PERMIT AMENDMENT NO. 8221-059-0059-V-04-2
ISSUANCE DATE: 12/23/2024

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality - Part 70 Operating Permit Amendment

Facility Name:	**University of Georgia**
Facility Address:	**240A Riverbend Road** **Athens, Georgia 30602, Clarke County**
Mailing Address:	**240A Riverbend Road** **Athens, Georgia 30602**
Parent/Holding Company:	**The Board of Regents of the University System of Georgia**
Facility AIRS Number:	**04-13-059-00059**

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:
Replacement of Boiler B002 with similar Boiler B002A and for temporary Boiler B002T.

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Amendment and Permit No. **8221-059-0059-V-04-0**. Unless modified or revoked, this Amendment expires upon issuance of the next Part 70 Permit for this source. This Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in App No. **820437** dated **October 2, 2024**; any other applications upon which this Amendment or Permit No. **8221-059-0059-V-04-0** are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **12** pages.

Jeffrey W. Cown

Jeffrey W. Cown, Director
Environmental Protection Division

Table of Contents

PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

The University of Georgia plans to replace Boiler B002 with a new 99.999 MMBtu/hr boiler (designated B002A) at the university's Central Steam Plant (CSP). Boiler B002A will primarily burn natural gas with distillate fuel oil used as backup fuel. As a result of the demolition work necessary to remove B002, Boilers B001 and B003 will be temporarily shut down to allow workers safe access to B002 and its associated piping. In order to meet campus steam demand during this demolition and construction period, a 99.9 MMBtu/hr temporary boiler (designated B002T) will be used to maintain CSP operational flexibility. Boiler B002T will exclusively burn natural gas. Per 391-3-1-.03(6)(b)(15), temporary boilers like B002T are exempt from permitting if the temporary boiler remains on site for 180 days or fewer. The construction schedule for this project may require that Boiler B002T be onsite for more than 180 days, therefore Boiler B002T is included in this permit amendment.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Additional Emission Units

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
B002A	Steam Plant – 99.999 MMBtu/hr, Victory Energy Model Boiler (natural gas and fuel oil)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(lll) 40 CFR 60 Subpart A 40 CFR 60 Subpart Dc	N/A	None
B002T	Steam Plant – 99.9 MMBtu/hr, Nationwide Boiler Inc. Boiler (natural gas)	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(lll) 40 CFR 60 Subpart A 40 CFR 60 Subpart Dc	N/A	None

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards are intended as a compliance tool and may not be definitive.

3.2 Equipment Emission Caps and Operating Limits

MODIFIED CONDITIONS

3.2.1 The Permittee shall not fire any fuel in boiler B001 with a sulfur content exceeding 1.3 percent by weight.
[391-3-1-.03(2)(c); 391-3-1-.02(2)(g) (subsumed)]

3.2.2 The Permittee shall only fire natural gas and No. 2 or distillate fuel oil in Boilers B001, **B002A,** B003, and B004. The sulfur content of fuel oil fired in Boilers **B002A,** B003, and B004 shall not exceed 0.5 percent by weight. In particular, fuel oil shall only be burned during periods of gas curtailment, gas supply emergencies, startup, or periods of testing on fuel oil. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours per boiler during any calendar year.
[391-3-1-.03(2)(c); 391-3-1-.02(2)(g) (subsumed), and Avoidance of 40 CFR 63 Subpart JJJJJJ – 63.11195]

3.3 Equipment Federal Rule Standards

MODIFIED CONDITION

3.3.1 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart A – "General Provisions," and Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," for the operation of the boilers with ID Nos. **B002A, B002T,** B004, B006, and B007.
[40 CFR 60 Subpart Dc]

3.3.2 The Permittee shall not discharge or cause the discharge into the atmosphere from boilers **B002A and** B004 any visible emissions the opacity of which is equal to or greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.
[40 CFR 60.43c(c)]

