

Application Review

Issue Date:

Region: Mooresville Regional Office
County: Catawba
NC Facility ID: 1800106
Inspector's Name: Sandra Sherer
Date of Last Inspection: 07/20/2023
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): HWS Company Inc. dba Hickory White</p> <p>Facility Address: HWS Company Inc. dba Hickory White 9 Lenoir Rhyne Boulevard SE Hickory, NC 28602</p> <p>SIC: 2511 / Wood Household Furniture NAICS: 337122 / Nonupholstered Wood Household Furniture Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p style="text-align: center;">Permit Applicability (this application only)</p> <p>SIP: 15A NCAC 02D .0503, .0504, .0512, 0516, .0521, .1111, .1806 and 02Q .0317 of 02D .1111 NSPS: N/A NESHAP: MACT JJ, MACT DDDD, GACT JJJJJ, GACT ZZZZ PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: N/A</p> <p>Note: This facility is actually an area source of HAPs but continues to keep the requirements of MACT JJ and MACT DDDD in their permit.</p>
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Contact Data			Application Data
<p style="text-align: center;">Facility Contact</p> Kim White Environmental Manager (828) 322-8624 9 Lenoir Rhyne Boulevard, SE Hickory, NC 28602	<p style="text-align: center;">Authorized Contact</p> William Smith VP of Operations (828) 341-5815 PO Box 189 Hickory, NC 28603	<p style="text-align: center;">Technical Contact</p> William Smith VP of Operations (828) 341-5815 PO Box 189 Hickory, NC 28603	<p>Application Number: 1800106.23A Date Received: 11/22/2023 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 02796/T20 Existing Permit Issue Date: 04/17/2019 Existing Permit Expiration Date: 03/31/2024</p>

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	1.36	20.72	77.16	21.24	13.50	4.82	2.89 [Toluene]
2021	0.3000	12.31	79.15	12.17	6.63	4.28	3.09 [Toluene]
2020	0.3900	14.09	61.27	14.33	5.83	3.62	2.29 [Toluene]
2019	0.4100	8.23	68.97	9.89	5.61	3.65	2.53 [Toluene]
2018	0.4700	14.86	86.76	15.72	6.14	6.88	2.93 [Toluene]

<p>Review Engineer: Jacob Larson</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue: 02796/T21 Permit Issue Date: _____ Permit Expiration Date: _____</p>
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1. Purpose of Application

HWS Company Inc. dba Hickory White (Hickory White) is a furniture manufacturing facility located in Hickory, Catawba County, North Carolina that operates under Title V permit No. 02796T20 which is set to expire on March 31, 2023. The Renewal application was NOT received within 6 months of expiration date, therefore the permit shield does not apply after expiration of the existing permit No. 02796T20.

2. Facility Description

The Hickory White facility manufactures, assembles, and finishes case good furniture. Operations at the facility include lumber drying (using a steam-heated drying oven), woodworking, and wood finishing (which includes the application of adhesives, stains, wash coats, sealers, topcoats, basecoats, and enamels in spray booths). The facility is in operation eight hours per day, five days per week, 50 weeks per year.

3. History/Background/Application Chronology

History/Background

April 17, 2019	TV permit renewal (02796T20) issued with an expiration date of March 31, 2024.
April 25, 2019	Notice of Violation issued to the facility on April 25, 2019 for failure to comply with the requirements for annual compliance certification listed in Air Permit No. 02796T19 General Condition P., inaccurate report.
August 27, 2021	A NOD was issued to the facility for violation of Air Permit No. 02796T20 Specific Condition and Limitation No. 2.2-B.1.f.ii., recordkeeping requirements for NESHAP Subpart JJ.

Application Chronology

November 22, 2023	DEQ received permit application 1800106.23A for Title V renewal.
November 28, 2022	Sent acknowledgment letter indicating that the application for permit renewal was complete on November 22, 2023.
January 11, 2024	Draft permit and review forwarded for comments to Permitting Supervisor.
January 11, 2024	Minor Comments received from Booker Pullen, Permitting Supervisor.
January 12, 2024	Draft permit and review forwarded to the Stationary Compliance Branch for comments. No comments were received January 16, 2024.
January 12, 2024	Draft permit and review forwarded to the MRO Regional Office for comments. No comments were received January 16, 2024.

