

**NORTH CAROLINA DIVISION OF
AIR QUALITY
Application Review**

Issue Date: TBD

Region: Winston-Salem Regional Office
County: Guilford
NC Facility ID: 4100854
Inspector's Name: Andrew Kormos
Date of Last Inspection: 05/23/2023
Compliance Code: W / Violation - procedures

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): Marsh Furniture Company</p> <p>Facility Address: Marsh Furniture Company 1001 South Centennial Street High Point, NC 27260</p> <p>SIC: 2434 / Wood Kitchen Cabinets NAICS: 33711 / Wood Kitchen Cabinet and Countertop 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: 02D: .0512, .0521, .1111 02Q: .0504</p> <p>NSPS: n/a NESHAP: Subpart JJ PSD: n/a PSD Avoidance: n/a NC Toxics: n/a 112(r): no RMP required Other: n/a</p>
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Contact Data			Application Data
<p style="text-align: center;">Facility Contact</p> <p>Bruce Braswell Regulatory Compliance Manager (336) 819-4035 PO Box 870 High Point, NC 27261</p>	<p style="text-align: center;">Authorized Contact</p> <p>Edwin Underwood SVP/COO (336) 819-4051 PO Box 870 High Point, NC 27261</p>	<p style="text-align: center;">Technical Contact</p> <p>Bruce Braswell Regulatory Compliance Manager (336) 819-4035 PO Box 870 High Point, NC 27261</p>	<p>Application Numbers: 4100854.23B (21A&23A) Date Received: 11/01/2023 (.23B) 02/08/2021 (.21A) 05/03/2023 (.23A) Application Type: Modification (.23B) 502(b)(10) (21A&23A) Application Schedule: TV-Sign-501(b)(2) Part II Existing Permit Data Existing Permit Number: 03238/T26 Existing Permit Issue Date: 07/21/2022 Existing Permit Expiration Date: 04/30/2025</p>

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	0.5040	10.41	373.46	0.8400	0.6046	33.15	16.99 [Methanol (methyl alcohol)]
2021	0.5240	10.80	399.43	0.9150	0.6158	41.55	20.18 [Methanol (methyl alcohol)]
2020	0.4950	10.38	368.52	0.9630	0.8100	38.24	19.22 [Methanol (methyl alcohol)]
2019	0.5740	11.89	328.74	0.8990	0.8223	37.55	17.29 [Methanol (methyl alcohol)]
2018	0.5230	10.77	293.73	2.95	1.71	34.26	15.23 [Methanol (methyl alcohol)]

<p>Review Engineer: Russell Braswell</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 03238/T27 Permit Issue Date: TBD Permit Expiration Date: April 30, 2025 (no change)</p>
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1.0 Purpose of Applications

1.1 Application 4100854.23B (Part II significant modification)

Marsh Furniture Company (MFC; the facility) operates a wood products factory in Guilford County under Title V permit 03238T26 (the existing permit). The existing permit includes Specific Condition 2.2 D.2.a, which requires MFC to submit an application for permit modification pursuant to 02Q .0500 within 12 months of commencing operation of any of the new “Barberan” spray booths. MFC submitted this application in order to comply with Specific Condition 2.2 D.2.a.

1.2 Application 4100854.21A (502(b)(10) notification; consolidated into .23B)

MFC submitted a notification pursuant to 15A NCAC 02Q .0523(a) (a “502(b)(10) notification”) in order to add small gas-fired heaters to the Sealer line (ID No. NFLS-5) and Topcoat line (ID No. NFLS-3). MFC filled out DAQ’s checklist to determine that the proposed change qualified as a 502(b)(10) notification.

Per 02Q .0523(a)(3), DAQ addresses 502(b)(10) notifications the next time the Title V permit is revised or renewed. Therefore, DAQ will consolidate this notification into application .23B.

1.3 Application 4100854.23A (502(b)(10) notification; consolidated into .23B)

MFC submitted a 502(b)(10) notification in order to move a spray booth (SB-R1) to be closer to the Barberan spray booths. MFC filled out DAQ’s checklist to determine that the proposed change qualified as a 502(b)(10) notification.

As stated above, DAQ addresses 502(b)(10) notifications the next time the Title V permit is revised or renewed. Therefore, DAQ will consolidate this notification into application .23B.

2.0 Application Chronology

Date	Event
February 8, 2021	Application .21A (502(b)(10) notification) received.
May 3, 2023	Application .23A (502(b)(10) notification) received.
November 1, 2023	Application .23B (TV-Sig Part 2) received.
November 9, 2023	Application transferred to Russell Braswell
November 9, 2023	Request for additional information sent via email: How should the descriptions of NFLS3 and 5 change based on the 502(b)(10) notification?
November 17, 2023	Response received to the November 9 request: NFLS-5: Flat line dry filter type spray booth, Two (2) Modine heaters {one is 161,000 btu and one is 212,000 btu}, one steam-heated drying oven (Makor) and one IR oven (ID No. IRSLR) NFLS-3: Flat line dry filter type spray booth, three (3) Modine heaters 212,000 btu each, and one IR oven (ID No. IRTOP)
December 18, 2023	Request for additional information sent via email: On December 22, 2021, US EPA added 1-bromopropane (1-BP) to the list of hazardous air pollutants. Does MFC emit any 1-BP?
December 26, 2023	Response received to the December 18 request. MFC reviewed material usage at the facility and determined that no 1-BP was in use at the facility.
January 2, 2024	Initial draft sent to DAQ Permits staff.
January 5, 2024	Revised draft sent to DAQ WSRO staff, DAQ SSCB staff, and MFC staff.
January 11, 2024	MFC and WSRO submitted comments on the January 5 draft via email.
XXXX	Public Notice / EPA Review
XXXX	The Public Notice period ended.
XXXX	The EPA Review period ended.
XXXX	Permit issued.

3.0 Application Discussion

3.1 Part II Significant Modifications

Background: A facility may choose to make a significant modification to a Title V permit using a “two-step” process as allowed by 15A NCAC 02Q .0501(b)(2) or (c)(2). When a facility uses the two-step process, the facility must submit a second permit application within 12 months of commencing operation of the modified sources.

Applicability: MFC used this two-step process to remove several old paint spray operations and add three new “Barberan” spray operations (application .22A). DAQ approved the application and issued Title V permit 03238T26. As a result, MFC was required to submit a 2nd application within 12 months of commencing operation of the Barberan spray operations (see Specific Condition 2.2 D.2 of the existing permit).

DAQ’s review of application .22A and Title V permit 03238T26 are included with this document as Attachment 1.

Compliance: According to the application, MFC began operating the Barberan spray operations on November 18, 2022. Application .23B was received November 1, 2023, and therefore was received within 12 months of commencing operation. The application states that no changes are needed from the original application.

