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AIR PROTECTION BRANCH

Sean Taylor, Program Manager  
Georgia EPD - Air Protection Branch  
Stationary Source Compliance Program  
4244 International Parkway, Suite 120  
Atlanta, Georgia 30354-3908

Subject: Semiannual Synthetic Minor Deviation Report for Sterigenics, U.S., LLC, Atlanta, Georgia Facility Operating **Permit No. 7389-067-0093-S-06-0** for the period of July 01, 2024 to December 31, 2024

Dear Mr. Taylor:

This letter provides information for the semi-annual Synthetic Minor Permit Deviation Report for Sterigenics, US LLC Atlanta, Georgia facility covering the period from July 1, 2024 through December 31, 2024. This report is intended to satisfy the reporting requirements of Condition 5.4, 5.5, 7.6 and 7.14 in operating permit number 7389-067-0093-S-06-0. For ease of reference, this report is organized by permit condition.

**Semiannual Deviation Reporting Requirements**

Condition 5.4 requires:

The Permittee shall maintain and operate the AAT Scrubber System with Dry Bed Adsorbers (Source Code EC2) to ensure a maximum ethylene oxide emission level of 1 ppmv or an ethylene oxide emission reduction of 99% for the Aeration Room (Source Code AR-1) and the chamber backvents (Source Codes CEV-1 through CEV-8, CEV-10, and CEV-11):

<p>a. If complying with the 99% reduction efficiency standard, as specified in Condition No. 2.7 and 2.8, once per week the Permittee shall collect and record the concentrations of a 15-minute ethylene oxide bag sample from both the inlet and outlet of the AAT Scrubber System with dry bed absorbers. If the reduction efficiency is 99.1% or less, the Permittee shall replace the dry bed material within 30 days. 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 absorbers.</p>	<p>N/A</p>
<p>b. If complying with the 1ppmvd standard, as specified in condition No. 2.7 and 2.8, once per week the Permittee shall collect and record the concentration of a 15-minute ethylene oxide bag sample from the outlet of the AAT Scrubber System with dry bed absorbers. If the concentration of ethylene oxide in the outlet sample of the dry bed absorbers increases to 0.9 ppmv or greater, the Permittee shall replace the dry bed material within 30 days.</p>	<p>None</p>
<p>c. In addition to subparagraphs a. and b. of this Condition, once per week, the Permittee shall collect and record the concentrations of a 15-minute ethylene oxide bag sample from the outlet of the AAT Scrubber System</p>	<p>CEMS used during this reporting period. CEMS data</p>

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<p>with Dry Bed Adsorbers (Source Code EC2). If the concentration of ethylene oxide in the outlet sample of the dry bed adsorbers (Source Code EC2) is greater than 0.5 ppmv for 2 consecutive weekly readings, the Permittee shall not initiate any new sterilization cycle until the dry bed material has been replaced. Upon successful installation and initial operation of the ethylene oxide CEMS required by Condition 5.6, in lieu of the bag sample, the Permittee shall use the CEMS to determine outlet concentration on a ppm basis. If any 30-day rolling average ethylene oxide concentration equals or exceeds 0.2 ppmv, the Permittee shall replace the dry bed material within 30 days, unless an extension is granted in writing by the Division. The dates of dry bed material replacement shall be recorded and kept in a form suitable for inspection or submission to the Division.</p>	<p>indicated that EC2 reached 0.2 ppm as of Dec. 27, 2024 and dry bed media will be replaced within 30 days.</p>
<p>d. When the Permittee is sampling in accordance with this Condition, 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 and available within 3 hours of the sampling event.</p>	<p>N/A</p>
<p>e. In lieu of compliance with subparagraphs a. or b. of this Condition, the Permittee may use the ethylene oxide CEMS required by Condition 5.6, provided that US EPA approves in writing the CEMS- related conditions in this permit as acceptable monitoring for 40 CFR 63 Subpart O..</p>	<p>N/A</p>

Condition 5.5 requires:

