UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

July 26, 2022

Mr. Scott Hankins
Plywood Plant Manager
Georgia-Pacific Wood Products LLC
P.O. Box 555
Taylorsville, Mississippi 39168

Dear Mr. Hankins:

This is in response to your letter dated May 27, 2022, to the Mississippi Department of Environmental Quality, Office of Pollution Control, requesting approval of a continuous monitoring system (CMS) plan petition for Title 40, Code of Federal Regulation (CFR), Part 63, Subpart YYYY - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines, as it applies to Georgia-Pacific Wood Product's (GP) combustion turbine AA-900 located at GP's Plywood Plant in Taylorsville, Mississippi. Due to the nature of the request and delegation of authority, the MDEQ informed you that it is necessary for the EPA to provide a response to you. On June 13, 2022, you electronically transmitted your CMS plan petition to EPA.

The EPA requested additional information from your contact, Mr. Jeff Bonkoski, Environmental Manager, on June 29, 2022, June 30, 2022, July 1, 2022, July 6, 2022, and July 11, 2022, and received information on June 29, 2022, June 30, 2022, July 6, 2022, July 7, 2022, July 11, 2022, and July 13, 2022. Based on our review of all available information, including additional information provided by Mr. Bonkoski, your proposed CMS plan is acceptable. Details regarding the CMS Plan and the bases for our determination are provided in the remainder of this letter.

Description of Combustion Turbine Unit AA-900

Emission point AA-90 (ID EQPT23) is a 7,691 kilowatt (kW) Solar Model Taurus 70 natural gas-fired lean premix combustion turbine (turbine) using a SoLoNOx Dry Low Emissions Combustion System. The turbine is equipped with a heat recovery steam generator. Since the turbine was constructed in 2018, it is a new affected source (constructed after July 14, 2003) under Subpart YYYY. The unit is not equipped with an oxidation catalyst to control emissions of formaldehyde.

Description of GP's CMS Petition

GP proposes to continuously monitor and record turbine power output (kW) and indication of lean-premix mode operation to ensure compliance with the formaldehyde emission standard. To establish the operating limits range for turbine power output, GP proposes to conduct formaldehyde emission standard compliance testing at two turbine operating power output levels to determine the operating

limit range for power output: maximum operating power output (high-power output) (100% capacity, ± 10%) and low-power output (anticipated at 20-50% of maximum power output).

GP affirms ambient air temperature, pressure, and humidity are not measured and used as process control inputs to the programmable logic controllers governing turbine operation but affirms power output of the turbine is affected these parameters. GP noted Solar Turbines Inc. product information letter(s) and intended design product literature which depict the correlation of ambient air temperature and specified turbine power output. The turbine operates to maintain flame temperature in the combustion zone, rather than relying on the input of ambient air temperature, pressure, and humidity as process control parameters. The turbine's designed operating range, by specification, is 0 degrees Fahrenheit (°F) – 121 °F. GP proposes to monitor the turbine system's lean-premix mode indication sensor (On/Off, True/False, Enables/Disabled, or equivalent) which indicates that the turbine is operating in the lean-premix mode, which is also the SoLoNOx mode. The lean-premix mode of operation ensures good combustion practices are being achieved during operation of the turbine and is only indicated during normal operations. GP has identified the operation and maintenance manual for the power output meter, which describes the recommended operation and maintenance procedures, to include meter verification procedures. Eaton, the manufacturer of the power output meter, verified that the instrument is factory calibrated using a National Institute of Standards (NIST) protocol and does not require periodic calibration, only periodic accuracy verification.

GP proposes to: 1) monitor turbine power output and lean-premix mode indication at a minimum frequency of at least once every 15 minutes during formaldehyde emission standard compliance demonstration testing at low-power output and high-power output operations, and 2) determine the power output hourly average of the 15-minute readings and three-hour rolling-averages from the hourly averages, to establish the power-output range operating limits to indicate compliance with the formaldehyde emission standard during non-testing period. After testing, GP proposes to continuously monitor and record the rolling three-hour average turbine power output to indicate compliance with the operating limit range established by the formaldehyde emission standard testing. Also, following testing, GP proposes to monitor and record lean-premix mode of operation at a minimum frequency of at least once every 15-minutes to verify the turbine's lean-pre-mix mode of operation.