Changes to the existing permit: Now that MFC has submitted the required application, Specific Condition 2.2 D.2 of the existing permit, and all references to 02Q .0504, will be removed from the permit.

3.2 502(b)(10) notifications and changes not requiring a permit revision under 15A NCAC 02Q .0523

Background: A “502(b)(10) modification” is a modification that meets the definition in 15A NCAC 02Q .0523(a). An application for permit modification is not required for 502(b)(10) changes; per 02Q .0523(a)(3), a 502(b)(10) change is integrated into a Title V permit during the next permit renewal or significant permit modification.

In order to make a 502(b)(10) modification, a facility must submit a notification. The notification must include a certification that the proposed modification qualifies as a 502(b)(10) modification. MFC submitted two separate notifications of 502(b)(10) notifications. DAQ has consolidated these two notifications with the Part II application discussed above.

Proposed modifications: MFC has submitted two notifications:

- Add five steam heaters to the finishing lines NFLS-3 and NFLS-5.
- Move the spray booth SB-R1 from the New Hanging Line No. 1 without changing the capacity of the spray booth.

3.2.1 Adding heaters to NFLS-3 and NFLS-5:

MFC explains the need for these heaters:

“The existing Makor steam fired ovens have a part racking system that moves up and down with a full belt charge to increase residence time in the oven. The ball/screw systems are wearing out and the ovens are frequently malfunctioning.”¹

The racking systems in the existing ovens will be disabled, and the new heaters will operate such that overall oven drying time remains unchanged. will improve reliability and reduce downtime, but the capacity and utilization of the finishing lines will not increase. Therefore, MFC states that this change will not de-bottleneck the finishing lines. Like the existing Makor ovens, these heaters receive steam generated by the boilers B2 and B3. Given that the capacity of the finishing lines will not increase, the addition of these new heaters will not cause an increase in utilization of the boilers. Furthermore, Marsh states that there has not been a change in capacity of the boilers to support the heaters.²

SIP rules: The heaters will be subject to the following State Implementation Plan (SIP) rules:

- 15A NCAC 02D .0521 “Control of Visible Emissions”
- 15A NCAC 02D .1111 “Maximum Achievable Control Technology” (Part 63 Subpart JJ)

Note that these fired heaters receive steam from separate boilers and are not combustion devices in and of themselves. Therefore they are not subject to 15A NCAC 02D .0503 or .0516. The heaters will not be a source of visible emissions, so compliance with 15A NCAC 02D .0521 is not expected to be affected.

MACT rules: The finishing lines are subject to 40 CFR Part 63 (MACT) Subpart JJ. MFC will continue to comply with these emission limits. There will not be any changes to the associated monitoring, recordkeeping, and reporting requirements. The new heaters are not subject to MACT Subpart DDDDD because they are not boilers or process heaters as defined in §63.7575.

NSPS rules: The finishing lines are not subject to any rules under 40 CFR Part 60 (NSPS). The new heaters are not subject to NSPS Subpart Dc because they are not steam generating units as defined in §60.41c.

PSD: MFC is a major stationary source as defined in 40 CFR 51.166, and the finishing lines NFLS-3 and NFLS-5 are subject to BACT emission limits. For major stationary sources, a “major modification” under PSD is defined in §51.166(b)(2)(i):

Major modification means any physical change in or change in the method of operation of a major stationary source that would result in: a significant emissions increase (as defined in [paragraph \(b\)\(39\)](#) of this section) of a regulated NSR pollutant (as defined in [paragraph \(b\)\(49\)](#) of this section); and a significant net emissions increase of that pollutant from the major stationary source.

Because the new heaters will not increase the capacity of or de-bottleneck the finishing lines, and the overall utilization of the existing boilers will not increase, there will be no significant emissions increase from the finishing lines.

MFC will continue to comply with the BACT emission limits. There will not be any changes to the associated monitoring, recordkeeping, and reporting requirements.

¹ See Appendix D from the 502(b)(10) notification received February 8, 2021.

² Email from Bruce Braswell, received January 11, 2024.

502(b)(10) applicability: An applicant must confirm that a proposed 502(b)(10) change meets the definition in 02Q .0523(a) by filling out a checklist provided by DAQ. MFC submitted the checklist, certifying that the proposed change to the coal mix would qualify as a 502(b)(10) change.

The below table examines the criteria for a 502(b)(10) change:

502(b)(10) Qualification Checklist	Discussion	Disallows 502(b)(10)?
This change does not violate any existing requirement in the current Title V air quality permit.	MFC will continue to comply with the existing BACT and MACT limits in the permit.	No
This change does not cause emissions allowed under the permit to be exceeded.		No
This change does not require a case-by-case determination (e.g. BACT)	As discussed above, no case-by-case determination (such as BACT) is required.	No
This change is not a modification under Title I of the federal Clean Air Act.		No
This change does not alter (modify or add to) any existing monitoring, reporting or recordkeeping provisions in my current permit.	MFC will continue to comply with emission limits using the existing monitoring, recordkeeping, and reporting requirements. No new monitoring, recordkeeping, or reporting requirements will be added to the permit.	No
This change does not require a change to an existing permit term that was taken to avoid an applicable requirement. (e.g. PSD avoidance condition)	As discussed above, no PSD avoidance limit will be required.	No
This change does not require a permit under the NC Toxics program.	The finishing lines NFLS-3 and NFLS-5 are each subject to 40 CFR Part 63 Subpart JJ, which is specifically excluded from TAP applicability under 15A NCAC 02Q .0702(a)(23).	No

Based on the above analysis, this change does qualify as a 502(b)(10) change.

3.2.2 Relocating spray booth SB-R1:

MFC explains the need for this change:

“[Marsh] desires to relocate the Akzo Test Booth (SB-R1) from the old Hanging Line Area to the flat line area where the new Barberan Spray Booths were installed. The intent is to get the testing booth closer to where the services are needed.”

In the letter, MFC also states that there will not be any emission changes associated with the relocation. No new emission sources will be added as part of this change.

SIP rules: The spray booth is subject to the following SIP rules:

- 15A NCAC 02D .0512 “Particulates from Miscellaneous Wood Products Finishing Plants”
- 15A NCAC 02D .0521 “Control of Visible Emissions”
- 15A NCAC 02D .1111 “Maximum Achievable Control Technology” (Part 63 Subpart JJ)

The emissions of the spray booth are not changing. Therefore, continued compliance with these rules can be assumed. No changes to monitoring, recordkeeping, or reporting will be required.

MACT rules: The spray booth is subject to MACT Subpart JJ. MFC will continue to comply with these emission limits. There will not be any changes to the associated monitoring, recordkeeping, and reporting requirements.

