control devices in accordance with the following operating conditions. A "daily block average" is an average of the continuous measurements from 12:00 AM (day 1) to 12:00 AM (day 2).
[391-3-1-.02(6)(b)1.]

a. Maintain a minimum acid flow rate through the Sulfonation I Acid Gas Absorber of 55 gallons per minute when exhaust gases are routed through the absorber.

b. Maintain a daily pressure drop block average within the range of 2 to 50 inches of water for Dry Scrubber SCP-DRY1 when exhausted gases are routed through the control device.

c. Maintain a daily pressure drop block average within the range of 3 to 80 inches of water for each of Dry Scrubber Demisters SCP-DEM11 and SCP-DEM12 when exhaust gases are routed through the control devices.

d. For Caustic Scrubber SCP-NAOH1:

i. Maintain a daily pressure drop block average within the range of 1 to 10 inches of water.

ii. Maintain a daily pH block average greater than 5.

iii. Maintain a daily scrubbant flow rate block average greater than 30 gallons per minute.

e. Maintain a daily pressure drop block average within the range of 1 to 40 inches of water for Tail Gas Demister SCP-TAIL1.

Sulfonation II Process Line

4.17 At all times during the operation of Sulfonation II Process Line R420, the Permittee shall route the exhaust gases from the Sulfonation II Process Line Reactor through control equipment which includes Dry Scrubber SCP-DRY2, Dry Scrubber Demisters SCP-DEM21 and SCP-DEM22, Caustic Scrubber SCP-NAOH2, and Tail Gas Demister SCP-TAIL2. The Permittee may exhaust gases from the Sulfonation I Process Line Reactor through the acid absorber instead of the dry scrubber and two demisters before exhausting to the caustic scrubber and tail gas demister.
[391-3-1-.02(6)(b)1.]

4.18 During times when the Sulfonation II Process Line R420 is in operation, the Permittee shall operate the control devices in accordance with the following operating conditions. A "daily block average" is an average of the continuous measurements from 12:00 AM (day 1) to 12:00 AM (day 2).
[391-3-1-.02(6)(b)1.]

a. Maintain a daily pressure drop block average within the range of 0.01 to 1.0 psi for the cyclone/acid-gas separator system immediately downstream of the Sulfonation II Process Line R420 Reactor.

b. Maintain a minimum acid flow rate through the Sulfonation II Sulfuric Acid Absorber of 200 gallons per minute when exhaust gases are routed through the absorber.

c. Maintain a daily pressure drop block average within the range of 2 to 50 inches of water for Dry Scrubber SCP-DRY2 when exhausted gases are routed through the control device.

d. Maintain a daily pressure drop block average within the range of 3 to 80 inches of water for each of Dry Scrubber Demisters SCP-DEM21 and SCP-DEM22 when exhaust gases are routed through the control devices.

e. For Caustic Scrubber SCP-NAOH2:

i. Maintain a daily pressure drop block average within the range of 1 to 10 inches of water.

ii. Maintain a daily pH block average greater than 5.

iii. Maintain a daily scrubbant flow rate block average greater than 80 gallons per minute.

f. Maintain a daily pressure drop block average within the range of 1 to 40 inches of water for Tail Gas Demister SCP-TAIL2.

4.19 Should any control equipment parameters fall outside the normal operational ranges, the Permittee shall take immediate corrective actions. The Permittee shall record the time of occurrence, the nature, the cause, and the corrective action of such deviations. Said records shall be maintained in a permanent form suitable and available onsite for inspection by the Division and shall be retained for at least five (5) years from the date of last entry.
[391-3-1-.02(6)(b)1.]

5. Monitoring

5.1 Any continuous monitoring system required by the Division and installed by the Permittee shall be in continuous operation and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Monitoring system response, relating only to calibration checks and zero and span adjustments, shall be measured and recorded during such periods. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.
[391-3-1-.02(6)(b)1.]

5.2 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements. This information required to be monitored and recorded shall be recorded in a permanent form suitable and available for inspection.
[391-3-1-.02(6)(b)1.]

