Facility Name: **Multitrade Rabun Gap, LLC.**
City: Rabun Gap
County: Rabun
AIRS #: 04-13-24100018

Application #: TV-602182
Date Application Received: October 19, 2021
Permit No: 4911-241-0018-V-04-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name: Multitrade Rabun Gap, LLC.

2. Parent/Holding Company Name

   Multitrade Rabun Gap, LLC.

3. Previous and/or Other Name(s)

   No previous or other names have been identified.

4. Facility Location

   1585 York House Road
   Rabun Gap, Georgia 30568

5. Attainment, Non-attainment Area Location, or Contributing Area

   The facility is located in Rabun County which is an attainment area.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

The facility is contiguous to a shutdown textile manufacturing plant, formerly Rabun Apparel, Inc. Multitrade has acquired the powerhouse component of the prior facility, but none of the textile manufacturing operations. In the future, any potential manufacturing operations in the prior textile facility will be owned and operated by a separate entity and will not be part of the Multitrade plant or air permit.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
4911-241-0018-V-03-0	July 12, 2017	Title V Renewal

D. Process Description

1. SIC Codes(s)

4911

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

The facility generates electricity for sale.

3. Overall Facility Process Description

Multitrade Rabun Gap, LLC (Multitrade) is the owner/operator of an electrical power generation facility located at 1585 York House Road, Rabun Gap, Georgia.

Multitrade Rabun Gap, LLC with AIRS number 04-13-241-00018 removed all existing textile operations at the facility, with only the existing Wood-fired Boiler (Source Code WB) and Natural Gas-fired Boiler (Source Code OB5) remaining. The Wood-fired Boiler (Source Code: WB) is used to provide steam to a new electric Steam Turbine (Source Code ST01) to produce electricity for the grid and exhausts to an Electrostatic Precipitator (APCD ID No. ESP1) instead of the prior Wet Scrubber (APCD ID No. WBS), which was removed.

The steam turbine is exempt from permitting under 391-3-1-.03(6)(i)(6), as well as *"The exclusion for "small power production facilities" under 40 CFR part 60.2020 (e), that is for facilities with generating capacity of 30 MW or less or 80 MW for geothermal facilities."* The wood fired boiler (Source Code WB) which generates steam for a 20 MW electric turbine qualifies as it burns homogenous timber discards and is designed for energy recovery.

The facility also installed a Catalyst Oxidation Bed (APCD ID No. CBI) at the transition after the Dry Electrostatic Precipitator (APCD ID No. ESP1) to control emissions from the Wood-fired Boiler (Source Code: WB).

To facilitate the production and sale of electricity as well as to improve the efficiency of combustion, the following changes had occurred to the permitted existing equipment. The Wood-fired Boiler feedwater heater, grate system and the over-fired air system was upgraded to optimize combustion and to reduce actual wood usage and emissions.

Superheater (Source Code: SH) was installed at the front end of its existing Wood-fired boiler (Source Code: WB). The purpose of the Superheater (Source Code: SH) is to increase the steam temperature by increasing the boiler tube surface area (heat transfer surface area) thereby delivering a higher enthalpy steam to the steam turbine. The higher enthalpy steam delivered to the steam turbine helps the turbine-generator get closer to its rated capacity of 20 MW. The Superheater (Source Code: SH) project also included casing improvements and new insulation on the wood-fired boiler. The Superheater is included with the existing wood-fired boiler (Source Code: WB) source description.

The Natural Gas-fired Boiler (Source Code: OB5) is not used to produce electricity but remains permitted for potential future steam production.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

Rabun County is an attainment-area for all pollutants regulated under the National Ambient Air Quality Standards (NAAQS). The facility is not categorized as one of the 28 listed source categories in 40 CFR 52.21(b)(1)(i)(a) because the boiler is not fossil fuel-fired and is not used for fuel conversion. Therefore, the PSD major source threshold is 250 tons per year. Based on the projected emissions and control efficiencies, the Multitrade facility demonstrates through stack testing and continuous emission monitoring that the facility is a minor source with respect to PSD.