The Permittee shall maintain and operate the Indoor Air Dry Bed Adsorber System (Source Code EC4) as follows:

<p>a. Once per week the Permittee shall collect and record the concentration of a 15-minute ethylene oxide bag sample from the outlet of the Dry Bed Adsorbers. If any 2 consecutive weekly ethylene oxide outlet concentration measurements equal or exceed 0.5 ppmv, the Permittee shall replace the dry bed material within 30 days. The dates of dry bed material replacement shall be recorded and kept in a form suitable for inspection or submission to the Division.</p>	<p>N/A- Site used CEMS to comply with this condition during this reporting period.</p>
<p>b. When the Permittee is sampling in accordance with this Condition, the ethylene oxide concentration shall be recorded within 3 hours of the sampling event. These records shall be kept in a form suitable for inspection or submission to the Division.</p>	<p>N/A- Site used CEMS to comply with this condition during this reporting period.</p>
<p>c. Upon successful installation and initial operation of the ethylene oxide CEMS required by Condition 5.6, in lieu of compliance with paragraphs a and b above, the Permittee shall use the CEMS to determine outlet concentration on a ppm basis. If any 30-day rolling average ethylene oxide concentration equals or exceeds 0.2 ppmv, the Permittee shall replace the dry bed material within 30 days, unless an extension is granted in writing by the Division. The dates of dry bed material</p>	<p>None</p>

replacement shall be recorded and kept in a form suitable for inspection or submission to the Division.	
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**Reporting Requirements**

Condition 7.4 requires:

For each scrubber parameter measurement conducted in accordance with Condition 5.3.a and 5.3.b, dry bed sample in Conditions 5.4 and 5.5, and the continuous emission monitoring (CEMS) in Condition 5.6, the Permittee shall include the following information in the semiannual report required by Condition 7.6.

a. For the acid-water scrubbers [AAT Scrubber System with Dry Bed Adsorbers (Source Code EC2) and the Ceilcote Scrubber (Source Code EC3)], any occurrence when the ethylene glycol concentration in the acid-water scrubber liquor is in excess of the maximum ethylene glycol concentration established during performance testing and approved by the Division when using the Condition 5.3.a monitoring option.	N/A  5.3a option is not used
b. For the acid-water scrubbers [AAT Scrubber System with Dry Bed Adsorbers (Source Code EC2) and the Ceilcote Scrubber (Source Code EC3)], any occurrence when the liquor recirculation tank level of the acid-water scrubber is in excess of the maximum liquor tank level established during performance testing and approved by the Division, when using the Condition 5.3.b monitoring option	None
c. For the acid-water scrubbers [AAT Scrubber System with Dry Bed Adsorbers (Source Code EC2) and the Ceilcote Scrubber (Source Code EC3)], any occurrence when the scrubbing liquor pH rises above the manufacturers' recommended level of 2 or the level determined in accordance with the performance testing required by Conditions 6.2 and 6.3, whichever is lower, when using the Condition 5.3.b monitoring option.	None
d. For the AAT Scrubber System with Dry Bed Adsorbers (Source Code EC2), any 2 consecutive measurements per Condition 5.4.c showing an outlet concentration exceeding 0.5 ppm, any single measurement per Condition 5.4.a that shows control efficiency equal or less than 99.1% or any single measurement per Condition 5.4.b that shows outlet concentration equal to or greater than 0.9 ppmv.	None
e. For the Indoor Air Dry Bed Adsorbers (Source Code EC4), any 2 consecutive measurements per Condition 5.5 equal to or greater than 0.5 ppmv.	None
f. Any instance that negative pressure cannot be verified for the Indoor Air system	None
g. For AAT Scrubber System with Dry Bed Adsorbers (Source Code EC2) and the Indoor Air Dry Bed Adsorber System (Source Code EC4), any instance when a bed system not replaced in accordance with Conditions 5.4 or 5.5.	None