Batch Process Lines

a. Percent by weight of acid in the scrubbant for Scrubber SCR-R01 for Alkoxylation Process Reactor R01. Data shall be recorded at least once per calendar week.

b. Percent by weight of caustic in the scrubbant for Scrubber SCR-NAOHR02 for Reactors R02, R04 and/or R05. Data shall be recorded at least once per calendar week.

5.3 The Permittee shall install, calibrate, maintain, and operate a system to continuously monitor and record the indicated parameters on the following equipment. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements. This information required to be monitored and recorded shall be recorded in a permanent form suitable and available for inspection.
[391-3-1-.02(6)(b)1]

The Permittee shall use the monitoring data to compute and record a daily block average for each parameter. The Permittee shall maintain records of the derivation (including calculation) of each daily block average.

Batch Process Lines

a. Scrubbant flow rate and gas flow rate for Scrubber SCR-R01.

b. Scrubbant flow rate across Scrubber SCR-NAOHR02.

Sulfonation I Process Line

c. Pressure drop across Dry Scrubber SCP-DRY1. This paragraph only applies when exhausted gases are routed through the control device.

d. Pressure drop across each of Dry Scrubber Demisters SCP-DEM11 and SCP-DEM12. This paragraph only applies when exhausted gases are routed through the control device.

e. Pressure drop across the scrubber, pH of the scrubbant, and scrubbant flow rate for Caustic Scrubber SCP-NAOH1.

f. Pressure drop across Tail Gas Demister SCP-TAIL1.

Sulfonation II Process Line

g. Pressure drop across the cyclone/acid-gas separator system immediately downstream of the Sulfonation II Process Line R420 Reactor.
[40 CFR 60.703(e)]

h. Pressure drop across Dry Scrubber SCP-DRY2. This condition only applies when exhausted gases are routed through the control device.

i. Pressure drop across each of Dry Scrubber Demisters SCP-DEM21 and SCP-DEM22. This paragraph only applies when exhausted gases are routed through the control device.

j. Pressure drop across the scrubber, pH of the scrubbant, and scrubbant flow rate for Caustic Scrubber SCP-NAOH2.

k. Pressure drop across Tail Gas Demister SCP-TAIL2.

Ethylene Oxide Handling

5.4 The Permittee shall develop, implement, and maintain an ethylene oxide Leak Detection and Repair Program for the handling and operation of ethylene oxide components (valves, connectors, seals, flanges, fittings, etc.), Scrubber SCR-R01, and Reactor R01. The program, and any modifications to the program, shall be subject to review and approval by the Division. The initial copy of the program shall be submitted to the Division, in writing, no later than 60 days following the date of issuance of this permit.
[391-3-1-.02(6)(b)1.]

5.5 The Permittee shall develop, implement, and maintain a maintenance program for the cleaning of ethylene oxide Tank T-3400 and the purging of ethylene oxide lines prior to maintenance activities. The program shall be used to minimize emission of ethylene oxide during maintenance activities, including the neutralization of ethylene oxide from the tank and lines in Reactor R01 and use of Scrubber SCR-R01. The program, and any modifications to the program, shall be subject to review and approval by the Division. The initial copy of the program shall be submitted to the Division, in writing, no later than 60 days following the date of issuance of this permit.
[391-3-1-.02(6)(b)1.]

40 CFR 60 Subpart NNN

5.6 If the Permittee seeks to comply with Condition 2.14.a for Stripping System Condenser Vent VS, the Permittee shall install, calibrate, maintain and operate according to the manufacturer's specifications for the following equipment, unless alternative monitoring procedures or requirements are approved for the vent by the Division:
[40 CFR 60.663(e) and 40 CFR 60.663(f)]

a. Where a condenser is the final recovery device in the recovery system:

i. A condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater, or

ii. An organic monitoring device used to monitor organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.