January 16, 2024 Draft permit forwarded to the applicant for comments. No comments were received January 25, 2024.

XXXX xx, 2024 Draft permit and permit review forwarded to public notice.

XXXX xx, 2024 Public comment period ends. ___ comments received.

XXXX xx, 2024 EPA comment period ends. ___ comments received.

XXXX xx, 2024 Permit issued.

4. Permit Modifications/Changes and TVEE Discussion

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

Page No.	Section	Description of Changes
--	Cover page and throughout permit	<ul style="list-style-type: none"> Updated all dates and permit revision numbers.
3	Cover page	<ul style="list-style-type: none"> Added "Notice Regarding The Right To Contest A Division Of Air Quality Permit Decision" page
4	Summary of Changes to Permit	<ul style="list-style-type: none"> Added summary of changes made to Permit No. 02796T20 according to the most recent requirements of the renewal Title V permit
2	Table of Contents	<ul style="list-style-type: none"> Added Section 3.0 as "Insignificant Activities List" Added Section 4.0 as "General Permit Conditions"
3	List of Acronyms	<ul style="list-style-type: none"> Added "List of Acronyms"
9	2.1 A. 6. d.	<ul style="list-style-type: none"> Updated monitoring condition to be consistent with shell language
9	2.1 A. 6. f	<ul style="list-style-type: none"> Corrected numbering error from b to f
14	2.1 C. 2. c	<ul style="list-style-type: none"> Updated monitoring condition to be consistent with shell language
14-15	2.1 D. 1. a-d	<ul style="list-style-type: none"> Added MACT DDDD condition for clarity
16	2.1 E. 2. c	<ul style="list-style-type: none"> Updated monitoring condition to be consistent with shell language
27	Section 3	<ul style="list-style-type: none"> Added Insignificant Activities as Section 3 of the Title V Permit
28-35	Section 4	<ul style="list-style-type: none"> Added General Conditions as Section 4 of the Title V Permit Updated General Conditions to version 7.0, 08/21/2023

This permit renewal is without modification, and no changes to the Title V Equipment Editor are needed.

5. Regulatory Review

HWS is subject to the following regulations. The facility's equipment and operations have not changed since the last renewal in 2019. The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary.

- 15A NCAC 02D .0503, Particulates from Fuel Burning Indirect Heat Exchangers: The two natural gas-fired boilers (ID Nos. ES-3 and ES-4) are subject to this rule. The wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2) is also subject to 02D .0503 when firing fuel oil. Using the equation for the allowable PM emissions limit in the rule, the PM emission limits for these boilers was determined to be 0.38 pounds per million Btu (lb/MMBtu) heat input.

ES-3 = 29.3 million Btu per hour heat input (burning natural gas)

ES-4 = 11.7 million Btu per hour heat input (burning natural gas)

ES-2 = 14.78 million Btu per hour heat input (burning No. 2 fuel oil)

Total heat input (Q) equals 55.78 million Btu per hour

$$E = 1.090 * Q^{-0.2594}$$

E = the allowable emission limit for particulate matter in lb per million Btu.

Q = the maximum heat input in million Btu per hour.

$$E_{\text{allow}} = 1.090 \times (55.78)^{-0.2594} = 0.38 \text{ lbs PM per million Btu heat input}$$

Using emission factors for fuel oil and natural gas, the maximum PM emissions expected from the boilers are:

- No. 2 fuel oil: 0.024 lb/MMBtu
- Natural gas: 0.007 lb/MMBtu

No monitoring, recordkeeping, or reporting is required to ensure compliance with this rule. The renewal of this permit does not affect this status.