PSD: MFC is a major stationary source as defined in 40 CFR 51.166, and the spray booth is subject to the BACT emission limits in the permit. Because moving the spray booth will not cause an increase in emissions, this will not be a major modification per §51.166(b)(2)(i). MFC will continue to comply with the BACT emission limits. There will not be any changes to the associated monitoring, recordkeeping, and reporting requirements.

502(b)(10) applicability: An applicant must confirm that a proposed 502(b)(10) change meets the definition in 02Q .0523(a) by filling out a checklist provided by DAQ. MFC submitted the checklist, certifying that the proposed change to the coal mix would qualify as a 502(b)(10) change.

The below table examines the criteria for a 502(b)(10) change:

502(b)(10) Qualification Checklist	Discussion	Disallows 502(b)(10)?
This change does not violate any existing requirement in the current Title V air quality permit.	MFC will continue to comply with the existing SIP, BACT, and MACT limits in the permit.	No
This change does not cause emissions allowed under the permit to be exceeded.		No
This change does not require a case-by-case determination (e.g. BACT)	As discussed above, no case-by-case determination (such as BACT) is required.	No
This change is not a modification under Title I of the federal Clean Air Act.		No
This change does not alter (modify or add to) any existing monitoring, reporting or recordkeeping provisions in my current permit.	MFC will continue to comply with emission limits using the existing monitoring, recordkeeping, and reporting requirements. No new monitoring, recordkeeping, or reporting requirements will be added to the permit.	No
This change does not require a change to an existing permit term that was taken to avoid an applicable requirement. (e.g. PSD avoidance condition)	As discussed above, no PSD avoidance limit will be required.	No

502(b)(10) Qualification Checklist	Discussion	Disallows 502(b)(10)?
This change does not require a permit under the NC Toxics program.	The spray booth SB-R1 is subject to 40 CFR Part 63 Subpart JJ, which is specifically excluded from TAP applicability under 15A NCAC 02Q .0702(a)(23).	No

Based on the above analysis, this change does qualify as a 502(b)(10) change.

3.3 Changes to the existing permit

Page No.	Section	Description of Changes
Throughout	Throughout	<ul style="list-style-type: none"> Updated dates and permit numbers.
5	1	<ul style="list-style-type: none"> Moved SB-R1 from NHL1S to Barberan Line Added two natural gas-fired Modine heaters to NFLS-5 Added three natural gas-fired Modine heaters to NFLS-3
n/a	2.2 D.2 (former)	<ul style="list-style-type: none"> Removed specific condition for 02Q .0504 because the Permittee has satisfied the requirement to submit a 2nd-step application for significant modification.
35	4	<ul style="list-style-type: none"> Updated General Conditions to v7.0.

*This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

4.0 Toxic Air Pollutants

Background: Under 15A NCAC 02Q .0706 “Modifications,” a modification that causes a net increase in TAP emissions may be required to comply with the TAP emission requirements in 15A NCAC 02D .1100 or 02Q .0711. However, 02Q .0706(a)(2) specifically exempts modifications that are covered by 02Q .0702 “Exemptions.” If a proposed modification is exempt under 02Q .0702, the facility would have no TAP requirements for that modification.

Modifications: MFC’s addition of new natural gas-fired heaters to the furniture finishing lines will increase TAP emissions (see Attachment 2). Therefore, TAP emissions must be reviewed.

All of the furniture finishing operations at this facility are subject to MACT Subpart JJ. According to 02Q .0702(a)(23), such activities are exempt from TAP requirements. Therefore, all of the sources covered by the proposed project are exempt from TAP requirements, and MFC has no additional requirements under 02D .1100 or 02Q .0711.

Relocation of SB-R1: The previous modeling demonstration performed by Marsh included emissions from the spray booth SB-R1. Now that Marsh has moved this spray booth to a new location within the facility, the impacts of TAP emissions from SB-R1 are different than when Marsh performed the modeling demonstration. According to Marsh, this booth is a testing booth³ and therefore, it is expected that throughput and resulting impacts from TAP emissions are low.

Unacceptable risk: Regardless of exemption, 02Q .0712 “Calls by the Director” states that if a facility emitting TAPs presents an “unacceptable risk to human health,” that facility shall comply with the requirements of 15A NCAC 02D .1100.

As part of the T26 permit revision (see Attachment 1), DAQ reviewed facility-wide TAP emissions and determined that TAP emissions from the facility did not pose an unacceptable risk to human health. DAQ based this decision on air dispersion modeling, which showed that no AAL under 02D .1104 was exceeded. The following table summarizes the results of air dispersion modeling for this facility:⁴

Pollutant	Averaging period	Sum of emission rates used in model	Maximum modeled impacts (% of AAL)
Ethyl acetate	Hourly	14.46 lb/hr	1
Formaldehyde	Hourly	0.40 lb/hr	23.8
Methyl ethyl ketone	Hourly	6.94 lb/hr	1
	24-hour	166.59 lb/day	6.3
Methyl isobutyl ketone	Hourly	1.62 lb/hr	< 1
	24-hour	38.89 lb/day	2
Toluene	Hourly	3.02 lb/hr	1
	24-hour	72.48 lb/day	3
Xylene	Hourly	22.77 lb/hr	4.4
	24-hour	546.50 lb/day	36.4

³ See cover letter for 502(b)(10) notification received May 1, 2023.

⁴ See memorandum to Russell Braswell from Mark Yoder (meteorologist, DAQ-AQAB), dated April 12, 2022 for detailed modeling inputs and results.

Given the wide margin of compliance for all AALs, it can be safely assumed that the relocation of a testing spray booth will not pose an unacceptable risk to human health. The addition of the small steam heaters will not cause an increase in emissions of TAPs because they do not represent an increase in capacity of the boilers or finishing lines. Therefore, MFC will not have any specific requirements under 02D .1100 or 02Q .0711.

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5.0 Compliance Status and Other Regulatory Concerns

Compliance status:

- The application includes a signed Form E5 “Title V Compliance Certification.” In this form, MFC certified compliance with all applicable requirements.
- This facility was most recently inspected on May 23, 2023, by Andrew Kormos. MFC appeared to be in compliance with the Title V permit at that time.
- This Title V permit was most recently renewed on July 21, 2022. MFC has not been issued any Notices of Violation since that date.

Application fee:

- Applications for the 2nd step of a two-step significant modification do not require an application fee if the 1st step was received after November 18, 2021. The 1st step of this two-step significant modification was received after that date, so no fee was required for this application.
- There is no fee for 502(b)(10) notifications.

PE Seal: Pursuant to 15A NCAC 02Q .0112 “Application requiring a Professional Engineering Seal,” a professional engineer’s seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in 15A NCAC 02Q .0103 that involve the criteria in 02Q .0112(a)(1)-(3).

- There is no need for a PE Seal for this 2nd step significant modification. The need for a PE Seal was addressed in the 1st step application (see Attachment 1).
- No PE Seal is required for a 502(b)(10) notification.