40 CFR 60 Subpart RRR

5.7 The Permittee shall maintain records describing the operation of the cyclone separator, immediately downstream of the Sulfonation II Process Line R420 Reactor and the process parameter(s) which would indicate proper operation and maintenance of the cyclone separator in accordance with 40 CFR 60.703(e). These records shall be maintained in a permanent form suitable and readily available for inspection or submittal when requested by the Division.
[40 CFR 60.703(e)]

Fuel-Burning Equipment

5.8 The Permittee shall, each calendar year, monitor emissions of nitrogen oxides (NO_X) from Boiler BLR, unless the boiler will not operate during the ozone season (May 1 through September 30 of each year) by performing a tune-up for each boiler to demonstrate compliance with the NO_X concentration limit of Condition 2.18 using the following procedures: [391-3-1-.02(6)(b)1 and PTM Section 2.119]

a. The tune-up shall be performed no earlier than March 1 and no later than May 1 of each calendar year. In the case of initial startups that occur after May 1 but before September 30, tune-ups shall be performed no later than 120 hours after startup. The tune-up shall be performed at the normal maximum operating load expected during the period from May 1 to September 30 of each year.

b. The tune-up shall be performed by using the manufacturer recommended settings for reduced NO_X emissions or by using a NO_X analyzer. Adjustments shall be made, as needed, so that NO_X emissions are reduced in a manner consistent with good combustion practices and safe fuel-burning equipment operation.

c. Following the adjustments, or determination that adjustments are not required, the Permittee shall perform a measurement consisting of a minimum of three test runs to demonstrate that the average emissions are less than or equal to the NO_X concentration limit of Condition 2.18. Each test run shall be a minimum of 30 minutes of operational data in length. Following any test run which results in an average NO_X concentration that exceeds the NO_X limit of Condition 2.18, the Permittee shall make adjustments to the boiler and conduct a new set of test runs within one day. Subsequent adjustments followed by test runs shall be continued until the average of 3 consecutive test runs do not exceed the NO_X concentration limit of Condition 2.18.

d. All measurements of NO_X and oxygen concentrations in paragraphs b. and c. of this condition shall be conducted using procedures of the American Society for Testing and Materials (ASTM) Standard Test Method for Determination of NO_X, Carbon Monoxide (CO), and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, ASTM D 6522; procedures of Gas Research Institute Method GRI-96/0008, EPA/EMC Conditional Test Method (CTM-30) Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers and Process Heaters Using Portable Analyzers; or procedures of EPA Reference Method 7E and 3A.

e. The Permittee shall maintain records of all tune-ups performed in accordance with this condition. These records shall include the following:

i. Date and time the tune-up was performed;

ii. The boiler settings for each test run;

iii. The average NO_X concentration (in ppm at 3 percent O_2, dry basis) for each test run;

iv. What operating parameters were adjusted to minimize NO_X emissions; and

v. An explanation of how the final (compliant) settings were determined.

f. Following the tune-up, from the period May 1 through September 30 of each year, the Permittee shall operate each affected boiler using the settings determined during the annual tune-up. If no parameters can be monitored to indicate the performance of a specific boiler, the Permittee shall certify that no adjustments have been made to the boiler by the Permittee and/or any third party since the most recent successful tune-up was completed. This certification shall be made in writing no later than October 15 of each year and shall be maintained with the records required by paragraph e. of this condition.

g. If a boiler is capable of operating for 3 consecutive test runs with average NO_X concentrations of less than or equal to 15 ppm corrected to 3 percent oxygen, the Permittee may conduct the next subsequent tune-up in the fourth calendar year following the demonstration of 15 ppm or less. Results of measurements of NO_X and oxygen concentrations and tune-ups, maintenance and records, and subsequent boiler operation shall otherwise be conducted as described in paragraphs a. through f. of this condition. The Permittee shall continue to make annual certifications of no adjustments since the previous tune-up.

h. As an alternative to complying with the requirements in this condition, the Permittee shall submit documentation no later than April 30 of each year confirming that an affected unit will not operate during the months of May through September. As a minimum, the documentation shall include the identification of the facility, the permit number, and the specific affected units that will not be operated.

Storage Tanks

5.9 For Storage Tanks T-3300 and T-3400 the Permittee shall operate the closed vent system and Scrubber SCR-R01 and monitor the parameters of the closed vent systems and control devices in accordance with the operating plan submitted to the Division in accordance with 40 CFR 60.113b(c)(1).
[391-3-1-.02(6)(b)1.]

Emergency Generators and Fire Water Pump Engines

5.10 The Permittee shall install, calibrate, maintain, and operate a non-resettable monitoring system on each Emergency Generator GEN1 and GEN2 and each Fire Water Pump Engine FP1 and FP2. The hours of operation shall be recorded monthly. This information shall be recorded in a permanent form suitable and available for inspection or submittal when requested by the Division.
[391-3-1-.02(6)(b)1.]

