

Air Permit Review

Permit Issue Date: **date, 2011**

Region: Asheville Regional Office
County: Caldwell
NC Facility ID: 1400167
Inspector's Name: Patrick Ballard
Date of Last Inspection: 01/27/2011
Compliance Code: W / Violation - procedures

| | | | |
|---|--|--|---|
| Facility Data | | | Permit Applicability (this application only) |
| <p>Applicant (Facility's Name): Woodgrain Millwork, Inc.</p> <p>Facility Address: Woodgrain Millwork, Inc. 700 Complex Place Lenoir, NC 28645</p> <p>SIC: 4961 / Steam Supply NAICS: 22133 / Steam and Air-Conditioning Supply</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p> | | | <p>SIP: NSPS: NESHAP: 15A NCAC 2D .1111 (40 CFR 63, Subpart JJJJJ) PSD: PSD Avoidance: NC Toxics: 112(r): Other:</p> |
| Contact Data | | | Application Data |
| Facility Contact | Authorized Contact | Technical Contact | <p>Application Number: 1400167.11A and 1400022.11A Date Received: 02/11/2011 Application Type: Renewal/Modification and State Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 07568/T10 Existing Permit Issue Date: 02/22/2008 Existing Permit Expiration Date: 06/30/2011</p> |
| <p>Steven Bowman HR Manager (276) 783-2883 P.O. Box 948 Marion, VA 24354</p> | <p>Robb Hitch General Manager (276) 783-2883 P.O. Box 948 Marion, VA 24354</p> | <p>Steven Bowman HR Manager (276) 783-2883 P.O. Box 948 Marion, VA 24354</p> | |
| <p>Review Engineer: Mark Cuilla</p> <p>Review Engineer's Signature: Date: date, 2011</p> | | <p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 07568/T11 Permit Issue Date: date, 2011 Permit Expiration Date: date, 2016</p> | |

I. Purpose of Application

This permitting action is for the following:

1. Renewal of an existing Title V permit pursuant to 2Q .0513. The existing Title V permit (**07568T10**) was issued on **February 22, 2008**, with an expiration date of **June 30, 2011**. The renewal application was received on **February 11, 2011**. This submittal date was not at least nine months prior to the expiration date. Therefore, the permit shield extended to timely submittals is not applicable to this submittal. If the permit is not issued prior to the original expiration date, the permit may expire. All terms and conditions of the existing permit shall remain in effect until either the renewal permit has been issued or denied or the eclipse of the original expiration date, whichever is earlier; and

2. Renewal of an existing synthetic minor permit pursuant to 2Q .0304(d) and (f). The existing synthetic minor permit (**02151R25**) was issued on **January 18, 2008**, with an expiration date of **April 30, 2011**. The renewal application was received on **February 11, 2011**. This submittal date was not at least 90 days prior to the expiration date. Therefore, the permit shield extended to timely submittals is not applicable to this submittal. If the permit is not issued prior to the original expiration date, the permit may expire. All terms and conditions of the existing permit shall remain in effect until either the renewal permit has been issued or denied or the eclipse of the original expiration date, whichever is earlier.
3. Consolidation of permits **07568** and **02151** under one permit (per 15A NCAC 2Q .0501). 40 CFR 70.2 defines major source as:

“...any stationary source (or any group of stationary sources that are located on one or more contiguous or adjacent properties, and are under common control of the same person (or persons under common control)) belonging to a single major industrial grouping...”

Since 2008 these two facilities have been under common ownership (see timeline in Section III below) and are contiguous and adjacent. They do not belong to the same SIC, however, EPA recognizes cases where facilities are operating as support facilities. In this case, the steam generating capabilities are in support of the [wood drying kilns](#); therefore, for both PSD and Title V purposes, these two facilities are considered a major source. Per 15A NCAC 2Q .0501(c)(2), the Permittee should have submitted a permit modification to consolidate both permits into one at the time of the ownership change. This requirement is being processed as part of this permit renewal process.

II. Facility Description

Woodgrain Millwork, Inc. (**1400167**) – This facility is a steam generating facility, providing steam as a product to local customers. Current permitted equipment includes two gasified woodwaste boilers and two natural gas/No. 2 fuel oil-fired boilers.