EPA's Review of Subpart YYY Standards and CMS Petition Requirements

Under 40 CFR § 63.6085, owners and operators are subject to Subpart YYYY if they own or operate a stationary combustion turbine located at a major source of HAP emissions. Under 40 CFR § 63.6090(a)(2), a stationary combustion turbine is a new source if construction commenced after January 14, 2003. Under 40 CFR § 63.6095(a)(3), new lean-premix gas-fired stationary combustion turbines which start operation on or before March 9, 2022, must comply with the emissions limitations and operating limitations in this subpart no later than March 9, 2022. Under 40 CFR § 63.6100, each new lean-premix gas-fired stationary combustion turbine must comply with the emission limitations and operating limitations in Table 1 and Table 2 of Subpart YYYY, respectively. Table 1 of Subpart YYY limits the concentration of formaldehyde to 91 parts-per-billion by volume, dry basis (ppbvd) or less at 15-percent O_2 for new lean-premix gas-fired stationary combustion turbines, except during turbine startup, shutdown, and malfunction events. Table 2 of Subpart YYYY requires owners/operators to maintain operating limitations approved by the Administrator to continuously demonstrate compliance with the emission limit during non-testing periods.

Under 40 CFR § 63.6105(a), after September 8, 2020, owners/operators must comply with the applicable emission limitations, operating limitations, and other requirements of Subpart YYYY. Under 40 CFR § 63.6105(c), after September 8, 2020, owners/operators must always operate and maintain any affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Under 40 CFR § 63.6110(a), owners/operators must conduct the initial performance tests or other initial compliance demonstrations in Table 4 to Subpart YYYY that apply within 180 calendar days after the compliance date specified (*e.g.*, by September 5, 2022) for affected source stationary combustion turbines according to the provisions in 40 CFR § 63.7(a)(2) unless a historical test may be accepted according to the provisions of 40 CFR § 63.6110(b). Under 40 CFR § 63.6115, subsequent performance tests must be performed on an annual basis as specified in Table 3 to Subpart YYYY.

Under 40 CFR § 63.6125(b), for stationary combustion turbine not using an oxidation catalyst to comply with the formaldehyde emission limit, owners/operators must continuously monitor any parameters specified in your approved petition to the Administrator, to comply with the operating limitations in Table 2 to Subpart YYYY, and as specified in Table 5 to Subpart YYYY.

Under 40 CFR § 63.6120(f), for stationary combustion turbines not equipped with an oxidation catalyst, owners/operators may petition the Administrator for approval of operating limitations to demonstrate compliance with the formaldehyde emission limitation during non-testing periods. In these cases, the petition must include:

(1) Identification of the specific parameters you propose to use as additional operating limitations;
(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters and how limitations on these parameters will serve to limit HAP emissions;
(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

Under 40 CFR § 63.6125(e), after September 8, 2020, for owners/operators using a CMS to indicate compliance with the formaldehyde emissions standard during non-testing periods, a CMS quality control program must be developed and implemented which includes written procedures for the CMS according to § 40 CFR § 63.8(d)(1-2). Additionally, a program of corrective action should be included in the plan required under 40 CFR § 63.8(d)(2).

Under 40 CFR § 63.6135(a), except for monitor malfunctions, associated repairs, and required applicable quality assurance or quality control activities, owners/operators must always conduct all parametric monitoring when the stationary combustion turbine is operating.

Under 40 CFR § 63.6120(e), when a CMS petition is required to be submitted to the Administrator, owners/operators must not conduct the initial performance test until after the petition has been approved or disapproved by the Administrator.

The EPA's Determination for GP's CMS Plan Petition

Based on supporting and available information, the following CMS plan is acceptable to the EPA:

i.) The normal power output operating limit range must be established by the conduct of formaldehyde emission standard compliance demonstration testing events. GP must conduct testing at high-power output (regulatory requirement @ 100% power output capacity, ± 10%) and minimum-power output (low-power output) (GP's discretion, subject to lean-premix mode of operation) to successfully demonstrate compliance with the emission standard at the low-power and high-power output production levels. Testing, for the purposes of this approval, must not include data from startup, shutdown, or malfunction events.

ii.) Turbine power output and lean-premix mode indication shall be monitored and recorded at a minimum frequency of at least once every 15 minutes during testing conducted to successfully demonstrate compliance with the formaldehyde emission standard promulgated in 40 CFR § 63.6100 and Table 1 to Subpart YYYY.

