

I. INTRODUCTION

This source has applied for a Clean Air Act Permit Program (CAAPP) operating permit for its existing operation. The CAAPP is the program established in Illinois for the operating permits for significant stationary sources required by the federal Clean Air Act, as amended in 1990. The conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

Griffith Micro Science, Inc. is located at 7775 Quincy Street and at 830 Midway Drive in Willowbrook. The source is a medical sterilization facility. This sterilization only facility receives and processes primarily medical supplies and pharmaceuticals in addition to treating spices. The sterilization facility utilizes ethylene oxide as the principle sterilant gas, although propylene oxide is sometimes used. All sterilizer vacuum pumps exhaust to a wet (acid) scrubber. After leaving the sterilizing chambers, the product aerates or degasses without any vacuum in one of the aeration rooms or compartments. The product remains in aeration for approximately 18 hours then is moved to a segregated post-processing area.

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Date Constructed	Emission Control Equipment
AC	Eight (8) Aeration Chambers (Fourteen (14) Pallet Capacity, Willowbrook I)	June, 1984 (Modified March, 1998)	Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor
AR	Three (3) Aeration Rooms (Willowbrook I)	June, 1984 (Modified March, 1998)	Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor
Boiler-1	Lattner Model HRT-60 Natural Gas-Fired Boiler (Boiler-1, 2.5 mmBtu/hr, Willowbrook I)	Unknown	None
SC-1	Six (6) Ethylene Oxide/Propylene Oxide Sterilization Chambers (Six (6) Pallet Capacity, Willowbrook I)	June, 1984 (Modified November, 1990)	Acid Water Scrubber (Scrubber #1) or Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor
SC-2	Six (6) Ethylene Oxide/Propylene Oxide Sterilization Chambers (Thirteen (13) Pallet Capacity, Willowbrook I)	June, 1984 (Modified 1998)	Acid Water Scrubber (Scrubber #1) or Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor
SC-3	One (1) Ethylene Oxide/Propylene Oxide Sterilization Chamber (Three (3) Pallet Capacity, Willowbrook I)	June, 1984 (Modified November, 1990)	Acid Water Scrubber (Scrubber #1) or Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor

Emission Unit	Description	Date Constructed	Emission Control Equipment
SC-4	Five (5) Ethylene Oxide/Propylene Oxide Sterilization Chambers (Thirteen (13) Pallet Capacity, Willowbrook II)	July, 1999	Willowbrook II Scrubber (WBII-Scrubber) and Dry Bed Reactor
SV-1	Six (6) Ethylene Oxide/Propylene Oxide Sterilization Chamber Back Vents (Six (6) Pallet Capacity Sterilization Chambers, Willowbrook I)	June, 1984 (Modified November, 1990)	Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor
SV-2	Five (5) Ethylene Oxide/Propylene Oxide Sterilization Chamber Back Vents (Thirteen (13) Pallet Capacity Sterilization Chambers, Willowbrook I)	June, 1984 (Modified 1998)	Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor
SV-3	One (1) Ethylene Oxide/Propylene Oxide Sterilization Chamber Back Vent (Three (3) Pallet Capacity Sterilization Chamber, Willowbrook I)	June, 1984	Acid Water Scrubber (Scrubber #2) with Dry Bed Reactor
SV-4	Five (5) Ethylene Oxide/Propylene Oxide Sterilization Chamber Back Vents (Thirteen (13) Pallet Capacity Sterilization Chambers, Willowbrook II)	July, 1999	Willowbrook II Scrubber (WBII-Scrubber) and Dry Bed Reactor
WBII-AR	Two (2) Aeration Rooms (Willowbrook II)	July, 1999	Willowbrook II Scrubber (WBII-Scrubber) and Dry Bed Reactor
WBII-Boiler-1	Kewanee Model L35-80-G Natural Gas-Fired Boiler (WBII - Boiler-1, 3.3 mmBtu/hr, Willowbrook II)	July, 1999	None
WBII-Boiler-2	Kewanee Model L35-80-G Natural Gas-Fired Boiler (WBII - Boiler-2, 3.3 mmBtu/hr, Willowbrook II)	July, 1999	None
Fugitive VOM/HAP Emissions	Pumps, Seals, Flanges, etc.	-	None

III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions.

For purposes of fees, the source is allowed the following emissions:

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Nitrogen Oxides (NO _x)	3.45
Particulate Matter (PM)	0.26
Sulfur Dioxide (SO ₂)	0.03
Volatile Organic Material (VOM)	10.73
HAP, not included in VOM or PM	--
TOTAL	14.47

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

All emission sources in Illinois must comply with the federal New Source Performance Standards (NSPS). The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

A combined Title I/CAAPP permit contains terms and conditions established by the Illinois EPA pursuant to authority found in Title I provisions, e.g., 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Notwithstanding the expiration date on the first page of the permit, the Title I conditions remain in effect pursuant to Title

I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source's permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 164.

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