- 15A NCAC 02D .0504, Particulates from Wood Burning Indirect Heat Exchangers: The wood fired boiler (ID No. ES-1) and the wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2), when operating under its primary operating scenario, or POS (firing wood only, or wood with No. 2 fuel oil), are subject to 02D .0504, as discussed below. This Rule applies to installations in which wood is burned for the primary purpose of producing heat or power by indirect heat transfer.

Wood fired-boiler (ES-1)

Using the equation for allowable PM emissions from this rule, the PM emission limit for the wood fired boilers is 0.55 lb/MMBtu.

ES-1 when burning wood only (total heat input from wood = 14.78 + 14.78 million Btu per hour)

$$E_{\text{allow}} = 1.1698 * Q^{-0.2230}$$

E = the allowable emission limit for particulate matter in lb per million Btu

Q = maximum heat input in million Btu per hour

$$E_{\text{allow}} = 1.1698 * (29.56)^{-0.2230} = 0.55 \text{ lbs per million Btu heat input}$$

Wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2), operating under its POS Allowable PM emissions from the POS are determined from the following equation when wood is burned with No. 2 fuel oil in:

$$E_c = \frac{0.55Q_w + 0.38Q_o}{Q_w + Q_o}$$

Where:

E_c = emission limit from combined fuels (pounds per million Btu heat input)

Q_w = actual wood heat input rate (Btu/hr)

Q_o = actual No. 2 fuel oil heat input rate (Btu/hr)

Hickory White has not operated boiler ES-2 since 2002 due to a downturn in business; subsequently the facility removed the boiler's piping for wood fuel. Because Hickory White plans to reinstall the piping and combust wood fuel in boiler ES-2 when economically feasible, the permit will continue to allow wood fuel to be burned in this boiler.

Particulate emissions from the wood-burning boilers are controlled with centrifugal fly ash collectors (ID Nos. CD-19 and CD-20), both without fly ash reinjection. The permit includes a requirement to test for compliance with 02D .0504 when re-commencement of firing on wood fuel. Hickory White must conduct inspection and maintenance on the control devices to ensure compliance with this rule. The permit renewal does not affect this status.

- 15A NCAC 02D .0512, Particulates from Miscellaneous Wood Products Finishing Plants – The furniture finishing operation (ID No. E-5) and the woodworking operations (ID No. E-9) are subject to 02D .0512. Hickory White has to conduct inspection and maintenance of the control devices on these sources to ensure compliance. No changes to the monitoring, recordkeeping, or reporting requirements are needed under this renewal.
- 15A NCAC 02D .0516, Sulfur Dioxide from Combustion Sources – The natural gas-fired boilers (ID Nos. ES-3 and ES-4), the wood fired boiler (ID No. ES-1), and the wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2) are subject to 02D .0516. No monitoring, recordkeeping, or reporting is required when firing natural gas, wood, or No. 2 fuel oil because of the low sulfur content of the fuels. These fuels are inherently low enough in sulfur that continued compliance is expected. No changes to the monitoring, recordkeeping, or reporting are required under this permit renewal.
- 15A NCAC 02D .0521, Control of Visible Emissions
The following equipment was manufactured and operating as of July 1, 1971 and must not have visible emissions of more than 40 percent opacity when averaged over a six-minute period, except as specified in 02D .0521(c):
 - Wood –fired boiler (ID No. ES-1)
 - Wood fuel/No. 2 fuel oil-fired boiler (ID No. ES-2)
 - Woodworking operations (ID No. ES-9) when firing wood and No. 2 fuel oil

Hickory White is required to conduct daily visible emission observations for boiler ES-1 and the woodworking operations. Daily observations are also required for boiler ES-2 when firing wood. No monitoring, recordkeeping, or reporting is required when only No. 2 fuel oil is fired in boiler ES-2. This permit renewal does not affect this status. Continued compliance is expected.

The following equipment was manufactured and operating after July 1, 1971 and must not have visible emissions of more than 20 percent opacity when averaged over a six-minute period, except as specified in 02D .0521(d):

- Natural gas boilers (ID No. ES-3 and ES-4) – No monitoring, recordkeeping, or reporting is required when firing natural gas in these boilers. This permit renewal does not affect this status. Continued compliance is expected.
- Spray booths (ID Nos. SB-1 through SB-21) – Hickory White is required to conduct monthly visible emission observations and associated recordkeeping and reporting to ensure compliance. This permit renewal does not affect this status. Continued compliance is expected.

