AMENDMENT TO AIR QUALITY PERMIT

Permit Amendment No.
7389-067-0093-S-05-3

Effective Date of Amendment
August 27, 2015

In accordance with 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 or in effect under that Act, Permit No. 7389-067-0093-S-05-0 issued on May 27, 2014 to:

Facility Name: **Sterigenics U.S. LLC**

Mailing Address: 2015 Spring Road, Suite 650
Oak Brook, Illinois 60523

Facility Location: 2971 Olympic Industrial Drive SE, Suite 116
Atlanta, Georgia 30339 (Cobb County)

for the following: Operation of an ethylene oxide and propylene oxide sterilization facility.

is hereby amended as follows: Installation and operation of a new 30-pallet chamber and vacuum pump (Chamber 11: SEV-11 and CEV-11), an ownership and address change, and the routing of the sterilization chamber back vents to the existing AAT scrubber (EC2).

Reason for Amendment: Application No. 22970 signed November 18, 2014, Application No. 23229 signed April 27, 2015, Letter signed May 1, 2015, and Application No. 23461 signed August 3, 2015.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **4** page(s).

This Permit Amendment is hereby made a part of Permit No. 7389-067-0093-S-05-0 and compliance herewith is hereby ordered. Except as amended hereby, the above referenced Permit remains in full force and effect.

[Signed]
Director
Environmental Protection Division

Updated Equipment List

Emission Units			Associated Control Devices	
Source Code	**Description**	**Installation Date**	**Source Code**	**Description**
SEV-1	Six-pallet Sterilization Chamber 1 vacuum pump	1967	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-2	Six-pallet Sterilization Chamber 2 vacuum pump	1967	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-3	Nine-pallet Sterilization Chamber vacuum pump	1967	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-4	Five-pallet Sterilization Chamber vacuum pump	1967	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-5	Thirteen-pallet Sterilization Chamber vacuum pump	1987	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-6	Thirteen-pallet Sterilization Chamber vacuum pump	1992	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-7	Thirteen-pallet Sterilization Chamber vacuum pump	1994	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-8	Thirteen-pallet Sterilization Chamber vacuum pump	1994	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-10	Thirty-pallet Sterilization Chamber vacuum pump	2014	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
SEV-11*	Thirty-pallet Sterilization Chamber vacuum pump*	2015*	EC2 EC3	AAT Scrubber System (with Dry Bed Adsorber) Ceilcote Scrubber
CEV-1	Back vent for Chamber 1	1967	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-2	Back vent for Chamber 2	1967	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-3	Back vent for Chamber 3	1967	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-4	Back vent for Chamber 4	1967	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-5	Back vent for Chamber 5	1987	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-6	Back vent for Chamber 6	1992	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-7	Back vent for Chamber 7	1994	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-8	Back vent for Chamber 8	1994	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-10	Back vent for Chamber 10	2014	EC2	AAT Scrubber System (with Dry Bed Adsorber)
CEV-11	Back vent for Chamber 11	2015	EC2	AAT Scrubber System (with Dry Bed Adsorber)
AR-1	Aeration Room 1	2014	EC2	AAT Scrubber System (with Dry Bed Adsorber)

*proposed within current application

2. Allowable Emissions

MODIFIED CONDITION

2.3 The Permittee shall reduce ethylene oxide emissions to the atmosphere from each sterilization chamber vent (Source Codes: SEV-1, SEV-2, SEV-3, SEV-4, SEV-5, SEV-6, SEV-7, SEV-8, SEV-10, SEV-11) by at least 99%.
[40 CFR 63 Subpart O; 40 CFR 63.362(c); Avoidance of 40 CFR Part 70 for HAP; Avoidance of Non-Attainment New Source Review for VOC emissions]

MODIFIED CONDITION

2.4 The Permittee shall reduce ethylene oxide emissions to the atmosphere from each aeration vent (Source Code: AR-1) to a maximum concentration of 1 part per million, volume basis, (ppmv), or by at least 99%, whichever is less stringent.
[40 CFR 63 Subpart O; 40 CFR 63.362(d); Avoidance of 40 CFR Part 70 for HAP; Avoidance of Non-Attainment New Source Review for VOC emissions]

5. Monitoring

MODIFIED CONDITION

5.4 The Permittee shall maintain and operate the AAT Scrubber System (Source Code: EC2) to ensure a maximum emission level of 1 ppmv or a reduction of 99% for aeration room vents (Source Code: AR-1) and a reduction efficiency of 99% for sterilization chamber vents (Source Codes: SEV-1, SEV-2, SEV-3, SEV-4, SEV-5, SEV-6, SEV-7, SEV-8, SEV-10, SEV-11):
[391-3-1-.02(6)(b)1.]