To ensure that the facility retains its minor source status with respect to PSD, the Multitrade facility has agreed to accept PSD avoidance limits of 249 tons per year for nitrogen oxides (NOx) and carbon monoxide (CO). Based on emissions calculations, the facility is a "true minor" source (i.e., potential emissions below 250 tons per year) for the other pollutants. Due to the NSPS PM limit (see discussion in Section III, potential emissions of PM/PM_{10} are below 250 tons per year.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓	✓		
PM_{10}	✓	✓		
$PM_{2.5}$	✓	✓		
SO_2	✓			✓
VOC	✓			✓
NO_x	✓	✓		
CO	✓	✓		
TRS	✓			✓
H_2S	✓			✓
Individual HAP	✓			✓
Total HAPs	✓			✓

3. MACT Standards

The facility is minor for HAPs, thus the facility is an Area Source for HAPs and must meet the requirements of 40 CFR 63 Subpart JJJJJJ for Area Sources.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	Yes
Program Code M – Part 63 NESHAP	Yes
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

To ensure that the facility retains its minor source status with respect to PSD, the Multitrade facility has agreed to accept PSD avoidance limits of 249 tons per year for the following pollutants: nitrogen oxides (NOx) and carbon monoxide (CO). Based on emissions calculations, the facility is a "true minor" source (i.e., potential emissions below 250 tons per year) for the other pollutants. Due to the NSPS PM limit (see discussion below), potential emissions of PM/PM_{10} will be below 250 tons per year.

B. Applicable Rules and Regulations

None applicable.

C. Compliance Status

The application indicates that the facility is operating in compliance.

D. Permit Conditions

Permit Condition No. 2.1.1 sets the facility-wide limit of NOx and CO emissions to 249 tons each per twelve consecutive months. This limit is set to avoid the NSR program regulations.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
OB5	Natural Gas-fired Boiler	40 CFR 60 Subparts A and Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)2		
WB	Wood-fired Boiler (includes Superheater SH-01)	40 CFR 60 Subparts A and Db 40 CFR 63 Subparts A and JJJJJJ 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)2	ESP1, CBI	Electrostatic Precipitator Catalyst Oxidation Bed

* 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.

B. Equipment & Rule Applicability

Emission and Operating Caps:

None applicable.

Rules and Regulations Assessment:

Federal Rules

National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial Commercial, and Institutional Boilers, 40 CFR 63, Subpart JJJJJJ

Natural gas-fired boiler (Source Code: OB5):

This rule applies if you own or operate a boiler combusting solid fossil fuels, biomass, or liquid fuels located at an area source. Since the Natural gas-fired boiler is permitted only to fire natural gas as stated in Permit Condition No. 3.2.2, 40 CFR 63 Subpart JJJJJJ does not apply to this boiler.

Wood -fired boiler (Source Code: WB):

As an existing boiler, the facility had three years after the effective date to meet the requirements of this rule and one year to implement a boiler tune-up program.

The Wood-fired Boiler (Source Code: WB) is an existing biomass-fired boiler located at an area source for HAPs. According to Table 1 of 40 CFR 63 Subpart JJJJJJ, there are no PM emission limits that apply to existing biomass-fired boilers.

All biomass-fired and oil-fired area source boilers are required to implement a biennial tune-up program as a management practice.

The standard for existing area source facilities having an affected boiler with a designed heat input capacity of 10 MMBtu/hr or greater requires the performance of an one-time energy assessment, by qualified personnel, on the boiler and its energy use systems, to identify cost-effective energy conservation measures. The Multitrade Rabun Gap 40 CFR 63 Subpart JJJJJJ one-time energy assessment documentation was approved on March 19, 2014, in advance of the March 21, 2014, compliance deadline.