6. Performance Testing

6.1 The Permittee shall cause to be conducted a performance test at any specified emission point when so directed by the Division. The following provisions shall apply with regard to such tests:

a. All tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants.

b. All test results shall be submitted to the Division within sixty (60) days of the completion of testing.

c. The Permittee shall provide the Division thirty (30) days prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test and shall provide with the notification a test plan in accordance with Division guidelines.

d. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.

Ethylene Oxide Handling

6.2 Within 6 months after the initial issuance date of this permit, and at least once every 24 months thereafter, the Permittee shall conduct ethylene oxide performance testing for Scrubber SCR-R01 according to the test methods approved by EPA and/or the Division. Testing shall be completed for a depressurization cycle of Reactor R01 and for a depressurization cycle of Tank T-3400 and shall be used to demonstrate compliance with Condition 2.10. The test report shall list the final exhaust mass emission rate of ethylene oxide and the control efficiency of the scrubber for each depressurization cycle. The test report shall also list the scrubbant percent acid, scrubbant volume flow rate, and scrubber gas flow rate recorded during the test. The test shall be used to establish factors for depressurization cycles for use in the monthly calculations required by Condition 7.8.
[Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

40 CFR 60 Subpart NNN

6.3 For the purpose of demonstrating compliance with Condition 2.14, Stripping System Condenser Vent VS shall be run at full operating conditions and flow rates during any performance test. The Permittee shall use the test methods of Appendix A of 40 CFR 60, except as provided under 40 CFR 60.8(b) as specified as 40 CFR 60.664(b).
[40 CFR 60.664(a) and 40 CFR 60.664(b)]

6.4 If the Permittee is seeking to comply with 40 CFR 60.660(c)(4) or Condition 2.14, 40 CFR 60.662(c), the Permittee shall recalculate the TRE index value for Stripping System Condenser Vent VS whenever process changes are made. Examples of process changes include changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The TRE index value shall be recalculated based on test data, or on best engineering estimates of the effects of the change to the recovery system.
[40 CFR 60.664(g)]

6.5 If the Permittee is seeking to demonstrate compliance with 40 CFR 60.660(c)(6), the Permittee shall use Method 2, 2A, 2C, or 2D as appropriate, for determination of volumetric flow rate.
[40 CFR 60.664(h)]

40 CFR 60 Subpart RRR

6.6 The test methods described in 40 CFR 60.704(d) shall be used for determining the process vent stream TRE index value to determine compliance under 40 CFR 60.702(c) for the affected facility defined in Condition 2.16. This information shall be recorded in a permanent form suitable and available for inspection.
[40 CFR 60.704(d)]

6.7 For purposes of complying with 40 CFR 702(c), the Permittee shall calculate the TRE index value of the vent stream referenced in Condition 2.16 using the equations specified in 40 CFR 60.704(e), as applicable. This information shall be recorded in a permanent form suitable and available for inspection.
[40 CFR 60.704(e)]

6.8 The Permittee shall recalculate the TRE index value for the affected facility as defined in Condition 2.16 whenever process changes are made. Examples of process changes include changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The TRE index value shall be recalculated based on test data, or on best engineered estimates of the effects of the change on the recovery system. This information shall be recorded in a permanent form suitable and available for inspection.
[40 CFR 60.704(f)]

6.9 For the affected facility defined in Condition 2.16, where the recalculated TRE index value is less than or equal to 8.0 but greater than 1.0, the Permittee shall conduct a performance test in accordance with 40 CFR 60.8 and 40 CFR 60.704 and shall comply with 40 CFR 60.703, 40 CFR 60.704, and 40 CFR 60.705. Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.
[40 CFR 60.704(f)(2)]

7. Notification, Reporting and Record Keeping Requirements

7.1 The Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment or any periods during which a continuous monitoring system or monitoring device is inoperative. The Permittee shall retain these records for a period of at least five (5) years after the date of any such startup, shutdown, or malfunction.
[391-3-1-.02(6)(b)1.]