Woodgrain Millwork, Inc. (**1400022**) – This facility is part of the former Broyhill Furniture – Miller Hill Complex. The Permittee operates the control devices associated with former woodworking operations to transfer woodwaste from a neighboring wood furniture facility (Blue Ridge Panels – **1400202**) to the boilers located at the steam generating facility it also owns. The current permit also lists dry kilns as operating sources; however, these sources are currently idle and there are no plans to operate them.

III. History/Background/Application Chronology

July 26, 2001 – Permit **07568T07** issued as a first time Title V to Trigen Biopower (**1400167**).

May 5, 2006 – Permit **02151T23** issued as a Title V renewal to Broyhill Furniture Industries Inc. – Miller Hill Complex (**1400022**).

July 20, 2006 – Permit **07568T08** issued as a Title V renewal to Trigen Biopower (**1400167**).

November 15, 2006 – Permit **07568T09** issued as a name change from Trigen Biopower to Suez Energy Biopower, Inc. (**1400167**).

June 4, 2007 – Permit **02151R24** issued to Broyhill Furniture Industries Inc. – Miller Hill Complex (**1400022**) for a fee class change from Title V to Synthetic Minor.

January 18, 2008 – Permit **02151R25** issued as an ownership/name change from Broyhill Furniture Industries Inc. – Miller Hill Complex to Woodgrain Millwork, Inc. – Lenoir (**1400022**).

February 22, 2008 – Permit **07568T10** issued as an ownership change/name change from Suez Energy Biopower, Inc. to Woodgrain Millwork, Inc. (**1400167**).

January 27, 2011 – Patrick Ballard of the ARO completed facility inspections for both Woodgrain Millwork facilities (**1400167 and 1400022**). Each was considered “in compliance” by virtue of shutdown.

February 11, 2011 – Permit applications **1400167.11A** and **1400022.11A** received as TV renewal and State renewal respectively for both Woodgrain Millwork facilities. The State renewal was consolidated into the Title V renewal for processing. Both applications were received late; therefore, the permit shield for timely submittals will not be extended to these applications.

April 25, 2011 – DRAFT permit sent to Permittee and ARO for comment prior to public notice and EPA review. Patrick Ballard of the ARO submitted the following comments via email on **April 26, 2011** (response in italics):

1. in the review under No. 3, Section I, I would state that the boilers support the kilns, not necessarily the woodworking operations. *Agree, change has been made.*
2. Why not go ahead and put a boiler GACT 6J place holder in the permit? *Agree, both the permit and review have been modified to include a discussion of the new regulatory requirement.*
3. in the permit insignificant activities list, I would remove the header “700 Complex Place”. I would then reword the “I-Wood” description to add “associated with Boilers ES-1 and ES-2. *Agree, change has been made.*
4. In the permit equipment list, I would remove “700 Complex Place” and replace with a location grouping “boilers”. Likewise, I would remove “810 Complex Street SW” and replace with location grouping of “Woodworking and Kilns”. I think the addresses are confusing. *Agree, changes have been made.*
5. In the permit, it is confusing if the woodworking operations are currently subject to CAM or not. I would maybe clarify this. *Agree, the permit condition has been modified to require that the Permittee perform an applicability analysis within 30 days of startup and provide an administrative amendment if CAM applies to any or all of the control devices.*

date, 2011 – DRAFT permit sent to 30-day public notice and 45-day EPA review.

IV. Permit Modifications/Changes and ESM Discussion

The following table describes the modifications to the current permit as part of the renewal process.

| Pages | Section | Description of Changes |
|------------|--------------------------|---|
| Attachment | Insignificant activities | -amended permit revision number -amended equipment description per ARO request |
| Cover | - | -amended all dates and permit revision numbers -added physical address for former Woodgrain Millwork (1400022) -corrected mailing address -added SIC grouping of former Woodgrain Millwork (1400022) |
| All | Header | -amended permit revision number |

| Pages | Section | Description of Changes |
|-------|---|--|
| 3-4 | Equipment table | -added location groupings for collection of sources associated with former plants (1400167 and 1400022) -added equipment from former Woodgrain Millwork (1400022) -added GACT designations where necessary |
| 5 | 2.1 A (table) 2.1 A.1.b | -added reference to combustion source GACT -corrected testing rule cross reference |
| 6 | 2.1 A.2.d 2.1 A.2.e 2.1 A.2.g | -added testing requirement to be effective 90 days from restart of sources -corrected regulatory authority reference -updated shell reporting language |
| 8 | 2.1 B (table) 2.1 B.1.c | -added reference to combustion source GACT -corrected testing rule cross reference |
| 9 | 2.1 B.2.b 2.1 B.3.b | -corrected testing rule cross reference -corrected testing rule cross reference |
| 10-13 | 2.1 C 2.1 C.3 | -added regulatory requirements for Woodgrain Millwork (1400022) -added CAM requirements to be effective 30 days from restart of source (if applicable) |
| 14 | 2.2 A (table) 2.2 A.1.b | -added reference to combustion source GACT -corrected testing rule cross reference |
| 16 | 2.2 A.2 | -added combustion source GACT placeholder language |
| 17-27 | General Conditions | -updated general conditions (v3.4) |
| 28 | List of Acronyms | -Added acronyms for CAIR/NAA/RACT per current shell |