This final rule also requires sources to meet a work practice standard, including following the manufacturer's recommended procedures for minimizing startup and shutdown periods, to demonstrate compliance with the emission limits for all subcategories of new and existing area source boilers (that would otherwise be subject to numeric emission limits) during periods of startup and shutdown.

Acid Rain Program – 40 CFR 72

The Acid Rain Program (40 CFR 72) does not apply to the Multitrade Facility.

Wood-fired Boiler (Source Code: WB)

The Wood-fired Boiler (Source Code: WB) does not meet the definition of "unit" in 40 CFR 72.2:

"*Unit* means a fossil fuel-fired combustion device."

Since the boiler does not burn any fossil fuel, it is not considered a subject unit with respect to the Acid Rain Program.

Natural gas-fired Boiler (Source Code: OB5)

This boiler is used for the purposes of steam production only. It does not generate electricity. It is not being used as a backup boiler for the Wood-fired-boiler (Source Code: WB).

NSPS Subpart A

All sources subject to a source specific NSPS are also subject to the general provisions of NSPS Subpart A, unless specifically excluded. The Wood-fired Boiler (Source Code: WB) is currently operating and the notifications required per 40 CFR 60.7(a)(4) and 40 CFR 60.7(a)(3) were provided. The facility has performed the testing per the requirements of 40 CFR 60.8. Please refer to section IV of this narrative for further discussion of the testing performed. 40 CFR 60.7(b) requires the facility to maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the Wood-fired Boiler (Source Code: WB).

NSPS Subpart Dc

Natural gas-fired Boiler (Source Code: OB5)

This boiler is a 85.9 MMBTU/hr Natural Gas-fired Boiler and is subject to the New Source Performance Standard (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Dc. This standard applies for boilers less than 100 MMBtu/hr, but greater than or equal to 10 MMBtu/hr, and that are constructed, modified, or reconstructed after June 9, 1989.

NSPS 40 CFR 60 Subpart Dc applies to the Natural gas-fired boiler (Source Code: OB5), though due to the use of only natural gas as a fuel, there are no applicable emission limits. As such, compliance with the NSPS will be demonstrated by recordkeeping showing that natural gas is the only fuel burned in this boiler when and if it is operated.

NSPS Subpart Db

Wood-fired Boiler (Source Code: WB)

Because the Wood-fired boiler (Source Code: WB) has a heat input capacity of greater than 100 MMBtu/hr and was constructed, modified, or reconstructed after June 19, 1984, it is subject to the New Source Performance Standard (NSPS) for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Db. Because the boiler does not burn any coal, oil, or natural gas, only the PM standards of the NSPS applies (i.e., the SO_2 and NO_x standards in 40 CFR 60.42b and 60.43b, respectively, are not applicable).

Since the boiler combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of greater than 250 MMBtu/hr, it is subject to a PM emission limit of 0.10 lb/MMBtu [40 CFR 60.43b(c)(1)]. Also, because the boiler combusts wood, it is subject to a limit of 20% opacity (6-minute average), except for one 6-minute period per hour of no more than 27% opacity [40 CFR 60.43b(f)]. Also, since the boiler is subject to an opacity standard under 40 CFR 60.43b, the Multitrade facility is required to install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS)[40 CFR 60.48b(a)]. The prior use of a wet scrubber (WS) to control PM rendered a COMS ineffective and the COMS was not required. Since the facility has installed a dry ESP (ESP1) in the place of the wet scrubber (WS), a COMS is now a NSPS requirement for monitoring opacity from the Wood-fired boiler (WB).

The lower PM emission limits of 0.085 lb/MMBtu listed in 40 CFR 60.43b(h)(4) or 0.030 lb/MMBtu listed in 40 CFR 60.43b(h)(1) do not apply as the maintenance/upgrades to the existing Wood-fired Boiler's (WB) feedwater heater, overfire air system and grates do not constitute a modification, as defined by 40 CFR 60.2, because emissions of PM, the only regulated pollutant, are decreased.