**Condition 7.6 requires:**

The Permittee shall submit a written report containing any excess emissions, exceedances, and/or excursions as described in this permit and any monitor malfunctions for each semiannual period ending July 30 and December 31 of each year. All reports shall be postmarked by the 30<sup>th</sup> day following the end of each reporting period, July 30 and January 30, respectively. In the event that there have not been any excess emissions, exceedances, excursions or malfunctions during a reporting period, the report should so state. Otherwise, the contents of each report shall be as specified by the Division's Procedures for Testing and Monitoring sources of Air Pollutants and shall contain the following: [391-3-1-.02(6)(b) 1 and 40 CFR 63.10 (e)]

- a. A Summary report of excess emissions, exceedances and excursions, and monitor downtime, deviations and monitor downtime in accordance with Section 1.5 (c) and (d) of the above referenced document, including any failure to follow required work practice procedures.

**There were no recordkeeping/ procedural deviations or excess emissions or excursions associated with section 7.6.**

- b. Total process operating time during each reporting period. Total processing time was:

**4,320 hours**

- c. The magnitude of all excess emissions, exceedances and excursions computed in accordance with the applicable definitions as determined by the Director, and any conversion factors used, and the date and time of the commencement and completion of each time period of such occurrence.

**There were no deviations during the period.**

- d. Specific identification of each period of such excess emissions, exceedances, and excursions that occur during startups, shutdowns, or malfunctions of the affected facility. Include the nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

**There were no deviations during the period.**

- e. The date and time identifying each period during which any required monitoring system or device was inoperative (including periods of malfunction) except for zero and span checks, and the nature of the repairs, adjustments, or replacement. When the monitoring system or device has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

**There were no deviations during the period.**

- f. Certification by a Responsible Official, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

**Condition 7.14 requires:**

The Permittee shall include the following information in the semiannual report required by Condition 7.6.

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- a. Total pounds of ethylene oxide usage for each month in the reporting period and the 12-month rolling total of ethylene oxide usage for each month in the reporting period, as calculated in accordance with Conditions 7.8 and 7.9.

**See table below.**

- b. Total pounds of ethylene oxide emitted from the facility for each month in the reporting period and the 12-month rolling total of ethylene oxide emissions for each month in the reporting period, as calculated in accordance with Condition 7.10 and 7.11.

c.

Month	Monthly EO Usage (lbs.)	12 Month Rolling EO Usage (lbs.)	Releases of EO (lbs.)	Monthly EO Emissions (lbs.)	12 Month Rolling EO Emissions (lbs.)
July	24,499	246,205	0	1.6	76.3
August	20,983	243,095	0	2.7	69.6
September	23,336	243,693	0	2.8	62.7
October	27,639	249,564	0	5.0	58.8
November	26,698	258,570	0	7.2	50.2
December	24,781	262,614	0	14.0	49.8

- d. Total pounds of propylene oxide usage for each month in the reporting period and the 12-month rolling total of propylene oxide usage for each month in the reporting period, as calculated in accordance with Conditions 7.12 and 7.13.

Month/Year	Monthly PO Usage (lbs.)	12 Month Rolling PO Usage (lbs.)
January 2024	0	0
February 2024	0	0
March 2024	0	0
April 2024	0	0
May 2024	0	0
June 2024	0	0

**Required Statement**

Sterigenics U.S. LLC has reviewed all applicable provisions of the Atlanta Synthetic Minor operating permit. There have not been deviations from applicable limitations or standards or monitor malfunctions during the reporting period from July 01, 2024 through December 31, 2024.


  
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 Kevin Wagner  
 VP, Environmental Health & Safety

28-JAN-2025  
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 Date

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Please let me know if you have any questions.

Kind Regards,



Digitally signed by Michael Newkirk  
DN: cn=Michael Newkirk, email=mnewkirk@soterahealth.com, c=US  
Date: 2025.01.29 08:13:03 -05'00'

Michael Newkirk  
VP, Corporate EHS

cc: Air and EPCRA Enforcement Branch, U.S. EPA Region 4  
61 Forsyth Street  
Atlanta, Georgia 30303

Atlanta General Manager