3.3.3 Fuel oil fired in boilers **B002A and** B004 shall be distillate fuel oil and shall not contain more than 0.5 percent sulfur, by weight. Distillate fuel oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396, "Standard Specification for Fuel Oils."
[40 CFR 60.42c(d)]

3.4 Equipment SIP Rule Standards

MODIFIED CONDITION

3.4.1 The Permittee shall not discharge or cause the discharge into the atmosphere from boiler B001, any gases which contain particulate matter in excess of the rate derived from $E = 0.7(10/R)^{0.202}$ where E equals the allowable particulate emission rate in pounds per million Btu heat input and R equals the heat input in million Btu per hour.
[391-3-1-.02(2)(d)1.(ii)]

3.4.2 The Permittee shall not discharge or cause the discharge into the atmosphere from each boilers **B002A, B002T,** B003, B004, B006, and B007, any gases which contain particulate matter in excess of the rate derived from $E = 0.5(10/R)^{0.5}$ where E equals the allowable particulate emission rate in pounds per million Btu heat input and R equals the heat input in million Btu per hour.
[391-3-1-.02(2)(d)2.(ii)]

3.4.8 The Permittee shall not discharge, or cause the discharge, into the atmosphere from boiler B001, emergency generators, and paint booth SB01, each, visible emissions the opacity of which exceeds forty (40) percent.
[391-3-1-.02(2)(b)]

3.4.9 The Permittee shall not discharge or cause the discharge into the atmosphere from boilers **B002A, B002T, and** B004, any gases which contain nitrogen oxides (NO_x) 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.
[391-3-1-.02(2)(lll)1]

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

MODIFIED CONDITION

4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 are as follows:

a. Method 1 shall be used for the determination of sample point locations,

b. Method 2 shall be used for the determination of stack gas flow rate,

c. Method 3 or 3A shall be used for the determination of stack gas molecular weight,

d. Method 3B shall be used for the determination of the emissions rate correction factor or excess air. Method 3A may be used as an alternative to Method 3B.

e. Method 4 shall be used for the determination of stack moisture,

f. Method 5 shall be used for the determination of Particulate Matter concentration for the purpose of Rule 391-3-1-.02(2)(d) (for boilers B001, **B002A, B002T,** B003, B004, B006, and B007 only).

g. Method 5T shall be used for the determination of total Particulate Matter concentration from incinerators I001, I002, and I004,

h. Method 9 and the procedures contained in Section 1.3 of the above reference document shall be used for the determination of opacity,

i. ASTM D4057 shall be used for collection of fuel oil samples,

j. Method 19, Section 12.5.2.2.3, shall be used for the determination of fuel oil sulfur content.

k. Method 10 shall be used for the determination of Carbon Monoxide concentration.

l. Method 7 or 7E shall be used for the determination of Nitrogen Oxides concentrations.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.
[391-3-1-.02(3)(a)]

4.2 Specific Testing Requirements

NEW CONDITION

4.2.2 Within 60 days after the first firing of fuel oil in boiler B002A, the Permittee shall conduct a visible emissions performance test on boiler B002A while burning distillate fuel oil at the maximum expected firing rate to demonstrate compliance with the emission limit specified in Condition 3.3.2. The results of the performance test(s) shall be submitted to the Division within 30 days of the completion of testing.
[40 CFR 60.45c(a)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.2 Specific Monitoring Requirements

MODIFIED CONDITIONS

5.2.4 The Permittee shall install, calibrate, maintain and operate natural gas and distillate fuel oil **(if applicable)** consumption meters on boilers **B002A, B002T, and** B004 subject to Subpart Dc. As allowed by Subpart Dc, the Permittee may propose an alternative protocol for monitoring fuel usage. In lieu of installing fuel meters, the Permittee may maintain records of the total amounts of natural gas and fuel oil delivered to the facility each calendar month. [40 CFR 60.48c(g)(2)]

5.2.5 The Permittee shall, each calendar year, monitor emissions of nitrogen oxides (NO_x) from boilers **B002A, B002T, and** B004 by performing a tune-up for the boiler to demonstrate compliance with the NO_x concentration limit of Condition 3.4.9 using the following procedures:
[391-3-1-.02(2)(lll)]