Also, the NSPS reconstruction criteria are not triggered since the installed cost of a new equivalent Wood-fired Boiler, per the estimate from Babcock Borsig Power, Inc in Appendix C of the Application No. 18100, would be $8,261,000 and the costs associated with the boiler upgrades,

detailed in Table 1 of the application, are estimated to be approximately $450,000, which is far below the 50% reconstruction cost threshold.

Georgia Rules for Air Quality Control – Chapter 391-3-1

Georgia Emission Standards

The facility is subject to the following specific Georgia Rules for Air Quality Control – Chapter 391-3-1:

Georgia Rule 391-3-1-.03(6)(c)7

Storage Tanks Exemptions:

The regulation exempts all chemical storage tanks with a true vapor pressure less than or equal to 10 mm of mercury (1.3 Kpa). All of the facility storage tanks are exempted.

Rule 391-3-1-.02(2)(d)

Wood-fired Boiler (Source Code: WB)

Fuel-burning Equipment: The following limits apply to the Wood-fired Boiler (Source Code: WB) boiler:

PM: 0.10 lb/MMBtu (where P = allowable weight of emissions of fly ash and/or other particulate matter in pounds per million BTU heat input, heat input = 377 million BTU per hour)

Opacity: 20%, except for one 6-minute period per hour of no more than 27% opacity. This rule subsumes rule 391-3-1-.02(2)(b) and is identical to the opacity and PM emission limits of NSPS Subpart Db for the Wood-fired Boiler (WB).

Operation of the COMS is used to demonstrate compliance with this standard. Note that the Rule (d) NO_x limit applicable to fuel-burning equipment does not apply to the Wood-fired Boiler (Source Code: WB) since it does not burn coal, oil, or natural gas.

Natural gas-fired Boiler (Source Code: OB5)

Fuel-burning Equipment: The following limits apply to the Natural gas-fired Boiler (Source Code: OB5):

PM: 0.17 lb/MMBtu (or $P= 0.5(10/R)^{0.5}$ pounds per million BTU heat input; where P = allowable weight of emissions of fly ash and/or other particulate matter in pounds per million BTU heat input, and R = heat input of fuel-burning equipment in million BTU per hour; heat input = 85.9 million BTU per hour)

Opacity: 20%, except for one 6-minute period per hour of no more than 27% opacity. This rule subsumes rule 391-3-1-.02(2)(b).

Rule 391-3-1-.02(2)(g)

Wood-fired Boiler (Source Code: WB)

Sulfur Dioxide: The following limit applies to the Wood-fired Boiler (Source Code: WB): Fuel sulfur content of no more than 3% by weight. Biomass is naturally low in sulfur.

Natural gas-fired Boiler (Source Code: OB5)

Sulfur Dioxide: The following limit applies to the Natural gas-fired Boiler (Source Code: OB5) and is subsumed by Permit Condition No. 3.2.2 which limits the Natural gas-fired Boiler (Source Code: OB5) to only fire natural gas and natural gas has a sulfur content that is well below the sulfur weight limit specified in this rule: Fuel sulfur content of no more than 2.5% by weight.

Rule 391-3-1-.02(2)(jjj)

Wood-fired Boiler (Source Code: WB)

Note that Rule 391-3-1-.02(2)(jjj) NO_x Emissions from Electric Utility Steam Generating Units does not apply because the Wood-fired Boiler (Source Code: WB) is not coal-fired and is not located in one of the counties subject to this standard.

Rule 391-3-1-.02(2)(n)

Facility-wide

Fugitive Dust: The Multitrade facility is required to take all reasonable precautions to prevent fugitive dust from becoming airborne and to maintain visible emissions from fugitive dust below 20% opacity.

C. Permit Conditions

Permit Condition No. 3.2.1a. allows the facility to only fire untreated wood biomass in the Wood-fired Boiler (Source Code: WB).