Zoning Consistency Determination:

- A zoning consistency determination per 15A NCAC 02Q .0507(d) was not required for this 2nd step application because this application does not expand the facility.
- A zoning consistency determination was required for the 1st step application (see Attachment 1).
- No zoning consistency determination is required for 502(b)(10) notifications.

Addition of 1-bromopropane to §112(b): On December 22, 2021, the US EPA added 1-bromopropane (1-BP) to the list of HAP.⁵ Marsh has not previously quantified emissions of 1-BP. As part of processing application .23B, DAQ asked Marsh to quantify 1-BP emissions from the facility. Marsh responded:

“I looked through the Akzo hazardous ingredients list for 2022 and do not see 1-Bromopropane (CAS 106-94-5) listed. We get our solvents through Chemsolv and it is not an ingredient in the products we use from them. We get custom paints from Richelieu (these are mostly specialty formulated Akzo products with a minor quantity of Sherwin

⁵ See 87 FR 393 (published January 5, 2022).

Williams products). Based on the review, it is my belief we do not use any 1-Bromopropane.”⁶

Removal of References to Affirmative Defense: 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 decisions.⁷ Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses⁸ 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.

DAQ 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 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.

⁶ Email from Bruce Braswell (Regulatory compliance manager, Marsh Furniture Company) to Russell Braswell (Engineer, DAQ), received December 26, 2023.

⁷ NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

⁸ 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).

6.0 Facility Emissions Review

Emission changes based on modified sources:

- There are no emission changes associated with this 2nd step significant modification. See Attachment 1 for a review of emission changes associated with the 1st step significant modification.
- There are no emission changes for the spray booth SB-R1 because the capacity and use of that source did not change.
- The addition of the five small gas-fired ovens associated with the finishing lines NFLS-3 and NFLS-5 will cause an increase in emissions due to the combustion of natural gas in those ovens. See Attachment 2 for emission calculations for these sources. Because the capacity of the finishing lines did not change and the addition of these heaters did not debottleneck the finishing lines, there will not be a change in emissions from the finishing lines due to an increase in production or capacity.

Title V: MFC is a major source for Title V because it has potential emissions of criteria pollutants greater than the major source threshold in 40 CFR 70.2. This 2nd step significant modification and these 502(b)(10) notifications will not affect MFC's status as a major source for Title V. See Attachment 2 for a review of emission changes associated with the 1st step significant modification.

HAP: MFC is a major source of hazardous air pollutants (HAP) because it has potential emissions of HAP greater than the major source threshold in 40 CFR 63.2. This 2nd step significant modification and these 502(b)(10) notifications will not affect MFC's status as a major source for HAP. See Attachment 2 for a review of emission changes associated with the 1st step significant modification. Note that MFC has reviewed potential emissions of 1-BP and concluded that no 1-BP is emitted from this facility.

PSD: MFC has previously been designated a major stationary source for PSD. This 2nd step significant modification and these 502(b)(10) notifications will not affect MFC's status as a major stationary source for PSD. See Attachment 2 for a review of emission changes associated with the 1st step significant modification.

PSD Increment Tracking: The Guilford County airshed has been triggered for PSD Increment Tracking for PM₁₀ and SO₂.

- The 2nd step significant modification will not consume or expand increments for tracked pollutants.
- See Attachment for a review of increment changes associated with the 1st step significant modification.
- There are no emission changes for the spray booth SB-R1 because the capacity and use of that source did not change.
- The addition of the five small steam heaters associated with the finishing lines NFLS-3 and NFLS-5 will not cause an increase in PM₁₀ and SO₂ emissions because they do not increase the capacity of those finishing lines or the associated boilers B2 and B3.

7.0 Draft Permit Review Summary, Public Notice, and EPA Review

Initial draft: An initial draft of the Title V permit and this application review were sent to DAQ Permits staff on January 2, 2024. Comments were received on January 5 requesting minor revisions to the permit and application review.

Subsequent draft: A revised draft of the Title V permit and this application review were sent to DAQ SSCB staff, DAQ WSRO staff, and MFC staff on January 5, 2024.

MFC Comment: The draft indicates the new heaters on the finishing lines are natural gas-fired. That is not the case.

DAQ WSRO Comment: WSRO concurs with MFC's above comment.

Response: I had misread the initial 501(b)(10) notification. These heaters use steam from the existing boilers B2 and B3. MFC also confirmed that the capacity of B2 and B3 did not increase. I will correct the draft permit and application review.

Public Notice and EPA 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 .0518(b), the EPA will have a 45-day review period. Based on an agreement between DAQ and EPA, this period will generally coincide with the 30-day public notice 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 is provided to the public under 02Q .0521 above. DAQ voluntarily provides notice to each bordering State (Virginia, Tennessee, Georgia, and South Carolina).

- The Public Notice and EPA Review periods began on XXXXXX.
- The Public Notice period ended on XXXXX.
- The EPA Review period ended on XXXXX.

8.0 Recommendations

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

DAQ recommends issuance of Permit No. 03238T27. WSRO, SSCB, and MFC have received a copy of this permit and submitted comments that were incorporated as described in Section 7.0.

DRAFT

**Attachment to Review of Applications 4100854.21A, 22B, & 23B:
Review of Application 4100854.22A and Title V Permit 03238T26**

The following application review was signed by Russell Braswell (Engineer, DAQ) on July 20, 2022.
(pages numbers in this attachment may differ from the original document due to formatting changes)

**NORTH CAROLINA DIVISION OF
 AIR QUALITY**

Application Review

Issue Date: July 21, 2022

Region: Winston-Salem Regional Office
County: Guilford
NC Facility ID: 4100854
Inspector's Name: Robert Barker
Date of Last Inspection: 05/27/2021
Compliance Code: B / Violation - emissions

Facility Data

Applicant (Facility's Name): Marsh Furniture Company

Facility Address:
 Marsh Furniture Company
 1001 South Centennial Street
 High Point, NC 27261

SIC: 2434 / Wood Kitchen Cabinets
NAICS: 33711 / Wood Kitchen Cabinet and Countertop Manufacturing

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 02D: .0503, .0512, .0516, .0521, .0530, .1111
 02Q: .0317 (Avoidance of 02D .0530),
 .0504, .0706
NSPS: n/a
NESHAP: 40 CFR 63, Subparts JJ, DDDDDDD
PSD: n/a
PSD Avoidance: 02Q .0317 (VOC)
NC Toxics: n/a
112(r): n/a
Other: n/a

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Bruce Braswell Regulatory Compliance Manager (336) 819-4035 PO Box 870 High Point, NC 27261	Edwin Underwood SVP/COO (336) 819-4051 PO Box 870 High Point, NC 27261	Bruce Braswell Regulatory Compliance Manager (336) 819-4035 PO Box 870 High Point, NC 27261

