PERMIT AMENDMENT NO. 9431-089-0028-S-04-1
ISSUANCE DATE:

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Air Quality – Permit Amendment

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. 9431-089-0028-S-04-0 issued on January 17, 2007 to:

Facility Name:	**US Center for Disease Control and Prevention**
Facility Address:	**4770 Buford Highway** **Atlanta, Georgia 30341 Dekalb County**
Mailing Address:	**1600 Clifton Road NE** **Atlanta, Georgia 30333**
Facility AIRS Number:	**04-13-089-00028**

for the following: Operation of a medical health research facility

is hereby amended as follows: Construction and operation of a natural gas and fuel oil boiler B11 as well as the removal of Boilers B5, B6, B7, and B8; Generators G20, G103A, G103B, G105, G109, and GP01; and fire pump FP01.

Reason for Amendment: Application No. 28375 signed April 18, 2022.

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. 9431-089-0028-S-04-0 and compliance herewith is hereby ordered. Except as amended hereby, the above referenced Permit remains in full force and effect.

STATE OF GEORGIA
CONSTITUTION
WISDOM
JUSTICE
MODERATION
1776

Richard E. Dunn, Director
Environmental Protection Division

Fuel Burning Equipment

Source Code	Input Heat Capacity (MMBtu/hr)	Description	Installation Date
B9	49.0	Natural Gas fired boiler with Fuel Oil as back-up	2004
B10	49.0	Natural Gas fired boiler with Fuel Oil as back-up	2004
B11	**47.5**	**Natural Gas fired boiler with Fuel Oil as back-up**	**2022**

Engine Generators

Source Code	Design Capacity (hp)	Description	Installation Date
GC01	2935	Central Utility Plant Generator	2004
GC02	2935	Central Utility Plant Generator	2004
GC03	2935	Central Utility Plant Generator	2004
GC04	2935	Central Utility Plant Generator	2004
GC05	2935	Central Utility Plant Generator	2004
GC06	2935	Central Utility Plant Generator	2004

2. Allowable Emissions

Modified Conditions

2.2 The Permittee shall comply with the requirements of 40 CFR Part 60 Subpart A, "General Provisions," and 40 CFR Part 60 Subpart Dc, "Standards of Performance for Small Industrial – Commercial - Institutional Steam Generating Units," for **Boilers B9-B11**. In the event of any discrepancy between the terms of this permit and 40 CFR Part 60, Subpart Dc, the terms of 40 CFR Part 60, Subpart Dc shall control.

2.7 The Permittee shall not discharge, or cause the discharge, into the atmosphere from **Boilers B9-B11**, any gases which contain nitrogen oxides (NOx) in excess of 30 parts per million (ppm) corrected to 3 percent oxygen on a dry basis. This requirement shall apply from May 1 through September 30 of each year.

5. Monitoring

Modified Conditions

5.4 The Permittee shall, each calendar year, monitor emissions of NO_X from **Boilers B9-B11** by performing a tune-up for each boiler to demonstrate compliance with the NO_X concentration limit of Condition No. 2.7 using the following procedures

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 startups that occur after May 1 but before September 30, tune-ups shall be performed no later than 120 hours after startup.

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 minimum of three emissions test runs to demonstrate that the emissions are less than or equal to the NOx concentration limit of Condition No. 2.7. Each test run shall be a minimum of 30 minutes in length and shall measure the average NOx concentration over the test duration. Following any test run which results in an average NOx concentration that exceeds the NOx limit of Condition No. 2.7, 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 results of 3 consecutive test runs do not exceed the NOx concentration limit of Condition No. 2.7.

d. All measurements of NOx 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 NOx, 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 6522-00; 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 NOx concentration (in ppm at 3% O2, dry basis) for each test run
iv. what operating parameters were adjusted to minimize NOx emissions
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.

7. Notification, Reporting and Record Keeping Requirements

Modified Conditions

7.2 The Permittee shall maintain monthly usage records of all distillate oil and natural gas. Separate records shall be maintained for each boiler, **Boilers B9-B11**. The records shall include the total number of gallons of fuel oil and cubic feet of natural gas used in all the emissions units that burn these fuels. The Permittee shall calculate the combined 12-month rolling total for natural gas and fuel oil, for each calendar month and include it in each month's log. All calculations used to figure usages shall be kept as part of the monthly record. These records shall be kept available for inspection or submittal for five years from the date of record.

7.6 The Permittee shall use the following equation to calculate the amount of nitrogen oxides (NO_X) emitted each month (monthly emission rate: ER_{ENG}) from engines.

$$ER_{ENG}\left(\frac{lb_{NO_X}}{month}\right) = H_{ENG}\left(\frac{hours_{ENG}}{month}\right) \times EF\left(\frac{lb_{NO_X}}{hour}\right)$$

Where:

ER_{ENG} = Monthly calculated NO_X emissions,

H_{ENG} = Monthly hours an engine/generator was operated, as recorded in Condition No. 7.5, and

EF = Emission factor for engines listed in Table 3 below.

Table 3
NO_X Emission factors for engines powering generators.

Source Code	Emission Factor (lb/hr)
GC01	**36.88**
GC02	**36.88**
GC03	**36.88**
GC04	**36.88**
GC05	**36.88**
GC06	**36.88**

7.7 The Permittee shall use the following equation to calculate the amount of nitrogen oxides (NO_X) emitted each month (monthly emission rate: ER_{boiler}) from the burning of fuels in Boilers and other fuel-burning equipment.

$$ER_{boilers}\left(\frac{lb_{NO_x}}{month}\right) = FuelUsed\left(\frac{cubic\ feet_{NG}\ or\ gallons_{\#2FO}}{month}\right) \times EF_{fuel}\left(\frac{lb_{NO_x}}{cubic\ feet_{NG}\ or\ gallons_{\#2FO}}\right)$$

Where:

$ER_{boilers}$ = Monthly calculated boiler NO_X emissions,

Fuel Used = Monthly fuel used in cubic feet of Natural Gas or Gallons of #2 FO per month as recorded per Condition No. 7.2, and

EF_{fuel} = Emission factor for type of fuel used as listed in Table 4 below.

Table 4
NO_X Emission factors for fuel fired in boilers and heaters

Boiler	Fuel Type	Emission Factor (lb/cu-ft NG) and (lb NO_x/gallon FO)
Boilers B9 – B11	**Natural Gas while using properly maintained Low NO_X burners (30 ppm)**	**3.67×10^{-5} NG** **2.00×10^{-5} FO**

7.11 The Permittee shall notify the Division in writing if, during the months of May, June, July, August or September, the Facility exceeded 30 ppm @ 3% O2 (dry basis) from the stacks for **Boilers B9-B11**. This notification shall be postmarked by the fifteenth day of the following month the exceedance occurred and shall include an explanation of how the Permittee intends to maintain compliance with the limitation contained in Condition No. 2.7 in the future.