a. Aeration room vents (Source Code: AR-1) – Once per month, the Permittee shall simultaneously collect and record the concentrations of a 15-minute ethylene oxide bag sample from both the inlet and the outlet of the dry bed adsorbers:

i. If the facility is complying with the 1 ppmvd standard, as specified in Condition No. 2.4, and the concentration of ethylene oxide in the outlet sample of the dry bed adsorbers increases to 0.9 ppmv or greater, the Permittee shall replace the dry bed material within 30 days, prior to the next scheduled aeration room exhaust sampling event.

ii. If the facility is complying with the 99% reduction efficiency standard, as specified in Condition No. 2.4, and the AAT Scrubber System reduction efficiency decreases to 99.1% or less, the Permittee shall replace the dry bed material within 30 days, prior to the next scheduled aeration room exhaust sampling event. The AAT Scrubber System reduction efficiency shall be calculated by comparing the ethylene oxide loading into the AAT Scrubber System to the ethylene oxide mass exiting the dry bed adsorbers.

b. Aeration room vents (Source Code: AR-1) and sterilization chamber vents (Source Codes: SEV-1, SEV-2, SEV-3, SEV-4, SEV-5, SEV-6, SEV-7, SEV-8, SEV-10, SEV-11) – Any instance when sterilization chamber exhausts and aeration room exhausts are simultaneously vented through the AAT Scrubber System, the Permittee shall comply with the 99% reduction efficiency standard. During any such event, the Permittee shall collect and record the concentration of a 15-minute ethylene oxide bag sample from the outlet of the dry bed adsorbers within 96 hours of the changeover. The AAT Scrubber System reduction efficiency shall be calculated by comparing the ethylene oxide loading into the AAT Scrubber System to the ethylene oxide mass exiting the dry bed adsorbers. If the reduction efficiency for the AAT Scrubber System is less than 99.1%, the Permittee shall not route any sterilization chamber exhausts through the AAT Scrubber System until the dry bed material has been replaced. Bag testing shall continue at a sampling frequency of once per week during the changeover of the sterilization chamber vents from the Ceilcote Scrubber (Source Code: EC3) to the AAT Scrubber System.

c. When the Permittee is sampling in accordance with Condition Nos. 5.3.a.ii or 5.3.b, the ethylene oxide loading to the AAT Scrubber System, the ethylene oxide mass out of the AAT dry adsorbers, and the AAT Scrubber System reduction efficiency shall be recorded for each sampling event. These records shall be kept in a form suitable for inspection or submission to the Division. Methods of calculation for these measurements shall be submitted in the site-specific monitoring plan.

d. The dates of dry bed material replacement shall be recorded and kept in a form suitable for inspection or submission to the Division.

6. Performance Testing

NEW CONDITION

6.4 Within 60 days of achieving the maximum production rate for ethylene oxide sterilization chamber SEV-11, but not later than 180 days after startup, the Permittee shall conduct ethylene oxide performance testing according to the procedures listed in 40 CFR 63.7 according to the applicability in Table 1 of 40 CFR 63.360, the procedures listed in 40 CFR 63.363, and the test methods listed in 40 CFR 63.365.
[40 CFR 63 Subpart O; 40 CFR 63.363 and 63.365]

NEW CONDITION

6.5 Within 120 days following the completion of the routing of the sterilization chamber back vents (Source Codes: CEV-1, CEV-2, CEV-3, CEV-4, CEV-5, CEV-6, CEV-7, CEV-8, CEV-10, CEV-11) to the AAT Scrubber System (EC2), the Permittee shall conduct ethylene oxide performance testing according to the procedures listed in 40 CFR 63.7 according to the applicability in Table 1 of 40 CFR 63.360, the procedures listed in 40 CFR 63.363, and the test methods listed in 40 CFR 63.365.
[40 CFR 63 Subpart O; 40 CFR 63.363 and 63.365]

7. Notification, Reporting and Record Keeping Requirements

NEW CONDITION

Reporting Requirements

7.8 The Permittee shall provide the following information, in writing, to the Division for Sterilization Chamber 11 (Source Code: SEV-11).
[40 CFR 63 Subpart O; 40 CFR 63.366(c)(1)(ii)]

a. A notification of the date when construction was commenced, delivered or postmarked no later than 30 days after such date.

b. A notification of the anticipated date of startup, delivered or postmarked not more than 60 days nor less than 30 days before such date; and

c. A notification of the actual date of initial startup, delivered or postmarked within 15 calendar days after that date.

8. Special Conditions

NEW CONDITION

8.4 Georgia Air Quality Permits No. 7389-067-0093-S-05-2, issued on April 1, 2015 is hereby revoked in its entirety.