Application Data

Application Number: 4100854.22A
Date Received: 04/01/2022
Application Type: Modification
Application Schedule: TV-Sign-501(b)(2) Part I
Existing Permit Data
Existing Permit Number: 03238/T25
Existing Permit Issue Date: 05/15/2020
Existing Permit Expiration Date: 04/30/2025

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2020	0.4950	10.38	368.52	0.9630	0.8100	38.24	19.22 [Methanol (methyl alcohol)]
2019	0.5740	11.89	328.74	0.8990	0.8223	37.55	17.29 [Methanol (methyl alcohol)]
2018	0.5230	10.77	293.73	2.95	1.71	34.26	15.23 [Methanol (methyl alcohol)]
2017	0.3530	7.38	312.20	8.86	4.38	41.02	18.99 [Methanol (methyl alcohol)]
2016	0.5000	10.15	352.68	12.29	6.05	53.21	25.08 [Methanol (methyl alcohol)]

Review Engineer: Russell Braswell

Review Engineer's Signature: _____ **Date:** _____

[signed on Permit Issue Date]

Comments / Recommendations:

Issue 03238/T26
Permit Issue Date: July 21, 2022
Permit Expiration Date: April 30, 2025

1. Purpose of Application:

Marsh Furniture Company (MFC; the facility) currently operates a factory in Guilford County under Title V permit 03238T25. MFC operates several wood finishing processes, such as paint spray booths.

MFC proposes to modify the existing facility by removing some existing spray booths and adding newer, more modern spray booths in their place. In addition, MFC proposes to rearrange several spray booths and associated activities (such as drying ovens) within the facility to support the new spray booths.

MFC initially requested DAQ issue an applicability determination for the proposed project. DAQ issued applicability determination #3732, informing MFC that the proposed project would require a significant modification and MFC would need to determine an avoidance condition for Prevention of Significant Deterioration.

Based on DAQ's applicability determination, MFC submitted this application. MFC submitted this application as the first step of a two-step significant modification as allowed by 15A NCAC 02Q .0501(b)(2).

2. Facility Description:

MFC is a factory that manufactures wooden cabinets for use in kitchens and bathrooms. The manufacturing process involves woodworking activities and application of various coatings by spray or hand. In addition, there are support activities at the facility such as boilers and storage. Based on the application, the facility operates for about nine hours per day, five days per week.

3. Application Chronology:

- September 7, 2021 Pre-application conference call with DAQ staff and MFC staff.
- October 8, 2021 MFC submitted a permit applicability determination for the proposed project.
- October 28, 2021 DAQ issued permit applicability determination #3732. DAQ's conclusion was that MFC's proposed project would require a significant modification and PSD avoidance limit.
- November 30, 2021 MFC sent a request to Michael Abraczinskas⁹ requesting an additional review of applicability determination #3732.
- December 10, 2021 Conference call between DAQ and MFC to discuss applicability determination #3732 and MFC's future plans. As a result of this call, MFC planned to calculate a PSD avoidance limit for the proposed project and submit an application for significant modification of MFC's Title V permit.
- February 3, 2022 Conference call between DAQ and MFC to discuss the calculation of the PSD avoidance limit. The PSD avoidance limit will be impacted by the baseline of the spray booths being removed as part of the proposed project, and MFC discovered that emissions from the spray booths had been under-reported

⁹ Director, DAQ.

previously. Based on this conference call, MFC revised previous emission calculations, and based this current application on the revised calculations.

- March 25, 2022 Conference call between DAQ and MFC to discuss the calculation of the PSD avoidance limit. The PSD avoidance limit will be impacted by the baseline of the spray booths being removed as part of the proposed project, and MFC desired clarification on the look-back period for calculating the baseline. Based on this conference call, DAQ tentatively agreed that a 10-year lookback period could be justified for this application.
- April 1, 2022 MFC submitted application 4100854.22A.
- April 27, 2022 Email to MFC requesting clarification of changes proposed to the list of permitted emission sources.
- May 6, 2022 WSRO submitted comments on application 4100854.22A.
- May 11, 2022 MFC sent corrections to the equipment list and sources being changed/removed by the proposed project.
- May 16, 2022 Initial internal draft sent to RCO staff.
- May 23, 2022 Subsequent draft sent to MFC, SSCB, and WSRO staff.
- June 14, 2022 MFC requested additional changes to the draft permit. Specifically, MFC requested that the O₂ trim setting and boiler steam load references in the existing permit (included in sections 2.1 D.5.j.ii and iii of the existing permit) be removed from the permit.
- June 16 -
July 14, 2022 Internal discussion regarding MFC's above request. On July 14, DAQ agreed to remove the requested parameters.
- July 21, 2022 Permit issued.

4. Discussion:

The existing facility includes several manufacturing lines, which each consist of several paint spray booths and drying ovens. MFC proposes to make several changes and additions to the existing facility. The new sources are discussed below. In addition, the potential applicability of Prevention of Significant Deterioration (PSD) and MFC's compliance requirements under the Title V permit are also discussed below.

1. Proposed project:

The existing facility includes several manufacturing lines, which each consist of several paint spray booths and supporting activities such as drying ovens.

MFC proposes to remove several existing spray booths and replace them with three new "Barberan" spray booths. To support the addition of the new spray booths, MFC plans to install new infrared drying ovens, new washoff tanks, and relocate existing steam-heated drying ovens to work with the new spray booths. The new

and relocated sources are discussed below. In addition, MFC plans to remove several sources from the Title V permit (some of which were never actually installed at the facility).

1. New spray booths (Barberan5 through 7) and new infrared ovens (IR5 through 7)

Emissions from the spray booths are expected to be particulate matter (PM), volatile organic compounds (VOC), and hazardous/toxic air pollutants (HAP/TAP).

PM is emitted from the spray booths because some sprayed coatings contain solids, and not all of the sprayed coating is transferred to the part being sprayed (a.k.a. “overspray”). Overspray is reduced through the use of fabric filters. Note that these filters are considered integral to the spray booth, and not add-on control devices.

VOC and HAP are emitted from the spray booths because the solvents used in the spray coatings evaporate and are emitted to the atmosphere. In general, 100% of the VOC and HAP content of the coatings is expected to be emitted.

In order to calculate potential emissions from the spray booths, MFC determined the amount of paint necessary to coat a single product and estimated the potential production of the spray booths. Note that some HAP and TAP in the sprayed coatings are particulate (PM) (e.g., the pigments within paint). To calculate the potential emissions of PM, MFC estimated the amount of overspray that occurs with each part and the control effectiveness of the integral fabric filters.

The infrared ovens will be associated with the new spray booths (one oven per spray booth). The infrared ovens will be used to rapidly dry the coatings applied in the new spray booths. Emissions from these ovens are expected to be the VOC, HAP, and TAP content of the coatings that are drying within the oven. However, the act of drying the coatings does not generate additional emissions.