TVEE modifications included the consolidation of the two facilities (1400022 and 1400167).

V. Regulatory Review

The newly combined facility is currently subject to the following regulations:

15A NCAC 2D .0502, Purpose
15A NCAC 2D .0503, Particulates from Fuel Burning Indirect Heat Exchangers
15A NCAC 2D .0512, Particulates from Wood Products Wood Finishing Plants
15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
15A NCAC 2D .0521, Control of Visible Emissions
15A NCAC 2D .0524, New Source Performance Standards (40 CFR 60, Subpart Dc)
15A NCAC 2Q .0317, Avoidance Conditions (for 15A NCAC 2D .0530, Prevention of Significant Deterioration)

A regulatory review for these current permit conditions will not be included in this document. As part of this permit renewal, the following regulations have been added to the permit:

15A NCAC 2D .1111, Maximum Achievable Control Technology (40 CFR 63, Subpart JJJJJ).

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS – The Permittee operates two woodwaste-fired boilers (**ID Nos. ES-1 and ES-2**) subject to New Source Performance Standards (40 CFR 60, Subpart Dc). Particulate emissions are limited to less than 0.10 pounds per million Btu heat input and visible emissions shall not be greater than 20 percent opacity. To ensure compliance with these requirements, the Permittee is required to install, calibrate, maintain and operate a continuous opacity monitoring system on each unit and keep records of the amounts of fuel fired each day (including any used oil for start-up purposes). Semiannual reporting of all monitoring and recordkeeping activities is also required. This permit renewal does not affect this status. However, as part of this permit renewal, the Permittee will be required to test each unit for compliance with the particulate emission limit within 90 days of restart of the unit. The Permittee shall also be required to notify the ARO within seven days of the restart.

The current permit includes a permit shield for non-applicable requirements identifying boilers (**ID Nos. ES-3 and ES-4**) as not being subject to New Source Performance Standards (40 CFR 60, Subpart Dc). This permit renewal does not affect this status.

NESHAPS/MACT/GACT – The current permit includes a permit shield for non-applicable requirements identifying this facility as a Title III minor facility. The addition of the equipment (woodworking and kilns) from Woodgrain Millwork (Permit No. **02151R25**) does not affect this status. Therefore, no Maximum Achievable Control Technology Standards are applicable to this facility. This permit renewal does not affect this status.

The Permittee operates two three-pass scotch marine gasified woodwaste-fired boilers (55.5 million Btu per hour heat input, each; **ID Nos. ES-1 and ES-2**) with associated multicyclones (**ID Nos. C1 and C2**), electric precipitator (**ID No. CD-2**) and bagfilter (**ID No. F2**) and two No. 2 fuel oil-fired boilers (97.5 and 23.7 million Btu per hour heat input capacities, respectively; **ID Nos. ES-3 and ES-4**) with no associated control devices subject to 40 CFR 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers. These sources are categorized as existing biomass and existing oil-fired boilers. As such they are subject to the following requirements:

63.11196 - What are my compliance dates?

- (a) The Permittee must achieve compliance with the applicable provisions as follows:
- (1) If the existing affected boiler is subject to a work practice or management practice standard of a tune-up, the Permittee must achieve compliance with the work practice or management standard no later than **March 21, 2012**.
 - (3) If the existing affected boiler is subject to the energy assessment requirement, the Permittee must achieve compliance with the energy assessment requirement no later than **March 21, 2014**.

Emission Limits, Work Practice Standards, Emission Reduction Measures, and Management Practices

63.11201 - What standards must I meet?

- (b) The Permittee must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler. An energy assessment completed on or after **January 1, 2008** that meets the requirements in Table 2 to this subpart satisfies the energy assessment portion of this requirement.
- (d) These standards apply at all times.