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 NO_x concentration limit of Condition 3.4.9. Each test run shall be a minimum of 30 minutes in length and shall measure the average NO_x concentration over the test duration. Following any test run which results in an average NO_x concentration that exceeds the NO_x limit of Condition 3.4.9, 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 NO_x concentration limit of Condition 3.4.9.

d. All measurements of NO_x 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 NO_x, 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 NO_x concentration (in ppm at 3% O_2, dry basis) for each test run

iv. what operating parameters were adjusted to minimize NO_x 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.

g. As an alternative to complying with the annual tune-up requirement described above, the owner or operator may conduct measurements of NO_x at a reduced frequency following a tune-up and verification demonstrating that the affected facility is capable of NO_x emissions of less than or equal to 15 ppm at 3 percent oxygen. The Permittee may conduct subsequent tune-ups at 48 calendar month intervals as long as the 15 ppm capability can be demonstrated. Performance of tests and tune-ups, maintenance of records, and subsequent boiler operation shall otherwise be conducted as described in paragraphs a through f of this condition. The Permittee shall continue to make annual certifications of no adjustments since the previous tune-up.

5.2.6 Following the initial performance tests required by Conditions 4.2.1 **and 4.2.2**, subsequent performance testing shall be conducted at a frequency specified in Table 5.2.6-1 in order to monitor compliance with the emission limit specified in Condition 3.3.2. If, during the initial 60 minutes of observation, all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.
[391-3-1-.02(6)(b)1, 40 CFR 60.47c and 40 CFR 70.6(a)(3)(i)]

Table 5.2.6-1 Testing Schedule

Highest 6-Minute Average Opacity Observed	Subsequent test shall be conducted within:
0%	12 Months, or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later.
>0%-5%	6 Months, or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later.
>5%-10%	3 Months, or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later.
>10%	45 Days

5.2.7 If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 performance test required by Condition 4.2.1**, 4.2.2,** or 5.2.6, the Permittee may, as an alternative to performing subsequent Method 9 tests, elect to perform subsequent monitoring using Method 22, according to the following procedures.
[391-3-1-.02(6)(b)1, 40 CFR 60.47c and 40 CFR 70.6(a)(3)(i)]

a. The Permittee shall conduct 10-minute observations (during normal operation) each operating day the affected facility fires fuel oil, using Method 22, and demonstrate that the sum of the occurrences of any visible emissions while firing fuel oil is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10-minute period). If the sum of the occurrence, of any visible emissions is greater than 30 seconds during the initial 10-minute observation, immediately conduct a 30-minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30-minute period), the Permittee shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30-minute observation (i.e., 90 seconds), or conduct a new Method 9 performance test while firing fuel oil using the procedures in Condition 4.2.1 within 45 calendar days.

b. If no visible emissions are observed for 10 operating days during which fuel oil is fired, observations can be reduced to once every 7 operating days. If any visible emissions are observed, daily observations shall be resumed while fuel oil is being fired.

5.2.8 The Permittee shall submit excess emission reports for any excess emissions from boilers **B002A and** B004 that occur during the reporting period and maintain records according to the requirements specified in paragraphs (a) or (b) of this condition, as applicable, depending on the visible emissions monitoring method used.
[391-3-1-.02(6)(b)1, 40 CFR 60.48c and 40 CFR 70.6(a)(3)(i)]

a. For each performance test conducted using Method 9, the Permittee shall keep records, including the information specified in paragraphs (a)(i) through (iii) of this condition.

i. Dates and time intervals of all opacity observation periods;

ii. Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

iii. Copies of all visible emission observer opacity field data sheets.

b. For each performance test conducted using Method 22, the Permittee shall keep records, including the information specified in paragraphs (b)(i) through (iv) of this condition:

i. Dates and time intervals of all visible emissions observation periods;

ii. Name and affiliation for each visible emission observer participating in the performance test;

iii. Copies of all visible emission observer opacity field data sheets; and

iv. Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the Permittee to demonstrate compliance with the applicable monitoring requirements.