2. New washoff tanks (ESWO6 through 8)

MFC will install three new washoff tanks to support the new spray booths (one tank per booth). These tanks will be used to clean the working parts of the spray booths, such as the conveyor belts that move parts between the booths.

When washing parts, the volatile portion of the cleaning material is expected to evaporate. As a conservative estimate, MFC assumes that 100% of the VOC content of the cleaning material will be emitted. MFC estimated VOC emissions from the washoff tanks based on the usage records of other similar cleaning processes at the facility.

Note that, based on the composition of the cleaning materials, no HAP or TAP emissions are expected from the washoff tanks. If MFC changes the cleaning materials, this assumption may need to be reviewed.

3. New backup boiler (B3)

The facility’s current heating needs are met by the existing wood-fired boiler B2. MFC intends to add a new natural gas-fired boiler for use during periods of maintenance and downtime for B2. MFC intends to fire the boiler for at least 1.5 hours per month according to the manufacturer’s recommendations, but otherwise does not intend to use the boiler outside of the wood-fired boiler’s maintenance and repair schedule. Although this boiler is only intended as a backup, MFC calculated potential emissions based on 8,760 hours of operation (i.e., MFC did not request any limit for this boiler).

The boiler will have a capacity of 8.4 MMBtu per hour. The applicability threshold for NSPS Subpart Dc is 10 MMBtu per hour, so this new boiler will not be subject to NSPS Subpart Dc.

4. Relocated sources (spray booths (SB-1, 2, and 13, NHL1S 3.1 and 3.2, GL-NHL2S-1) and steam-heated drying ovens (DO-2, 3, 4, 8, 9, and 10))

MFC will relocate several sources within the facility to make room for the new spray booths and supporting sources. Relocating the spray booths will not change their potential or actual emissions.

The steam-heated drying ovens do not generate their own steam. Instead, steam is supplied by the existing wood-fired boiler. Like the infrared ovens, no emissions are associated directly with the steam-heated ovens. The wood-fired boiler is not being modified as part of this project.

5. Removed sources: spray booths (NHL1S Stages 1.2, 2.1, 2.2, 4.1, 4.2, 5.1, 5.2)

According to the application, NHL1S Stages 1.2, 2.1, 2.2, 4.1, 4.2, 5.1, and 5.2 will be removed from the facility and replaced with the Barberan booths discussed above (Application at 2 and 3).

6. Removed sources: spray booths (NHL2S stages 2 through 6, and NFLS1 Stages 1, 6, and 7)

According to the application, these spray booths were never installed at the facility and should be removed from the permit (Application at Appendix C, Form A2).

7. Removed sources: roll coaters (RC1, RC2, RC3, RC4, RC5A, RC5B, RC6, RC7, RC8, RC9, RC10, RC11, RC13, and RC14)

According to correspondence with MFC¹⁰, the roll coaters have not been operated at the facility in several years. MFC has no plans to reactivate them, so they should be removed from the permit.

2. PSD Applicability and Avoidance:

MFC is a major source for PSD permitting because it has actual emissions of VOC greater than the major source threshold of 250 tpy.

For PSD-major sources, any modification is a major modification if it results in a significant emissions increase for a regulated pollutant. A significant emissions increase occurs when the net emissions of a regulated pollutant increase is greater than the significant emission rate (SER). In order to determine the net emissions increase of the proposed project, MFC calculated the following:

- Potential emissions increases from the new sources,
- Baseline emissions decreases from existing sources that are being removed as a part of this project,
- Increases in emissions from the rest of facility as a result of this project, and
- An enforceable limit that ensures the sum of the above is less than the SER.

If the sum of the above is less than the SER, the project will not be a major modification. This project will increase emissions of VOC and particulate matter. The SERs for these pollutants are:

- VOC: 40 tpy

¹⁰ Email to Russell Braswell from Bruce Braswell (regulatory compliance manager for MFC), May 11, 2021.

- PM: 25 tpy
- PM10: 15 tpy
- PM2.5: 10 tpy

1. New sources:

Three spray booths (Barberan5 through 7): The new spray booths will process cabinet panels in an assembly-line fashion. One cabinet panel will pass through all three spray booths. In addition, cabinet panels are cured in several drying ovens (both steam-heated and electric infrared heated). For the purpose of determining potential emissions from the spray booths, 100% of VOC and HAP coatings applied in the spray booths are assumed to be emitted from the booths themselves (i.e., there are no emissions associated with the curing ovens).

In order to determine potential emissions from the new spray booths, MFC determined:

- the types of coatings that will be applied in the spray booths,
- the volume of coatings necessary to finish one product, and
- the number of products that one spray booth could process in an hour.

Using this information, MFC calculated the expected actual and potential emissions from the new spray booths. The potential emission calculations are included in the application as “Appendix B.” According to the application, the potential VOC emissions for all three spray booths is **VOC = 729.13 tpy**.

Overspray from the spraybooths will result in particulate emissions. Particulate emissions are reduced by integral fabric filters within the spray booth. Using the above information, plus the amount of solids in the coatings, MFC estimated the potential particulate emissions as **PM = 2.88 tpy** and **PM₁₀ = PM_{2.5} = 0.30 tpy**.

Three washoff tanks (ESWO6 through 8): In order to determine the potential emissions from the washoff tanks, MFC estimated that 20 gallons of cleaning fluid will evaporate per week per tank. This amount is based on the other washoff tanks at the facility and an annual operation of 2,173 hours per year. The cleaning fluid has a VOC content of 1.99 pounds per gallon. Therefore, the potential VOC emissions from the washoff tanks can be calculated as:

$$\text{VOC} = (20 \text{ gal/wk-tank}) \times (3 \text{ tanks}) \times (52 \text{ wk/yr}) \times (8,760 / 2,173 \text{ hr/hr}) \times (1.99 \text{ lb/gal}) / (2,000 \text{ lb/ton}) = \mathbf{12.51 \text{ tpy}}$$

No particulate emissions are expected from the washoff tanks.

Three infrared curing ovens: The infrared curing ovens are not expected to produce any emissions because 100% of the VOC and HAP emissions are already accounted for in the spray booths. The paint curing process does not release or create any additional emissions.

Backup boiler (B3): MFC intends to use this boiler only in cases where the existing wood-fired boiler is offline for maintenance or repair. MFC intends to fire the boiler for at least 1.5 hours per month according to the manufacturer’s recommendations, but otherwise does not intend to use the boiler outside of the wood-fired boiler’s maintenance and repair schedule. In order to determine potential emissions from the new backup boiler, MFC used North Carolina’s emission estimation spreadsheet for natural gas-fired boilers. Although this boiler is only intended as a backup, MFC calculated potential emissions based on 8,760 hours of operation (i.e., MFC did not request any limit for this boiler).