General Compliance Requirements

63.11205 - What are my general requirements for complying with this subpart?

- (a) At all times the Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Initial Compliance Requirements

63.11210 - What are my initial compliance requirements and by what date must I conduct them?

- (c) For existing affected boilers that have applicable work practice standards, management practices, or emission reduction measures, the Permittee must demonstrate initial compliance no later than the compliance date that is specified in 63.11196 and according to the applicable provisions in 63.7(a)(2).

63.11214 - How do I demonstrate initial compliance with the work practice standard, emission reduction measures, and management practice?

- (b) If you own or operate an existing biomass-fired boiler or existing oil-fired boiler, the Permittee must conduct a performance tune-up according to 63.11223(b) and you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the boiler.
- (c) If you own or operate an existing affected boiler with a heat input capacity of 10 million Btu per hour or greater, the Permittee must submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed and submit, upon request, the energy assessment report.

Continuous Compliance Requirements

63.11223 - How do I demonstrate continuous compliance with the work practice and management practice standards?

- (a) For affected sources subject to the work practice standard or the management practices of a tune-up, the Permittee must conduct a biennial performance tune-up according to paragraphs (b) of this section and keep records as required in 63.11225(c) to demonstrate continuous compliance. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up.
- (b) The Permittee must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in the following:
 - (1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months).
 - (2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
 - (3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly.
 - (4) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available.

- (5) Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made).
- (6) Maintain onsite and submit, if requested by the Administrator, biennial report containing the following information:
 - (i) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured before and after the tune-up of the boiler.
 - (ii) A description of any corrective actions taken as a part of the tune-up of the boiler.
 - (iii) The type and amount of fuel used over the 12 months prior to the biennial tune-up of the boiler.
- (7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup.

63.11225 - What are my notification, reporting, and recordkeeping requirements?

- (a) The Permittee must submit the following notifications:
 - (1) All of the notifications in 63.7(b); 63.8(e) and (f); 63.9(b) through (e); and 63.9(g) and (h) that apply to you by the dates specified in those sections.
 - (2) Per 63.9(b)(2), the Initial Notification no later than 120 calendar days after **May 20, 2011** or within 120 days after the source becomes subject to the standard.
 - (4) The Notification of Compliance Status in accordance with 63.9(h) no later than 120 days after the applicable compliance date specified in 63.11196. In addition to the information required in 63.9(h)(2), your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:
 - (i) "This facility complies with the requirements in 63.11214 to conduct an initial tune-up of the boiler."
 - (ii) "This facility has had an energy assessment performed according to 63.11214(c)."
 - (iv) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."
- (b) The Permittee must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the following information. You must submit the report by March 15 if you had any instance described by paragraph (b)(3) of this section.
 - (1) Company name and address.
 - (2) Statement by a responsible official, with the official's name, title, phone number, e-mail address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart.
 - (3) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken.
 - (4) The total fuel use by each affected boiler subject to an emission limit, for each calendar month within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by you or EPA through a petition process to be a non-waste under §241.3(c), whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of §241.3, and the total fuel usage amount with units of measure.
- (c) The Permittee must maintain the following records:

- (1) As required in 63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.
- (2) Records to document conformance with the work practices, emission reduction measures, and management practices required by 63.11214 as follows:
 - (i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.
 - (ii) Records documenting the fuel type(s) used monthly by each boiler, including, but not limited to, a description of the fuel, including whether the fuel has received a non-waste determination by you or EPA, and the total fuel usage amount with units of measure. If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 241.3(b)(1), you must keep a record which documents how the secondary material meets each of the legitimacy criteria. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 241.3(b)(4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in 241.2. If the fuel received a non-waste determination pursuant to the petition process submitted under 241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process.
- (4) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.
- (5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.
- (d) Your records must be in a form suitable and readily available for expeditious review, according to 63.10(b)(1). As specified in 63.10(b)(1), you must keep each record for 5 years following the date of each recorded action. You must keep each record onsite for at least 2 years after the date of each recorded action according to 63.10(b)(1). You may keep the records off site for the remaining 3 years.
- (g) If you intend to switch fuels, and this fuel switch may result in the applicability of a different subcategory or a switch out of subpart JJJJJ due to a switch to 100 percent natural gas, you must provide 30 days prior notice of the date upon which you will switch fuels. The notification must identify:
 - (1) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that will switch fuels, and the date of the notice.
 - (2) The currently applicable subcategory under this subpart.
 - (3) The date on which you became subject to the currently applicable standards.
 - (4) The date upon which you will commence the fuel switch.