State Only-Enforceable Permit Condition No. 3.2.1b. allows the facility to only fire untreated wood biomass from forestry residue, mill residue and clean urban wood waste in the Wood-fired Boiler (Source Code: WB). The purpose of specifying untreated wood is simply to clearly identify this boiler as not an incinerator.

Permit Condition No. 3.2.2 allows the facility to only fire natural gas in the Natural Gas-fired Boiler (Source Code: OB5).

Permit Condition No. 3.2.3 states the facility shall run the Dry Electrostatic Precipitator (APCD ID No. ESP1) and the Catalyst Oxidation Bed (APCD ID No. CBI) at all times that Wood-fired Boiler (Source Code: WB) is in operation, except during startup, shutdown and malfunction.

Permit Condition No. 3.3.1 requires the Wood-fired Boiler (Source Code: WB) to meet the requirements of 40 CFR 60, Subpart A "General Provisions" and 40 CFR Subpart Db "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units".

Permit Condition No. 3.3.2 requires the Natural Gas-fired Boiler (Source Code: OB5) to meet the requirements of 40 CFR 60, Subpart A "General Provisions" and 40 CFR Subpart Dc "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units".

Permit Condition No. 3.3.3 states the 40 CFR 60 Subpart Db requirements for PM emissions and opacity from the exhaust of the Wood-fired Boiler (Source Code: WB).

Permit Condition No. 3.3.4 states that the facility must meet the requirements of the National Emission Standards for Hazardous Air Pollutants for Area Sources (NESHAP): Industrial Commercial, and Institutional Boilers, 40 CFR 63, Subpart JJJJJJ for the Wood-fired Boiler (Source Code: WB).

Permit Condition No. 3.4.1 states Georgia Rule 391-3-1-.02(2)(g)2 which requires the sulfur content of the wood fired in the Wood-fired Boiler (Source Code: WB) not to exceed 3 percent sulfur, by weight.

Permit Condition No. 3.4.2 states Georgia Rule 391-3-1-.02(2)(g)2 which requires the sulfur content of natural gas fired in the Natural Gas-fired Boiler (Source Code: OB5) not to exceed 2.5 percent sulfur, by weight.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

On July 7, 2010 to July 8, 2010, initial testing was performed by the facility to comply with Permit Condition No. 3.3.3a. that limits particulate matter to no more than 0.10 pounds per million BTU heat input in the Dry Electrostatic Precipitator Exhaust from the Wood-fired Boiler (Source Code: WB) as an allowable emission rate and as required by 40 CFR 60 Subpart Db. The test result was an average of three one-hour runs. The test result showed an average total PM emission rate of 0.008 pounds per million BTU heat input, which is in compliance with the PM emission limit. The Permittee shall conduct performance tests for filterable and total particulate matter (PM) on an annual basis. The testing will be every two years if the filterable particulate matter test result is less than 50% of the limit in Permit Condition No. 3.3.3a. These requirements are listed in Permit Condition No. 4.2.1 of this permit.

On June 5, 2010, to June 12, 2010, initial performance specification testing was conducted for the Continuous Opacity Monitoring System (COMS) on the Dry Electrostatic Precipitator Exhaust from the Wood-fired Boiler (Source Code: WB). Permit Condition No. 5.2.1c. requires this COMS to show compliance with Permit Condition No. 3.3.3b. for visible emissions and/or the opacity limit of 20 percent (6-minute average) except for one 6-minute period per hour of not more than 27% opacity.

In order to comply with Previous Condition No. 5.2d. in the construction Permit No. 4911-241-0018-E-01-0, Relative Accuracy Test Audit (RATA) Report Review was performed.

On July 9, 2010, Relative Accuracy Test Audit (RATA) Report Review was conducted to determine the mass emissions per unit time for the CO and NOx Continuous Emission Rate Monitoring Systems (CERMS) on the Dry Electrostatic Precipitator Exhaust from the Wood-fired Boiler (Source Code: WB).