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

NSPS

The facility is not currently subject to any New Source Performance Standards. This permit renewal does not change the facility's NSPS status.

NESHAP/MACT/GACT

Hickory White was formerly classified as a major source for hazardous air pollutants (HAP), subject to the Wood Furniture MACT (40 CFR 63 Subpart JJ) and the Plywood and Composite Wood Products MACT, (40 CFR 63 Subpart DDDD). The US EPA finalized amendments on January 19, 2021 to the General Provisions that apply to National Emission Standards for Hazardous Air Pollutants (NESHAP). These amendments implement the plain language reading of the "major source" and "area source" definitions of section 112 of the Clean Air Act (CAA) and provide that a major source can be reclassified to area source status at any time upon reducing its potential to emit (PTE) hazardous air pollutants (HAP) to below the major source thresholds of 10 tons per year (tpy) of any single HAP and 25 tpy of any combination of HAP. This rule also finalizes amendments to clarify the compliance dates, notification, and recordkeeping requirements that apply to sources choosing to reclassify to area source status and to sources that revert back to major source status, including a requirement for electronic notification. This final rule became effective on January 19, 2021.

This facility contains a MACT avoidance condition which was initially permitted in Air Permit No. 02796T18 to become an area source for HAPs. Currently classified as an area source, Hickory White is subject to the Boiler GACT (40 CFR 63, Subpart JJJJJ) and the generally available control technology (GACT) requirements for reciprocating internal combustion engines (RICE). However, the facility has chosen to continue to comply with the Furniture MACT, Subpart JJ and the permit will be renewed as written. The DAQ will notify the facility that the "Once in Always in" policy has been changed and the MACT Subpart JJ condition can be (if elected) removed from the Title V permit. However, removal of the MACT JJ and MACT DDDD requirements from the permit would cause the facility to be subject to state Air Toxics regulations in accordance with 15A NCAC 02Q .0711.

40 CFR Part 63, Subpart JJJJJ, NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources

Wood fuel-fired boiler (ID No. ES-1) and wood fuel/ No. 2 fuel oil-fired boiler (ID No. ES-2) are subject to this NESHAP. The energy assessment was completed by Stratus Environmental Solutions, Inc. on January 22 and 31, 2014 and March 19, 2014. The NOCS was submitted in CEDRI on July 17, 2014. The biennial compliance report was completed upon completion of the August 12, 2014 tune-up (prior to the March 1, 2015 deadline). The most recent tune-up for Boiler ES-1 was completed on June 10, 2022. The facility has the compliance certificate on file. The compliance report was received January 20, 2023. Boiler ES-2 will need a tune-up prior to being put back into service and daily visible emissions observations will be required once back in service. Continued compliance is expected.

40 CFR Part 63, Subpart DDDD, Plywood and Composite Wood Products NESHAP

Hickory White has three lumber drying kilns subject to this NESHAP, which are no longer in operation. Per 40 CFR 63.2252 of Subpart DDDD, lumber drying kilns are not required to comply with the compliance options, work practice requirements, performance testing, monitoring, SSM plans, and recordkeeping or reporting requirements of this subpart except for the initial notification

requirements. The notification was received January 21, 2005. The initial compliance report was received August 1, 2008. Continued compliance is expected.

40 CFR Part 63, Subpart ZZZZ, NESHAP for Stationary RICE at both area sources and major sources of HAPs

HWS has a single stationary CI RICE, used as an emergency engine for the firewater pump (ID. No. ES-10-FP). The engine is rated at 220 bhp, therefore it does not exceed the 500 bhp threshold for ZZZZ emission limitation, fuel requirement, or performance test applicability. The source is classified as an insignificant source under 15A NCAC 02Q .0503(8) because it has potential emissions of less than five tons per year of criteria pollutants. Continued compliance is expected.