Using the emission factor in AP-42 Table 1.4-2 and the manufacturer's rated heat input, the potential emissions from the new boiler can be calculated:

$$\text{VOC} = (8.4 \text{ MMBtu/hr}) \times (5.5 \text{ lb}/10^6\text{scf}) \times (10^6\text{scf} / 1,020 \text{ MMBtu}) \times (8,760 \text{ hr/yr}) / (2,000 \text{ lb/ton}) = \mathbf{0.20 \text{ tpy}}$$

$$\text{PM}=\text{PM}_{10}=\text{PM}_{2.5} = (8.4 \text{ MMBtu/hr}) \times (7.6 \text{ lb}/10^6\text{scf}) \times (10^6\text{scf} / 1,020 \text{ MMBtu}) \times (8,760 \text{ hr/yr}) / (2,000 \text{ lb/ton}) = \mathbf{0.27 \text{ tpy}}$$

2. Contemporaneous emissions decreases:

Removed sources: Five spray booths (NHLIS Stage 1.2, NHLIS Stage 2.1 and 2.2, NHLIS Stage 4.1 and 4.2, NHLIS Stage 5.1 and 5.2): When an emission source is removed from a facility, the decrease in emissions resulting from that removal can be used to offset emissions increases elsewhere in the facility. The decrease is equal to the baseline actual emissions for the emission source being removed. "Baseline actual emissions" is defined in 15A NCAC 02D .0530(b)(1).

In order to calculate the baseline VOC emissions for the spray booths being removed, MFC examined production data and material usage and determined the baseline period to be calendar years 2016 and 2017.¹¹ Based on this data, the baseline VOC emissions for the removed spray booths is **140.83 tpy**.

Note that in the existing permit, each of these sources were previously included in a major modification for PSD. As a result of that major modification, these sources (and several others at the facility) are subject to a combined VOC limit of 800 tpy. In order to claim a creditable emissions decrease from the removal of these sources, the 800 tpy limit will be lowered by an amount equal to the baseline of the removed sources. Therefore, the facility-wide PSD limit in the new permit will be $800 - 140.83 = \mathbf{659.17 \text{ tpy}}$. See Section 5.5 for further discussion of PSD requirements for this facility.

Removed sources: NHL2S stages 2 through 6, NFLS1 stages 1, 6, and 7: In the application, MFC notes that these sources have never been installed at the facility and requested that they be removed from the permit (Application at Appendix C, Form A2). Because these sources were never installed, their VOC emissions during the baseline period were zero, and MFC cannot claim any creditable emissions decreases from these sources.

Removed sources: roll coaters (RC1, RC2, RC3, RC4, RC5A, RC5B, RC6, RC7, RC8, RC9, RC10, RC11, RC13, and RC14): According to correspondence with MFC,¹² the roll coaters have not operated at the facility in many years. They were not operating during the baseline period of CY2016 and CY2017, so the contribution of the roll coaters to the baseline emissions is zero, and MFC cannot claim any creditable emissions decreases from these sources. Nevertheless, MFC has requested they be removed from the permit.

3. Contemporaneous emissions increases:

Increased utilization throughout the facility: Most of the facility's heating needs are met by the wood-fired boiler B2. Because overall production at this facility will increase with the addition of the new spray booths, the utilization of B2 is also expected to increase. In order to quantify the emissions increase from B2, MFC

¹¹ The baseline period is any consecutive 24-month period selected by the applicant, within a 5-year lookback period immediately preceding the date the application is received by DAQ. However, 15A NCAC 02D .0530(b)(1)(A) also allows the lookback period to be extended to 10 years if the applicant demonstrates that it would be more representative of normal operation. In the application, MFC claims that "Marsh operations have experienced significant disruptions since late 2019 through 2021 and into 2022 due to the impacts of Covid." (Application at 6) Given these circumstances, it is reasonable to allow the use of the 10-year lookback period.

¹² See note 10.

determined the approximate heating required to produce one product. Heating at this facility comes from wood and natural gas combustion. Assuming 100% wood combustion is the most conservative approach with regards to VOC emissions.

MFC calculated the amount of steam and heat necessary to produce one panel. Using this amount and the amount of expected increase in production above, the estimated increase in emissions from the boiler due to the addition of the new spray booths can be calculated. MFC used the AP-42 factors for wood combustion to calculate the emissions. Note that there is no change in potential emissions from the boiler because the boiler's capacity did not change.

$$\text{VOC} = (5,121.53 \text{ MMBtu/yr}) \times (0.017 \text{ lb/MMBtu}) / (2,000 \text{ lb/ton}) = \mathbf{0.04 \text{ tpy}}$$

$$\text{PM} = (5,121.53 \text{ MMBtu/yr}) \times (0.046 \text{ lb/MMBtu}) / (2,000 \text{ lb/ton}) = \mathbf{0.12 \text{ tpy}}$$

$$\text{PM}_{10} = (5,121.53 \text{ MMBtu/yr}) \times (0.009 \text{ lb/MMBtu}) / (2,000 \text{ lb/ton}) = \mathbf{0.02 \text{ tpy}}$$

$$\text{PM}_{2.5} = (5,121.53 \text{ MMBtu/yr}) \times (0.020 \text{ lb/MMBtu}) / (2,000 \text{ lb/ton}) = \mathbf{0.05 \text{ tpy}}$$

Facility rearrangement: As part of this project, MFC will relocate several existing spray booths and steam-heated drying ovens at the facility in order to make room for the new spray booths. However, the potential and actual emissions of these sources will not change as part of this relocation. There will be no creditable emissions increases or decreases from this change.

Aggregation of previous related projects: Emissions increases resulting from previously permitted projects must be included in this analysis if they are “substantially related.”¹³ When determining if two or more projects are substantially related, the first criteria to examine is the length of time between projects. EPA has stated “once three years have passed, it is difficult to argue that they are substantially related and constitute a single project.”¹⁴ There has only been one Title V permit revision issued within the previous three years. That action renewed the Title V permit, and had no associated changes in emissions. Therefore, there are no previous projects that need to be aggregated with the current project.

4. PSD avoidance limit

In order to avoid this project being a major modification, the net emissions increase of each pollutant must be less than the SER. The net emissions increase is the sum of the potential emissions from the new sources and the contemporaneous emissions changes (both increases and decreases). Based on the potential emissions calculated above, only VOC has a potential net emissions increase greater than the SER.