iii.) The hourly low-power output for the turbine shall be determined by computing hourly averages using all 15-minute readings taken during the low-power output formaldehyde emission standard compliance demonstration testing event. The three-hour rolling-average low-power output for the turbine shall be determined by computing the three-hour average using all hourly averaged readings taken during the low-power output formaldehyde emission standard compliance testing event. The three-hour rolling-average low-power output must be used to establish the low-power output operating limit for the turbine's power output operating range.

iv.) The hourly high-power output for the turbine shall be determined by computing hourly averages using all 15-minute readings taken during the high-power output formaldehyde emission standard compliance demonstration testing event. The three-hour rolling-average high-power output for the turbine shall be determined by computing the three-hour average using all hourly averaged readings taken during the high-power output formaldehyde emission standard compliance testing event. The three-hour rolling-average high-power output must be used to establish the high-power output operating limit for the turbine's power output operating range.

v.) Indication of lean-premix mode operation must be continuously monitored and recorded at a minimum frequency of at least once every 15 minutes during low-power output and high-power output formaldehyde emission standard compliance testing events, respectively, and continuously thereafter.

vi.) The turbine power output operating limit range must be established by (iii) and (iv). The three-hour rolling-average turbine power output must be maintained within the operating range determined by testing which successfully demonstrates compliance with the formaldehyde emission standard.

vii.) Except for startup, shutdown, and malfunction events, the turbine must be operated in the lean-premix mode of operation to ensure compliance with this approval.

viii.) Following formaldehyde emission compliance demonstration testing, the three-hour rolling-average turbine power output must be continuously monitored and recorded. However, data collected during startup, shutdown, and malfunction events must not be included in the calculations for the three-hour rolling-average power output determination used to indicate compliance with the formaldehyde emission standard during normal operation (*e.g.*, lean-premix indication operation).

ix.) GP must verify the turbine power output meter's accuracy once annually according to the manufacturer's recommend procedures and maintain records of the annual verifications for inspection purposes.

x.) In addition to annual formaldehyde emission standard compliance demonstration testing required under 40 CFR § 63.6115 for the turbine high-power output operation, GP must also conduct testing for the turbine low-power output operation annually to verify, or adjust, the turbine power output limit range to assure GP maintains proper maintenance of the power output operating limits range for CMS plan purposes.

The EPA's approval of GP's CMS plan is based on information provided in the original submission, information provided by GP in response to EPA's additional information requests, discussions with GP, and research conducted by the EPA. The EPA's approval is contingent on successful demonstration of formaldehyde emission standard compliance demonstration testing events. Should GP change the operating conditions of the turbine to an operation which is different than the operating conditions represented in this approval such that formaldehyde emissions increase because of the change, GP must submit a revised CMS plan petition to address the change(s).

Nothing in this CMS plan approval excludes the EPA from reopening this CMS plan approval to adjust its conditions, if needed, for enhancement of emission standard compliance assurance. Finally, if GP discovers an additional parameter, or additional parameters, which indicate additional parametric monitoring operating limits are necessary to assure compliance with the formaldehyde emission standard, GP must submit a revised CMS plan petition to the EPA to revise the CMS plan and incorporate the additional operating limit(s) based on the discovery.

Please note that our approval does not alter GP's obligations to meet all other applicable NESHAP, including, but not limited to, the following NESHAP General Provisions:

- The requirement to maintain and operate affected facilities and associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, per §63.453(q) and

- The prohibition against concealing emissions which would otherwise constitute a violation of an applicable standard, including the use of gaseous diluents to achieve compliance with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere, per §63.4.

This CMS petition approval was coordinated with the EPA's Office of Enforcement and Compliance Assurance and Office of Air Quality Planning and Standards. If you have any questions about this CMS petition conditional approval, please contact Tracy Watson at (404) 562-8998, or by email at watson.marion@epa.gov.

Sincerely,

CAROLINE FREEMAN

Digitally signed by CAROLINE FREEMAN
Date: 2022.07.26 17:42:23 -04'00'

Caroline Y. Freeman
Director
Air and Radiation Division

cc: Sara Ayres, EPA OECA
Melissa Fortenberry, MDEQ
Melanie King, OAQPS