Table 2 to Subpart JJJJJ of Part 63 – Work Practice Standards, Emission Reduction Measures, and Management Practices [As stated in 63.11201, you must comply with the following applicable work practice standards, emission reduction measures, and management practices:]

| If your boiler is in this subcategory | You must meet the following |
|--|--|
| 3. Existing biomass or oil | Conduct a tune-up of the boiler biennially as specified in 63.11223. |

| If your boiler is in this subcategory | You must meet the following |
|---|---|
| 4. Existing biomass or oil (units with heat input capacity of 10 million Btu per hour and greater). | <p>Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table satisfies the energy assessment requirement. The energy assessment must include:</p> <ol style="list-style-type: none"> 1. a visual inspection of the boiler system. 2. an evaluation of operating characteristics of the facility, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints. 3. inventory of major systems consuming energy from affected boiler(s). 4. a review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage. 5. a list of major energy conservation measures. 6. a list of the energy savings potential of the energy conservation measures identified. 7. a comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments. |

Because there are no permit conditions currently approved by the DAQ Permit Workgroup (process has begun) for this permit condition, the following placeholder language has been added as Section 2.2 A.2 of the renewed permit:

2. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

- a. For these sources (ID Nos. ES-4A and ES-4B), the Permittee shall demonstrate compliance by the dates specified in 40 CFR 63.11196 with all applicable requirements of 15A NCAC 2D .1111 “Maximum Achievable Control Technology” and 40 CFR 63 Subpart JJJJJ “National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers.”*

PSD – The Permittee is currently subject to an avoidance condition from Prevention of Significant Deterioration requirements for PM₁₀, sulfur dioxide, nitrogen oxide, carbon monoxide, and volatile organic compounds. Currently the permit limits emissions of each pollutant from the combustion sources to less than 250 tons per 12-month period. To ensure compliance with the emission limits the Permittee is required to keep monthly records of the amounts of each fuel fired in each source and calculate emissions using established equations (factors based on a combination of past testing and AP42 factors). The permit also contains recordkeeping and semi-annual reporting requirements. This permit renewal does not affect this status.

Following the consolidation of the two permits into one, the PSD classification of the entire facility potentially could be changed from minor to major (although this will not be done at this time because the consolidation of the two permits is not considered a modification for PSD purposes). This is due to the 250 ton per year limit on PM₁₀ from the combustion sources in combination with any PM₁₀ portion from the woodworking equipment. Future modifications should be looked at for PSD applicability.

112(r) – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store one or more of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

CAM – 40 CFR 64 requires that a continuous compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. The following table indicates the current emission source/control device relationships:

| Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|------------------------|--|-----------------------|---|
| ES-1 | One three-pass scotch marine gasified woodwaste-fired boiler (55.5 million Btu per hour maximum heat input capacity). Site generated used oil may be utilized on boiler start-up only. | C1 CD-2 | One multicyclone (40 nine inch diameter cones) One electric precipitator (5478 square feet of collection plate area) |
| ES-2 | One three-pass scotch marine gasified woodwaste-fired boiler (55.5 million Btu per hour maximum heat input capacity). Site generated used oil may be used on boiler start-up only. | C2 F2 | One multicyclone (40 nine inch diameter cones) One bagfilter (5529 square feet of filter area) |

| Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|-------------------------------|---|------------------------------|---|
| ES-13 | Woodworking operations | CD-11 | One cyclone (80 inches in diameter) |
| | | CD-17 | One bagfilter (3825 square feet of filter area) |
| | | CD-54 | One cyclone (104 inches in diameter) |
| | | CD-17 | One bagfilter (3825 square feet of filter area) |
| | | CD-13 | One cyclone (48 inches in diameter) |
| | | CD-14 | One cyclone (160 inches in diameter) |
| | | CD-18 | One bagfilter (3255 square feet of filter area) |
| | | CD-23 | One transfer cyclone (128 inches in diameter) |
| | | CD-24 | One bagfilter (1912 square feet of filter area) |
| | | CD-55 | One cyclone (72 inches in diameter) |
| CD-17 | One bagfilter (3825 square feet of filter area) | | |