Permit Condition Nos. 5.2.1a. and 5.2.1b. require a CERMS to provide data for the record keeping requirements in Permit Condition Nos. 6.2.1a. and 6.2.1b. These record keeping requirements demonstrate compliance with Permit Condition No. 2.1.1 for NOx and CO emissions. This RATA passed.

Testing for HAPs (Hazardous Air Pollutants)

HCL

On July 9, 2010, initial testing was performed by the facility to comply with Previous Permit Condition No. 6.4 in the construction Permit No. 4911-241-0018-E-01-0. This condition requires performance testing to determine the amount of HCL in the Dry Electrostatic Precipitator Exhaust. The test result was based on an average of three one-hour runs. The test result showed an emission rate of 0.24 pounds per hour. Assuming boiler operation of 8,760 hours per year, this HCL emission rate of 0.24 pounds per hour (lb/hr) is equivalent to approximately 1 ton per year (tpy). Tested HCL emissions are significantly less than the major source threshold for any single HAP, which is 10 tpy. Therefore, no future testing for HCL emissions is required for the Wood-fired Boiler (Source Code: WB).

Acrolein

On July 7, 2010, to July 8, 2010, initial testing was performed by the facility to comply with Previous Permit Condition No. 6.4 in the construction Permit No. 4911-241-0018-E-01-0. This condition requires performance testing to determine the amount of Acrolein in the Dry Electrostatic Precipitator Exhaust. The test result was based on an average of three one-hour runs. The test result showed an emission rate of 0.21 pounds per hour. Assuming boiler operation of 8,760 hours per year, this Acrolein emission rate of 0.21 pounds per hour (lb/hr) is equivalent to approximately 0.92 ton per year (tpy). Tested Acrolein emissions are significantly less than the major source threshold for any single HAP, which is 10 tpy. Therefore, no future testing for Acrolein emissions is required for the Wood-fired Boiler (Source Code: WB).

Styrene AKA - Ethenylbenzene

On July 7, 2010, to July 8, 2010, initial testing was performed by the facility to comply with Previous Condition No. 6.4 in the construction Permit No. 4911-241-0018-E-01-0. This condition requires performance testing to determine the amount of Styrene in the Dry Electrostatic Precipitator Exhaust. The test result was based on an average of three one-hour runs. The test result showed an emission rate of 0.02 pounds per hour (lb/hr). Assuming boiler operation of 8,760 hours per year, this Styrene emission rate of 0.02 pounds per hour (lb/hr) is equivalent to approximately 0.09 ton per year (tpy). Tested Styrene emissions are significantly less than the major source threshold for any single HAP, which is 10 tpy. Therefore, no future testing for Styrene emissions is required for the Wood-fired Boiler (Source Code: WB).

Formaldehyde

On July 9, 2010, initial testing was performed by the facility to comply with Previous Condition No. 6.4 in the construction Permit No. 4911-241-0018-E-01-0. This condition requires performance testing to determine the amount of Formaldehyde in the Dry Electrostatic Precipitator Exhaust. The test result was based on an average of three one-hour runs. The test result showed an emission rate of 0.137 pounds per hour (lb/hr). Assuming boiler operation of 8,760 hours per year, this Formaldehyde emission rate of 0.137 pounds per hour (lb/hr) is equivalent to approximately 0.6 ton

per year (tpy). Tested Formaldehyde emissions are significantly less than the major source threshold for any single HAP, which is 10 tpy. Therefore, no future testing for Formaldehyde emissions is required for the Wood-fired Boiler (Source Code: WB).