7.2 The Permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this Permit. The information shall be recorded in a permanent form suitable and available for inspection and shall be retained for at least five (5) years following the date of such measurements, maintenance, reports, and records.
[391-3-1-.02(6)(b)1.]

7.3 The Permittee shall maintain an updated equipment list (including control devices) as found in this Permit. This information shall be recorded in a permanent form suitable and available for inspection or submittal to the Division.
[391-3-1-.02(6)(b)1.]

Emission Limits

7.4 The Permittee shall maintain a written emission calculation protocol for determining actual emissions of VOC emitted from the entire facility on a monthly basis. The protocol should include, but not limited to, the following: (1) VOC emission factors for each product or process line, storage tanks, equipment leak components, wastewater treatment plant, fuel combustion, and any other applicable source of VOC emissions at the site; (2) formulas for computing VOC emissions from each applicable source of VOC emissions and the origin of each formula. The Permittee shall use the written emission calculation protocol (including emission factors) submitted to the Division on May 19, 2017. The existing version of the protocol and any subsequent modification to the protocol shall be kept in a permanent form suitable and available for inspection.
[391-3-1-.02(6)(b)1.]

7.5 The Permittee shall maintain the monthly operating records necessary to determine actual monthly VOC emissions in conjunction with the protocol required by Condition 7.4. The records shall include, but may not be limited to, the quantity (total lbs and total number of batch) of each product manufactured during the month, records of storage tank usage, and the quantities of fuel burned in the boilers, emergency generators, and fire pump engines. The Permittee shall notify the Division, in writing, if emissions of VOC exceed 8.33 tons during any calendar month from the facility. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit in Condition No. 2.1. This information (including calculations) shall be recorded in a permanent form suitable and readily available for inspection or submittal to the Division.
[391-3-1-.02(6)(b)1.]

7.6 The Permittee shall use the records required by Condition 7.5 to compute the consecutive 12-month total of VOC emissions from the facility on a monthly basis. The Permittee shall notify the Division, in writing, if emissions of VOC equal or exceed 100 tons during any consecutive 12-month period from the facility. This notification shall be postmarked by the fifteenth day of the following month. This information (including calculations) shall be recorded in a permanent form suitable and readily available for inspection or submittal to the Division.
[391-3-1-.02(6)(b)1.]

7.7 The Permittee shall submit the consecutive 12-month total of VOC emissions from the facility, calculated in accordance with Condition 7.6, for each month in the reporting period with the report required by Condition 7.29.
[391-3-1-.02(6)(b)1.]

Ethylene Oxide Handling

7.8 The Permittee shall calculate the amount of ethylene oxide emitted from the entire facility on a monthly basis using the methods and equations in Application No. 27495 and the emission factors/scrubber efficiency determined from the most recent performance testing required by Condition 6.2.* Total emissions shall include emissions from the depressurization of Reactor R01, emissions from unloading to and depressurization of Tank T-3400, fugitive emissions from equipment in the LDAR Program, emissions from cleaning of Tank T-3400 due to maintenance, and emissions from purging of lines due to maintenance. Total emissions shall also include losses due to any malfunctions, leaks, spills, etc. All data needed to calculate emissions, and the calculations themselves, shall be kept as part of the monthly records. The Permittee shall maintain these records on site at all times in a format suitable and available for inspection by or submittal to the Division on request.
[391-3-1-.02(6)(b)1.]

*The calculation protocol shall be submitted to the Division within 60 days of the issuance of this permit. The protocol, and any modifications to the protocol, shall be subject to review and approval by the Division.

7.9 The Permittee shall maintain records of the number of ethylene oxide railcars unloaded during each 24-hour period. The records shall include the date and time the railcar unloading was initiated and the date and time the unloading was complete. The records shall be used to demonstrate compliance with Condition 2.6. The Permittee shall maintain these records on site at all times in a format suitable and available for inspection by or submittal to the Division on request.
[391-3-1-.02(6)(b)1.]

7.10 The Permittee shall use the ethylene oxide railcar unloading records specified in Condition 7.9 to calculate the total number of ethylene oxide railcars unloaded each calendar month. All demonstration calculations shall be kept as part of the records required in this condition. The Permittee shall notify the Division in writing if unloading exceeds eight (8) ethylene oxide railcars during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the limit in Condition 2.7. The Permittee shall maintain these records on site at all times in a format suitable and available for inspection by or submittal to the Division on request.
[391-3-1-.02(6)(b)1.]