40 CFR Part 63, Subpart JJ, National Emission Standards for Wood Furniture Manufacturing Operations

The wood finishing operation (ID No. ES-5) is subject to subpart JJ, and includes:

- seventeen dry filter-type spray booths (ID Nos. SB-1 through SB-10, SB-12, SB-13, SB-15, SB-16, and SB-19 through SB-21)
- four baffle-type spray booths (ID Nos. SB-11, SB-14, SB-17, and SB-18)
- two wash-off tanks (ID No. ES-6)
- gluing operation (ID No. ES-7)
- one steam heated drying oven divided into multiple sections (ID No. DO-1)

Hickory White has chosen to comply with this MACT using a combination of the averaging method (i.e., by working to achieve a weighted average volatile hazardous air pollutant (VHAP) content across all coatings used) and compliant coatings method (using finishing materials containing less than or equal to a maximum VHAP content). The facility is required to submit a semi-annual report which certifies their operation. Semi-annual reports received on July 25, 2022 and January 20, 2023 appeared to show compliance.

In addition, as of November 14, 2014, Subpart JJ only allows conventional spray guns to be used when all emissions from the finishing application station are routed to a functioning HAP control device. This change has been incorporated into permit condition 2.2.B for the MACT Subpart JJ sources.

PSD

Hickory White is classified as a minor facility under PSD. This permit renewal does not affect this status.

112(r)

The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the 112(r) thresholds. No change with respect to 112(r) is anticipated under this permit renewal.

CAM

The CAM rule (40 CFR 64; 15A NCAC 02D .0614) applies to each pollutant specific emissions unit (PSEU) at major TV facilities that meets all three following criteria:

- the unit is subject to any (non-exempt: e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to

be classified as a major source (i.e., 100 tons per year for criteria pollutants or 10/25 tons per year for HAPs).

The applicability of CAM requirements to the Hickory White facility was evaluated during permit reviews by Jenny Kelvington (June 29, 2009) and Judy Lee (January 24, 2005). Both permit reviews showed the pre-controlled PM₁₀ emissions for all control devices were less than 100 tons per year, negating the applicability of CAM. Because no changes have been made to the woodworking operations or boilers since the 2009 permit renewal (and the April 14, 2014 permit review by Betty Gatano documents this), the CAM status for the facility remains unchanged. This permit renewal does not affect this status.

7. Facility Wide Air Toxics

Hickory White is not currently subject to the NC Air Toxics Program because it is currently subject to MACT subpart JJ in accordance with 15A NCAC 02Q .0702(a)(27). This permit renewal does not change that status.

8. Facility Emissions Review

The facility-wide potential emissions do not change under this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the years 2018 through 2022 are provided in the header of this permit review.

9. Compliance Status

DAQ has reviewed the compliance status of HWS. During the most recent inspection, conducted on 07/20/2023 by Sandra Sherer of the MRO, the facility appeared to be in compliance with all applicable requirements. The facility's Annual Compliance Certification was received on January 18, 2023 and indicated compliance with all applicable requirements in 2023.

The following compliance violations have occurred in the last five years:

- Notice of Violation issued to the facility on April 25, 2019 for failure to comply with the requirements for annual compliance certification listed in Air Permit No. 02796T19 General Condition P., inaccurate report.
- Notice of Deficiency was issued to the facility for violation of Air Permit No. 02796T20 Specific Condition and Limitation No. 2.2-B.1.f.ii., recordkeeping requirements for NESHAP Subpart JJ. recordkeeping requirements, August 27, 2021.

All violations have been resolved.

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

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 02Q .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 02Q .0521 above. No affected states or local agencies are within 50 miles of this facility.

11. Other Regulatory Considerations

- A P.E. seal is NOT required for this renewal application.
- A zoning consistency determination is NOT required for this renewal application.
- A permit fee is NOT required for this renewal application.
- EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions¹. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses² and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance.

12. Recommendations

The permit renewal application for HWS Company Inc. dba Hickory White located in Hickory, Catawba County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 02796T21.

¹ NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

² In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).