Total Hazardous Air Pollutants (HAPs)

The HAPs, hydrogen chloride, benzene, formaldehyde, acrolein and styrene, are the HAPs present in the wood in larger quantities, and the Previous Permit Condition No. 6.4 in the construction Permit No. 4911-241-0018-E-01-0, required performance testing for these pollutants. Using AP-42 emission factors, and substituting the pollutant performance test emission factor data where applicable, the following results are shown below in Table 4:

Table 4

Pollutant Tons/year	Wood-fired Boiler (Source Code: WB)	Natural gas-fired Boiler (Source Code: OB5)	Facility Wide Emissions (tpy)	Major Source Threshold (tpy)
Total HAPs	5.07	0.694	5.76	25
HCL	1.05	0	1.05	10
***Benzene**	0.193	0.000775	0.194	10
Formaldehyde	0.601	0.03	0.631	10
Acrolein	0.915	0	0.915	10
Styrene	0.0876	0	0.088	10

***Estimated from test data for Styrene**

Summary

Total HAPs emissions from the facility are 5.76 tpy. HCL, which has the highest single HAP emissions from the facility, is approximately 1.05 tpy. Thus, the performance testing establishes the Multitrade Rabun Gap, LLC. facility as an area source of HAPs relative to the 40 CFR 63 MACT standards. No future testing and/or recordkeeping for HAPs is required because the facility's emission for HAPs are significantly less than the 10/25 tpy major source threshold.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

Permit Condition No. 5.2.1 requires the facility to install, calibrate, maintain and operate a CO CERMS, NOx CERMS and COMS for the Wood-fired Boiler (Source Code: WB). The facility is required to monitor CO, NOx and opacity to show compliance with Permit Condition No. 2.1.1 for NOx and CO and Permit Condition No. 3.3.3 for PM and opacity.

Permit Condition No. 5.2.2 requires the facility to install, calibrate, maintain and operate a system to continuously monitor and record the total power (kVA) from the Dry Electrostatic Precipitator (APCD ID No. ESP1).

Permit Condition No. 5.2.3 is the monitoring requirement per the Area Source Boiler, MACT, 40 CFR 63 Subpart JJJJJJ for the Wood-fired Boiler (Source Code: WB).

C. Compliance Assurance Monitoring (CAM)

Wood-fired Boiler (Source Code: WB)

The Wood-fired Boiler (Source Code: WB) contributes to the facility-wide CO limit in Permit Condition No. 2.1.1 and has its own *control device* to achieve compliance, namely a Catalyst Oxidation Bed System (APCD ID No. CBI). A catalyst oxidation bed meets the definition of *control device* as defined in Part 64.1. The potential post-controlled emissions of CO are at least 100 percent of the major source threshold for CO, so therefore, the Wood-fired Boiler (Source Code: WB) unit is a large *PSEU* for CO emissions.

Emission Unit	Pollutant	Stack Number	Control Device
Wood-fired Boiler (Source Code: WB)	CO	WB	CBI

However, the unit is not subject to CAM for CO. The CO CERMs is listed as the continuous compliance determination method for the facility wide CO limit as defined in Permit Condition No. 4.1.3j. Therefore, the facility is exempt per 40 CFR 64.2(b)(vi).

The requirements of Part 64 do not apply to the Wood-fired Boiler (Source Code: WB) for NOx and VOC emissions because there is no control device for these air pollutants. The Wood-fired Boiler (Source Code: WB) is configured with combustion modification technologies to minimize the formation of NOx, CO and VOC, but these technologies are not considered control devices under Part 64. Part 64 states that a control device does not include passive control measures that act to

prevent pollutants from forming, such as the use of combustion or other process design features or characteristics.

The Wood-fired Boiler (Source Code: WB) does have a PM Control device, namely the Dry Electrostatic Precipitator (APCD No. ESP1), and the requirements of Part 64 do apply to the Wood-fired Boiler (Source Code: WB), since it is an existing unit with pre-controls emissions of particulate matter > 100 tpy. Condition 5.2.2 requires a continuous compliance determination method for monitoring the kVA, yet the continuous method does not meet the definition as stated below:

§64.1 Definitions.

Continuous compliance determination method means a method, specified by the applicable standard or an applicable permit condition, which:

(1) Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and

(2) Provides data either in units of the standard or correlated directly with the compliance limit.