7.11 The Permittee shall use the calculations required by Condition 7.10 to determine the 12-month rolling total number of ethylene oxide railcars unloaded each calendar month. The Permittee shall notify the Division in writing if the number of ethylene oxide railcars unloaded exceeds 100 railcars during any consecutive 12-month period. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain compliance with the limit in Condition 2.7. The Permittee shall maintain these records on site at all times in a format suitable and available for inspection by or submittal to the Division on request.
[391-3-1-.02(6)(b)1.]

7.12 The Permittee shall maintain records of the number of batches of product using ethylene oxide produced and vented to Scrubber SCR-R01 each day. The records shall include the date and time the batch was initiated, the amount of ethylene oxide used, and the date and time the batch was complete. The records shall be used to demonstrate compliance with Condition 2.8. The Permittee shall maintain these records on site at all times in a format suitable and available for inspection by or submittal to the Division on request.
[391-3-1-.02(6)(b)1.]

7.13 The Permittee shall use the ethylene oxide product batch records specified in Condition 7.12 to calculate the total number of batches using ethylene oxide produced each calendar month. All demonstration calculations shall be kept as part of the records required in this condition. The Permittee shall notify the Division in writing if batch production exceeds 100 batches during any calendar month. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the limit in Condition 2.9. The Permittee shall maintain these records on site at all times in a format suitable and available for inspection by or submittal to the Division on request.
[391-3-1-.02(6)(b)1.]

7.14 The Permittee shall use the calculations required by Condition 7.13 to determine the 12-month rolling total number of batches of product using ethylene oxide produced each calendar month. The Permittee shall notify the Division in writing if the number of batches exceeds 1,200 during any consecutive 12-month period. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain compliance with the limit in Condition 2.9. The Permittee shall maintain these records on site at all times in a format suitable and available for inspection by or submittal to the Division on request.
[391-3-1-.02(6)(b)1.]

7.15 The Permittee shall submit the following information to the Division as part of the report required by Condition 7.29:
[391-3-1-.02(6)(b)1.]

a. The consecutive 12-month total of ethylene oxide emissions (in pounds) from the facility for each month in the reporting period.

b. Documentation demonstrating that only one (1) ethylene oxide railcar was unloaded at the facility per 24-hour period.

c. The consecutive 12-month total number of ethylene oxide railcars unloaded at the facility for each month in the reporting period.

d. Documentation demonstrating that no more than four (4) ethylene oxide product batches were vented at the facility per 24-hour period.

e. The consecutive 12-month total number of ethylene oxide product batches produced at the facility for each month in the reporting period.

7.16 The Permittee shall maintain records of the following activities:
[391-3-1-.02(6)(b)1.]

a. The date of time of any maintenance activities (cleaning) for ethylene oxide Tank T-3400 that result in emissions to the atmosphere. The records shall include a calculation of total ethylene oxide emitted during the maintenance activity.

b. The date and time of line purge/break activities that result in ethylene oxide emissions to the atmosphere. The records shall include a calculation of total ethylene oxide emitted during the maintenance activity.

7.17 Any spill or unpermitted release of ethylene oxide at the facility, regardless of the amount of the release, shall be reported to the Air Protection Branch by email (air.releases@dnr.ga.gov) within 24 hours of discovering such spill or release. As used in this condition, the term "spill or release" shall have the same meaning as set forth in the Georgia Code O.C.G.A. § 12-14-1.13. Emissions of ethylene oxide resulting from an operator error, a malfunction, or other failure of equipment at the facility that results in ethylene oxide not being routed through the air pollution control equipment prescribed in this permit is a release. The full report shall describe (1) the release, (2) its causes, (3) the estimated amount of ethylene oxide released, and (4) the steps taken to contain it and said report shall be submitted within 48 hours of the initial email notification.
[Georgia Code O.C.G.A. § 12-9-7(a) and Georgia Rule 391-3-1-.02(2)(a)(3)(ii)]