The following table outlines the specific permit conditions for each source/control device arrangement and if the control device is installed to comply with that requirement:

| Emission Source ID No(s). | Control Device ID No(s). | Permit Condition(s)* | Control Equipment Installed to Meet Permit Limit? |
|----------------------------------|---------------------------------|---|---|
| ES-1 | C1 CD-2 | 15A NCAC 2D .0516 15A NCAC 2D .0524 15A NCAC 2D .0524 15A NCAC 2Q .0317 15A NCAC 2Q .0317 15A NCAC 2Q .0317 15A NCAC 2Q .0317 15A NCAC 2Q .0317 15A NCAC 2Q .0317 | Sulfur dioxide. No Particulate matter. Yes Visible emissions. No PM ₁₀ . Yes Sulfur dioxide. No Nitrogen oxide. No Carbon monoxide. No Volatile organic compounds. No |

| Emission Source ID No(s). | Control Device ID No(s). | Permit Condition(s)* | Control Equipment Installed to Meet Permit Limit? |
|---------------------------|---|--|---|
| ES-2 | C2 F2 | 15A NCAC 2D .0516 15A NCAC 2D .0524 15A NCAC 2D .0524 15A NCAC 2Q .0317 15A NCAC 2Q .0317 15A NCAC 2Q .0317 15A NCAC 2Q .0317 15A NCAC 2Q .0317 | Sulfur dioxide. No Particulate matter. Yes Visible emissions. No PM ₁₀ . Yes Sulfur dioxide. No Nitrogen oxide. No Carbon monoxide. No Volatile organic compounds. No |
| ES-13 | CD-11 CD-17 CD-54 CD-17 CD-13 CD-14 CD-18 CD-23 CD-24 CD-55 CD-17 | 15A NCAC 2D .0512 | Particulate matter. Yes |

* 15A NCAC 2D .0521 is not included in this CAM analysis – This regulation limits visible emissions to specific opacity levels based on equipment manufacture date. Visible emissions are not criteria pollutants subject to CAM analysis.

ES-1 and ES-2:

As indicated above, boilers (**ID Nos. ES-1 and ES-2**) use control devices for the control of particulate matter emissions. Potential uncontrolled PM₁₀ emissions from each of these sources were calculated using the DAQ wood combustion spreadsheet. For a 55.5 million Btu wood-fired boiler, with no control, firing dry-wood, PM₁₀ emissions are estimated at 91.64 tons per year. This amount is less than the 100 ton per year CAM threshold; therefore, CAM is not required for these control devices as part of this renewal.

ES-13:

As indicated above, this source uses control devices for the collection/transfer/control of particulate matter emissions. The actual woodworking operations are currently idle at this facility and the Permittee has requested that a requirement for CAM applicability be completed prior to re-start of the source. Per the DAQ woodworking spreadsheet, the Permittee would be required to calculate potential pre-controlled PM₁₀ emissions from this group of sources based on the following particulate size distribution table with respect to the operation performed on the wood:

| OPERATION TYPE | PERCENT OF WOODWASTE THAT IS: | | | | | |
|------------------|-------------------------------|--------------|-------|----------|--------------|-------|
| | GREEN WOOD | | | DRY WOOD | | |
| | PM | PM10 | PM2.5 | PM | PM10 | PM2.5 |
| PLANING | 0.00 | 0.00 | 0.00 | 2.60 | 0.00 | 0.00 |
| SHAVING/CHIPPING | 0.56 | 0.00 | 0.00 | 0.56 | 0.00 | 0.00 |
| ROUGH SAWING | 18.00 | 1.89 | 0.70 | 18.00 | 1.89 | 0.70 |
| FINE SAWING | 31.00 | 0.37 | 0.14 | 31.00 | 0.37 | 0.14 |
| MILLING | 10.00 | 0.00 | 0.00 | 10.00 | 0.00 | 0.00 |
| MOLDING | 5.20 | 0.00 | 0.00 | 5.20 | 0.00 | 0.00 |
| SANDING | 76.00 | 23.80 | 8.81 | 76.00 | 23.80 | 8.81 |

The following permit condition has been placed in the renewed permit as Section 2.1 C.3 requiring that the Permittee perform a CAM applicability demonstration for this source:

3. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING

- a. *Within 30-days of resumption of operation of this group of sources (ID No. ES-13), the Permittee shall:*
 - i. *determine applicability of this regulation to each of the control devices listed below;*
 - ii. *if applicable, establish the “normal” operating range of each applicable control device listed below; and*
 - iii. *submit an administrative amendment to incorporate the established “normal” operating range of each applicable control device listed above.*

The Permittee shall notify the Regional Office Supervisor, ARO, within seven days of resumption of operation of this group of sources (ID No. ES-13). The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0614 if any of the requirements in this Paragraph are not met within the timelines specified.

