

NARRATIVE

TO: Wendy Troemel
FROM: Heather Brown
DATE: March 17, 2024

Facility Name: **BD Global Distribution Center**
AIRS No.: 21700075
Location: Covington, GA (Newton County)
Application #: 27439
Date of Application: February 14, 2020, Revised March 11, 2021 and June 10, 2022

Background Information

Becton, Dickinson and Company (BD) operates a Global Distribution System (GDC) located at 14201 Lochridge Boulevard, Covington, Georgia, Newton County. The GDC receives both sterilized and non-sterilized medical products, typically in palletized form, from various medical sterilization facilities, including the BD Covington and BD Madison facilities. The product is received at the facility and, depending on customer preference, is shipped either in palletized form or in smaller, custom order quantities. The facility does not currently hold an air quality permit.

BD GDC does not conduct sterilization. The facility only handles materials previously sterilized at other facilities.

Purpose of Application

BD was required by Consent Order signed on October 28, 2019, to provide estimates of fugitive ethylene oxide (EtO) emissions from the GDC by December 15, 2019. The report was submitted as directed and it estimated emissions at 0.65 pounds per hour or approximately 5,600 pounds per year (2.8 tons per year). Any source emitting more than 2 tons per year of a single HAP is required to obtain a Georgia Air Quality Permit. On January 15, 2020, an amendment to the Consent Order was issued to require the facility to submit an air quality permit application for the GDC no later than February 14, 2020. The application was required to contain a schedule for designing and installing air pollution control equipment and/or implementing work practices and process optimization projects to reduce EtO emissions. The application was received via email on February 14, 2020, and a hard copy was received on February 19, 2020. The submittal was assigned Application No. 27439. The application did not require a public advisory as it is for an emissions reductions project at an existing source.

The application was updated in March of 2021 and June 2022 after additional analysis. Uncontrolled potential emissions from the GDC are estimated at 0.78 pounds per hour or approximately 6,809 pounds per year (3.40 tons per year) of EtO.

The purpose of Application No. 27439 is to permit the GDC in addition to permitting the installation and operation of emission controls to control fugitive emissions of EtO. The facility installed Dry Bed System 1 (Source Code SYS1) to control emissions from the warehouse building Product Storage Area (Source Code PSTR) in December 2020. The system is expected to achieve at least 90% removal efficiency of the warehouse emissions. Therefore, controlled potential emissions are estimated at 0.078 pounds per hour or approximately 680.9 pounds per year (0.34 tons per year). The dry bed system demonstrated an efficiency of 98.52% during December 2022 performance testing.

Equipment List

Emission Units		Associated Control Devices	
Source Code	Description	Source Code	Description
PSTR	Product Storage Area	SYS1	Dry Bed System 1

Emissions Summary

BD calculated EtO emissions based on the number of pallets stored at the facility per year and the amount of EtO contained in each pallet. The calculations then assume at least 90% control for the dry bed system. The emissions of 0.34 tons per year correspond to a dry bed system outlet concentration of 208.0 micrograms per cubic meter.

Facility-Wide EtO Emissions (in tons per year)

Pollutant	Potential Emissions		
	Before Mod.	After Mod.	Emissions Change
EtO	3.40	0.34	-3.06

Regulatory Applicability

The BD GDC does not conduct EtO sterilization on site; therefore, it is not subject to 40 CFR 63 Subpart O – Ethylene Oxide Emission Standards For Sterilization Facilities. There are no other applicable rules or regulations. However, any facility that emits or has the potential to emit more than 2 tons per year (4,000 pounds per year), pre-control, of any single hazardous air pollutant is required to obtain an air quality permit.

Testing and Monitoring

Dry Bed System 1 (SYS1)

The Permittee is required to conduct a performance test within 6 months of the issuance date of the permit. The facility must monitor the EtO concentration from the system on a monthly basis. The Permittee must replace the bed material if the concentration exceeds 208.0 micrograms per cubic meter.

Permit Conditions

Conditions 1.1 through 1.5 are general requirements that apply to all facilities.

Condition 3.1 is a standard fugitive emission requirement that applies to all sources.

Conditions 4.1 through 4.3 are standard air pollution control equipment requirements that apply to all sources.

Condition 4.4 specifies that the product storage area air must be routed to the dry bed system.

Condition 5.1 requires the facility to conduct monthly sampling for the dry bed system to ensure proper operation of the device. The condition also specifies when the dry bed material must be replaced.

Condition 5.2 requires the facility to operate in accordance with a Division-approved Work Practice Plan. The plan must include a monitoring protocol for the negative pressure system associated with the product storage area air and the operation of on-site trucks containing sterilized material.

Condition 5.3 requires the facility to develop and implement a leak detection and repair program.

Condition 6.1 lists standard performance testing requirements that apply to all sources.

Condition 6.2 requires the facility to conduct performance testing on the dry bed system.

Conditions 7.1 and 7.2 are standard record keeping requirements that apply to all sources.

Condition 7.3 specifies the deviations the facility must report.

Condition 7.4 requires the facility to submit a semiannual report relating to any excess emissions, exceedances, and/or excursions, in addition to monitor malfunctions.

Condition 7.5 requires the facility to notify the Division of all unpermitted releases, in accordance with Georgia Code O.C.G.A. § 12-9-7(a).

Condition 7.6 specifies the compliance report and notification contact for EPD.

Condition 8.1 is a standard requirement that applies to all sources.

Toxic Impact Assessment

Application No. 27439 was an emission reduction project. A Toxic Impact Assessment is not required. The Permittee conducted modeling for the emission reduction project. Results of that modeling were reviewed by EPD. See the EPD Modeling Memorandum for more information.

Summary & Recommendations

A public advisory was not required for Application No. 27439 because the project resulted in a reduction in emissions from the source. The facility is classified as a true minor source. I recommend the issuance of Air Quality Permit No. 5047-217-0075-B-01-0 to the BD Global Distribution Center for the operation of the medical equipment and distribution warehouse and emission reduction project as described in Application No. 27439.