40 CFR 60 Subpart NNN

7.18 For Stripping System Condenser Vent VS, the Permittee shall notify the Division of the specific provisions of 40 CFR 60.662 (Condition 2.14.a or 2.14.b) with which the Permittee has elected to comply. Notification shall be submitted with the notification of initial start-up of Stripping System Condenser Vent VS) required by 40 CFR 60.7(a)(3). If the Permittee elects at a later date to use an alternative provision of 40 CFR 60.662 (Condition 2.14) with which it will comply, then the Division must be notified by the Permittee 90 days before implementing a change and, upon implementing the change, a performance test shall be performed as specified by 40 CFR 60.664 within 180 days.
[40 CFR 60.665(a)]

7.19 For Stripping System Condenser Vent VS, the Permittee shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 CFR 60.8. The same data specified in 40 CFR 60.665 shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined.
[40 CFR 60.665(b)]

7.20 For Stripping System Condenser Vent VS, the Permittee shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under 40 CFR 60.663 (e) and (f) as well as up-to- date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Division may at any time require a report of these data.
[40 CFR 60.665(g), 40 CFR 60.665(h) and 40 CFR 60.665(p)]

7.21 For Stripping System Condenser Vent VS, if the Permittee seeks to comply with the requirements of 40 CFR 60 Subpart NNN by complying with the flow rate cutoff in 40 CFR 60.660(c)(6), the Permittee shall keep up-to-date, readily accessible records to indicate that the vent stream flow rate of Stripping System Condenser Vent VS is less than 0.008 standard cubic meters per minute (scm/min) (0.3 standard cubic feet per minute (scf/min)) and of any change in equipment or process operation that increases the operating vent stream flow rate, including a measurement of the new vent stream flow rate. If the Permittee is seeking to comply with the design production capacity provision in 40 CFR 60.660(c)(5), the Permittee shall keep up-to-date, readily accessible records of any change in equipment or process operation for the vent that increases the design production capacity of the process unit in which the affected facility is located. Sources subject to the provisions of 40 CFR 60 Subpart NNN are exempt from the quarterly reporting requirements contained in 40 CFR 60.7(c) of the General Provisions.
[40 CFR 60.665(i), 40 CFR 60.665(j) and 40 CFR 60.665(k)]

7.22 For Stripping System Condenser Vent VS, sources seeking to complying with the requirements of 40 CFR 60.660 (c)(4) or (c)(6) or 40 CFR 60.662 must submit to the Division semiannual reports of the following recorded information. The initial report shall be submitted within 6 months after the initial start-up date. The requirements of 40 CFR 60.665(l) remain in force until and unless EPA, in delegating enforcement authority to the Division under Section 111(c) of the Clean Air Act, approves reporting requirements or an alternative means of compliance surveillance adopted by the Division. In that event, the Permittee will be relieved of the obligation to comply with 40 CFR 60.665(l), provided that the Permittee can comply with the requirements established by the Division.
[40 CFR 60.665(l) and 40 CFR 60.665(m)]

40 CFR 60 Subpart RRR

7.23 The Permittee shall keep up-to-date, readily accessible records of the following as they relate to the Sulfonation II Process Line R42 Reactor and cyclone separator immediately downstream of the reactor. This information shall be recorded in a permanent form suitable and available for inspection or submittal to the Division.

a. All measurements and calculations performed to determine the TRE index value of the vent stream.
[40 CFR 60.705(b)(4)(v)]

b. Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal or addition of recovery equipment or reactors.
[40 CFR 60.705(g)(1)]

c. Any recalculation of the TRE index value performed pursuant to 40 CFR 60.704(f); and
[40 CFR 60.705(g)(2)]

d. The results of any performance test pursuant to the methods and procedures required by 40 CFR 60.704(d).
[40 CFR 60.705(g)(3)]

Fuel-Burning Equipment

7.24 The Permittee shall record and maintain records of the amount of each fuel combusted in Boiler BLR during each calendar month.
[40 CFR 60.48c(g)(2)]

7.25 The Permittee shall submit notification of the date of construction and actual startup of Boiler BLR, as provided by 40 CFR 60.7. This notification shall include all applicable items specified in 40 CFR 60.48c(a).
[40 CFR 60.48c(a)]