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

MODIFIED CONDITION

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

None required to be reported in accordance with Condition 6.1.4.

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any time during which fuel oil combusted in boiler B001 has a sulfur content greater than 1.3 percent by weight.

ii. Any time during which fuel oil combusted in boilers **B002A,** B003, or B004 has a sulfur content greater than 0.5 percent by weight.

iii. Any twelve-consecutive month period where total VOC emissions from paint booth SB01 is equal to or greater than forty (40) tons.

iv. Any twelve-consecutive month period where combined HAP emissions from the entire facility, except from burning waste in the incinerator with ID Nos. I001, I002, and I004, is equal to or greater than 24.7 tons.

v. Any twelve-consecutive month period where emissions of any individual HAP from the entire facility, except from burning waste in the incinerator with ID Nos. I001, I002, and I004, is equal to or greater than 9.83 tons.

vi. Any calendar quarter during which the weight of Hospital/Medical/Infectious waste charged in the incinerator with ID No. I001, No. I002, or No. I004 exceeds 10 percent of the total weight of the waste burned in the incinerator.

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

i. Any time the pressure drop across fabric filter unit FF01 is greater than 0.3 inches of water.

ii. Any time that the average outlet temperature of incinerators I001, I002, and I004, primary chamber drops below 800 °F for any 3-hour period.

iii. Any time that the average outlet temperature of incinerators I001, I002, and I004, secondary chamber drops below 1500 °F for any 3-hour period.

d. In addition to the excess emissions, exceedances and excursions specified above, the following should also be included with the report required in Condition 6.1.4:

i. Fuel oil supplier certifications for fuel oil combusted in boilers B001, **B002A,** B003, and B004; and a certified statement from a Responsible Official that these fuel oil supplier certifications submitted represent all of the fuel oil combusted during the quarter. The report shall so note when the Permittee did not combust fuel oil in any of these boilers.

ii. The twelve-month rolling total of VOC and HAP emissions from spray paint booth SB01 for each month in the reporting period prepared from the records in Condition 6.2.6.

iii. The twelve-month rolling total for each individual HAP and the total HAP twelve-month rolling total for each month in the reporting period prepared from the records in Condition 6.2.9.

iv. [Reserved]

v. The quarterly pounds of waste charged in each incinerator with ID No. I001, No. I002, and No. I004 indicating quantities of Hospital /Medical/ Infectious Waste as defined by 40 CFR 60 Subpart Ec.

vi. The quarterly pounds of waste charged in each incinerator with ID No. I001, No. I002, and No. I004 indicating quantities of total waste incinerated.

vii. The percentage of Hospital/Medical/Infectious waste burned in each incinerator with ID No. I001, No. I002, and No. I004 during each calendar quarter.

6.2 Specific Record Keeping and Reporting Requirements

MODIFIED CONDITIONS

6.2.1 The Permittee shall maintain monthly records that specify the volume of natural gas consumed by boilers **B002A, B002T,** B004, B006, and B007 and monthly records that specify the amount of fuel oil consumed by boiler**s B002A and** B004.
[40 CFR 70.6(a)(3)(i), 40 CFR 60.48c(g)]

6.2.7 The Permittee shall maintain monthly records of the natural gas and fuel oil consumed in the boilers and waste incinerators (Emission Units ID, B001, **B002A, B002T,** B003, B004, B006, B007, I001, I002, I004). These records shall be kept available for inspection by or submittal to the division for five years from the date of record.
[391-3-1-.02(6)(b)1 and 391-3-1-.02(2)(c)]

6.2.14 The Permittee shall keep a written record of each and all instances during which fuel oil was fired in Boilers B001, **B002A,** B003, and B004. The record shall be available for submittal to and review by the Division and contain the date and time, duration of event, and the reason fuel oil was fired.
[Avoidance of 40 CFR 63 Subpart JJJJJJ – 63.11195]