- b. *For this group of sources (ID No. ES-13), as required by 40 CFR 64 and 15A NCAC 2D .0614, the Permittee shall comply with the following monitoring and recordkeeping requirements for particulate matter, including parameters to be monitored, parameter ranges, and performance criteria.*

| | <i>Indicator</i> |
|-----------------------------|---|
| <i>I. Indicator</i> | <i>Pressure drop</i> |
| <i>Measurement Approach</i> | <i>Pressure drop across the control device is measured with differential pressure gauges daily.</i> |
| <i>II. Indicator Range</i> | <i>An excursion is defined as a pressure drop other than normal*. Excursions trigger an inspection, corrective action, and a recordkeeping requirement.</i> |
| <i>QIP Threshold</i> | <i>None selected.</i> |

| | Indicator |
|--|--|
| <i>III. Performance Criteria</i> | |
| <i>A. Data Representativeness</i> | <i>Pressure taps are located at each control device inlet and outlet. The gauges have a minimum accuracy of 0.5 inches of water.</i> |
| <i>B. Verification of Operational Status</i> | <i>The pressure gauges are checked daily for operation.</i> |
| <i>C. QA/QC Practices</i> | <i>Calibrate, maintain, and operate instrumentation using procedures that take into account manufacturer's specifications.</i> |
| <i>D. Monitoring Frequency</i> | <i>Pressure drop are recorded daily.</i> |
| <i>Data Collection Procedures</i> | <i>Readings are manually recorded in a logbook daily.</i> |
| <i>Averaging Periods</i> | <i>NA</i> |

* "Normal" pressure drop ranges are as follows:

- CD-11 - ### inches of water*
- CD-17 - ### inches of water*
- CD-54 - ### inches of water*
- CD-13 - ### inches of water*
- CD-14 - ### inches of water*
- CD-18 - ### inches of water*
- CD-23 - ### inches of water*
- CD-24 - ### inches of water*
- CD-55 - ### inches of water*

Reporting [15A NCAC 2Q .0508(f)]

- c. *Once applicability of this regulation is established per the requirements in Section 2.1 C.3.a above, the Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified including any monitoring malfunctions as defined in 64.7(c) and required in 64.9(a)(2)(ii).*

VII. Facility Wide Air Toxics

The Permittee is not currently subject to NC Air Toxics requirements. This permit renewal does not affect this status.

VIII. Facility Emissions Review

There is no change in emissions for this renewal.

The following table represents the latest years' emission inventories from Woodgrain Millwork (1400167):

| Pollutant(s) | 2008 Actual Emissions (tpy) | 2009 Actual Emissions (tpy) |
|------------------|-----------------------------|-----------------------------|
| CO | 5.96 | 2.39 |
| NO _x | 11.13 | 6.65 |
| PM ₁₀ | 0.43 | 0.22 |
| SO ₂ | 0.19 | 0.08 |
| VOC | 0.08 | 0.03 |
| Total HAPs/TAPs | 1.1 | 0.44 |

The following table represents the latest years' emission inventories from Woodgrain Millwork (1400022):

| Pollutant(s) | 2007 Actual Emissions (tpy) | 2009 Actual Emissions (tpy) |
|------------------|-----------------------------|-----------------------------|
| CO | 1.95 | - |
| NO _x | 2.31 | - |
| PM ₁₀ | 2.89 | - |
| SO ₂ | 0.01 | - |
| VOC | 9.84 | - |
| Total HAPs/TAPs | 6.2 | - |

IX. Stipulation Review

These facilities were last inspected by Patrick Ballard of the ARO on **January 27, 2011**. He found both facilities in likely compliance with all applicable requirements by virtue of facility shutdown. He noted that all applicable reports will continue to be required as long as the permit is active.

X. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 2Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. The State of Tennessee and The Western NC Regional Air Quality Agency are affected areas within 50 miles of this facility.

XI. Conclusions, Comments, and Recommendations

A professional engineer's seal was not required for this renewal.

A consistency determination was not required for this renewal.

ARO recommends issuance of the permit and was sent a DRAFT permit prior to issuance (See Section III of this document for a discussion).

RCO concurs with ARO's recommendation to issue the renewed air permit.