Storage Tanks

7.26 The Permittee shall maintain on-site a Division approved operating plan for Storage Tanks T-3300 and T-3400 that meets the following requirements:

a. Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device.
[40 CFR 60.113b(c)(1)(i)]

If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under 40 CFR 60 Subpart Kb, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device.

b. A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).
[40 CFR 60.113b(c)(1)(ii)]

7.27 The Permittee shall maintain on-site the following records for Storage Tanks T-122, T-124, T-137, T-3300, T-3400, and T-139 in a format suitable for inspection or submittal to the Division. This information shall be recorded in a permanent form suitable and available for inspection or submittal to the Division.

a. Records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
[40 CFR 60.116b(b)]

b. Records of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period, excluding storage tanks T-3300 and T-3400 per 40 CFR 60.116b(g). Available data on the storage temperature may be used to determine the maximum true vapor pressure. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based on upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
[40 CFR 60.116b(c), 40 CFR 60.116b(e), and 40 CFR 60.116b(g)]

Emergency Generators and Fire Water Pump Engines

7.28 For each shipment of diesel fuel for Emergency Generators GEN1 and GEN2 and Fire Water Pump Engines FP1 and FP2, the Permittee shall obtain certification from the supplier that the diesel fuel meets the fuel sulfur limits specified in Condition 2.26. The certification shall contain the following:

a. The name of the diesel fuel supplier;

b. The location of the diesel fuel when the sample was drawn for analysis to determine the sulfur content of the diesel fuel, specifically including whether the diesel fuel was sampled as delivered to the affected facility, or whether the sample was drawn from diesel fuel in storage at the diesel fuel supplier's or oil refiner's facility, or other location;

c. The sulfur content of the diesel fuel from which the shipment came (or of the shipment itself);

d. The method used to determine the sulfur content of the oil.

Semiannual Report

7.29 The Permittee shall submit a written report of reportable incidences for each semiannual period. The report shall cover each semiannual period ending June 30 and December 31 of each year, shall be postmarked by August 29 and February 28, respectively, and shall contain the nature and cause of the reportable incident, the time and date of occurrence, and any initial and final corrective action taken. The report shall also contain a summary of any days for which any of the required operation and maintenance surveillance checks were not made and the reasons for such failure to perform the surveillance. A reportable incidence is defined as the following: [391-3-1-.02(6)(b)1.]

Batch Process Lines

a. Scrubber SCR-R01: Any percent scrubbant range of acid, scrubbant flow rate, or gas flow rate measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

b. Scrubber SCR-NAOHR02: Any percent caustic or scrubbant flow rate measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

Sulfonation I Process Line

c. Dry Scrubber SCR-DRY1: Any pressure drop measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

d. Dry Scrubber Demisters SCP-DEM11 and SCP-DEM12: Any pressure drop measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

e. Caustic Scrubber SCP-NAOH1: Any pressure drop, pH, or scrubbant flow rate measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

f. Tail Gas Demister SCP-TAIL1: Any pressure drop measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

Sulfonation II Process Line

g. Cyclone/Acid Gas Separator System on Sulfonation II Process Line R420: Any pressure drop measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

h. Dry Scrubber SCR-DRY2: Any pressure drop measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

i. Dry Scrubber Demisters SCP-DEM21 and SCP-DEM22: Any pressure drop measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

j. Caustic Scrubber SCP-NAOH2: Any pressure drop, pH, or scrubbant flow rate measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

k. Tail Gas Demister SCP-TAIL2: Any pressure drop measurement required by Section 5 of this permit that is outside the range prescribed in Section 4 of this permit.

Startup Notification

7.30 The Permittee shall submit written notification of startup of equipment and/or operations specified in Application Number 27794 to the Division within 15 days after such date. The notification shall be submitted to:

Mr. Sean Taylor
Stationary Source Compliance Program
4244 International Parkway, Suite 120
Atlanta GA 30354

8. Special Conditions

8.1 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.

8.2 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Fees."

8.3 All Georgia Air Quality Permits previously issued to this facility, including Air Quality Permit No. 2843-013-0001-S-02-0 and its amendments, are hereby revoked in their entirety.