The facility is continuously monitoring Total Power, KVa, on an hourly basis, as an indication of particulate matter removal efficiency. This unit does not correlate directly with the compliance limit in Condition 3.3.3 of 0.10 lb/MMBtu Heat Input, and the Wood-fired Boiler (Source Code: WB) is not exempted per 64.2(b)(1)(vi).

Permit Condition Nos. 5.2.4 and 5.2.5 contain the CAM plan requirements.

Natural Gas Fired Boiler (Source Code: OB5)

The requirements of Part 64 do not apply to the Natural Gas-fired boiler (Source Code: OB5) because this unit does not have a control device.

Summary

Multitrade Rabun Gap, LLC. submitted a CAM plan along with the initial updated electronic Title V application dated February 28, 2011, and the facility proposed to use the CO Continuous Emissions Rate Monitoring System (CERMS) located in the Dry Electrostatic Precipitator exhaust to satisfy the requirements of Part 64; the CO CERMS is the primary indicator of proper control device operation for carbon monoxide. CO is monitored continuously, and the data acquisition system retains all one-minute CO data, which is used to calculate one-hour block averages. The facility-wide CO limit is 249 tons per year CO for any twelve consecutive months.

However, the facility is not subject to CAM for CO, NOx, or VOC. The CO CERMs is listed as the continuous compliance determination method for the facility wide CO limit as defined in Permit Condition No. 4.1.3j. Therefore, the facility is exempt per 40 CFR 64.2(b)(vi) from the CAM Plan requirements for CO.

With the renewal application TV-602182 dated October 19, 2021, the facility is subject to CAM for PM Emissions, and has control device ESP1 for particulate matter. As explained above the continuous monitoring of the total power kVA, does not exempt the facility per 40 CFR 64.2(b)(vi).

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a [quarterly or semiannual] basis.

B. Specific Record Keeping and Reporting Requirements

Permit Condition No. 6.2.1 provides a formula for the facility to use in order to calculate and record monthly the facility-wide NOx and CO emissions.

Permit Condition No. 6.2.2 requires that the monthly NOx and CO emissions are recorded, and all demonstration calculations shall be kept as part of the records required in Permit Condition No. 6.2.1. This condition also requires reporting to the Division if either the monthly NOx or CO emissions exceed 20.75 tons from the entire facility. Also, the condition requires reporting to the Division, if the NOx or CO emissions exceed 249 tons from the entire facility, during any twelve consecutive months, and how the facility will maintain compliance with the emission limit in Permit Condition No. 2.1.1.

Permit Condition No. 6.2.3 requires measurement and recording of the amount and type of the wood biomass fuel burned in Boiler (Source Code: WB) on a monthly basis, as well as calculation of the total amount of fuel burned on a monthly basis.

Permit Condition No. 6.2.4 requires that the facility keep a monthly record of natural gas consumed in boiler OB5.

Permit Condition No. 6.2.5 requires that the facility keep monthly records of the hours of operation of boiler OB5.

Permit Condition Nos. 6.2.6 and 6.2.7 are the recordkeeping and reporting requirements per the Area Source Boiler, MACT, 40 CFR 63 Subpart JJJJJJ for the Wood-fired Boiler (Source Code: WB).

State Only-Enforceable Permit Condition No. 6.2.8 requires that the facility keep records that document, that untreated wood biomass from forestry residue, mill residue and clean urban wood waste only, is received, and stored for firing in the Wood-fired Boiler (Source Code: WB).

VII. Specific Requirements

A. Operational Flexibility

None applicable.

B. Alternative Requirements

None applicable.

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

None applicable.

E. Short-Term Activities

None applicable.

F. Compliance Schedule/Progress Reports

None applicable.

G. Emissions Trading

None applicable.

H. Acid Rain Requirements

None applicable.

I. Stratospheric Ozone Protection Requirements

None applicable.

J. Pollution Prevention

None applicable.

K. Specific Conditions

None applicable.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//