If the potential emissions from the new sources are subject to an enforceable emission limit (i.e., a PSD avoidance limit), that limit may be used in place of the potential emissions for those sources. For VOC, the appropriate PSD avoidance limit can be calculated with the following equation:

$$\text{limit} = \text{SER} - \text{contemporaneous emissions increases} + \text{contemporaneous emissions decreases}$$

¹³ EPA initially suggested the term “intrinsic relationship” as a test for requiring project aggregation in a memorandum from John B. Rasnic to EPA Region 5, titled “Applicability of New Source Review Circumvention Guidance to 3M—Maplewood, Minnesota” (a.k.a. “the 3M memo”). Subsequently, EPA has suggested the synonymous term “substantially related” instead (see 83 FR 57331). EPA has affirmed this term initially on January 15, 2009 (see 74 FR 2376) and reaffirmed this term on November 15, 2018 (see 83 FR 57324).

¹⁴ See 74 FR 2380.

Where:

SER = 40 tpy,

Contemporaneous emissions decreases = 140.83 tpy, and

Contemporaneous emissions increases = 0.04 tpy.

Therefore, the PSD avoidance limit for the new emission sources (the Barberan spray booths, washoff tanks, infrared drying ovens, and backup boiler) is **180.79 tpy**. If the new emission sources emit VOC less than this limit, the proposed project will not be a major modification.

In order to ensure compliance with the PSD avoidance limit, the new Title V permit will include a specific condition for 15A NCAC 02Q .0317 "Avoidance Conditions." See Section 5.7 for a discussion of compliance requirements for this rule.

3. Changes to the Existing Permit:

The following table summarizes the changes made to the existing permit:

Page No.	Section	Description of Changes
Throughout	Throughout	<ul style="list-style-type: none">• Updated dates and permit numbers• Updated formatting to current DAQ standard. Formatting changes are not intended to affect compliance requirements.
4-6	1	<ul style="list-style-type: none">• Updated equipment based on application. For a complete list of changes, see the additional changes below.

Page No.	Section	Description of Changes	
		Old ID	New ID
		NHL1S; Stage1.2, Stage2.1, Stage2.2, Stage 4.1, Stage 4.2, Stage 5.1, Stage 5.2	[Removed]
		NHL1S; Stage3.1 and Stage 3.2	HPL; NHL1-3.1 and NHL1- 3.2
		NHL2S; (all)	[Removed]
		GL-NHL2S-1	NHL2S-1
		GL-SB11b	SB11b
		NFLS1; (all)	[Removed]
		NFLS4; UVRC1 – UVRC4 and UVDO1 – UVDO4	[Removed]
		NFLS4; SB1 and SB2	EFL1; SB1 and SB2
		NFLS4; Oven.6	HPL; Oven.6
		EFL1; DO2 – DO4	Barberan Line (BL); DO2 – DO4
		EMUV; RC7 through RC11, RC13, RC14, DO12	[Removed]
		EMUV; DO13 and DO14	EFL1; DO13 and DO14
		EFL3; DO8 - DO10	Barberan Line (BL); DO8 – DO10
		ECD-RC1, ECD-RC2, ECD-RC3, ECD-RC12, ECD-RC19	[Removed]
		ESL; RC4, RC5A, RC5B, and RC6, and DO11 and DO17	[Removed]
		[New with this permit revision]	Barberan Line (BL); Barberan5, Barberan6, Barberan7, IR1, IR2, IR3, ESWO6, ESWO7, ESWO8
7	2.1 A.	<ul style="list-style-type: none"> Updated this section to reflect the changes to permitted emission sources. 	
13	2.1 C.	<ul style="list-style-type: none"> Updated this section to reflect the changes to permitted emission sources. Removed references to emission sources that do not burn fuel (e.g., the steam-heated drying ovens). The requirements for these sources are included in Section 2.1 A. 	

Page No.	Section	Description of Changes
17	2.1 D.5.j	<ul style="list-style-type: none"> Removed specific values for O₂ trim and boiler operating load. The Permittee will continue to comply with the O₂ trim and boiler operating load requirements in MACT Subpart DDDDD.
21	2.1 E.	<ul style="list-style-type: none"> Created this section. Added conditions for 02D .0503, 02D .0516, 02D .0521, and 02D .1111.
24	2.2 A.	<ul style="list-style-type: none"> Updated this section to reflect the changes to permitted emission sources. Reduced annual VOC emission limit to 659.17 tpy (was formerly 800 tpy) because the Permittee claimed this reduction as part of a PSD avoidance condition.
27	2.2 C.	<ul style="list-style-type: none"> Updated this section to reflect the changes to permitted emission sources.
32	2.2 D.	<ul style="list-style-type: none"> Created this section. Added condition for 02Q .0317 (PSD avoidance) and 02Q .0504.
33	2.3 A.	<ul style="list-style-type: none"> Updated the permit shield for 02D .1100 based on the Permittee's recent air dispersion modeling demonstration.
34	3. (new)	<ul style="list-style-type: none"> Moved list of insignificant activities to this section. Removed activities that are insignificant due to anything other than 02Q .0503(8).
35	4. (new)	<ul style="list-style-type: none"> Created this section. Moved the General Conditions to this section.

5. Regulatory Overview and Rules Review:

Under the existing permit, MFC is subject to the several State Implementation Plan (SIP) rules. This review will only discuss the applicability of the specific rules which are, or could be, affected by the proposed project:

- 15A NCAC 02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"
- 15A NCAC 02D .0512 "Particulates from Miscellaneous Wood Products Finishing Plants"
- 15A NCAC 02D .0516 "Sulfur Dioxide Emissions from Fuel Combustion Sources"
- 15A NCAC 02D .0521 "Control of Visible Emissions"
- 15A NCAC 02D .0530 "Prevention of Significant Deterioration"
- 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (40 CFR Part 63, Subparts JJ and DDDDD)
- 15A NCAC 02Q .0317 "Avoidance Conditions" (PSD Avoidance)
- 15A NCAC 02Q .0504 "Option for Obtaining Construction and Operation Permit"

The applicability of each of these rules will be discussed below. In addition, rules that could potentially apply to this project are also discussed below.

- 15A NCAC 02D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"

This rule limits particulate emissions from indirect heat exchangers (generally, boilers). The new boiler B3 will be subject to this rule. The existing boiler B2 is not subject to this rule because it burns wood and is therefore subject to 02Q .0504 instead. The natural gas-fired drying ovens are not subject to this rule because

they are direct-fired. The new infrared drying ovens and existing steam-heated drying ovens are not subject to this rule because they do not burn their own fuel.

The particulate limit is defined by the following equation: $E = 1.090 \times Q^{-0.2594}$, where “E” equals the allowable emission limit for particulate matter in pounds per million Btu (lb/MMBtu). “Q” equals the maximum heat input in million Btu per hour (MMBtu/hr). Note that Q is the sum of the heat input for all sources at the facility subject to this rule. However, there are no other sources at this facility subject to this rule. The boiler B3’s maximum heat input will be 8.4 million Btu per hour, so **E = 0.628 lb/MMBtu**.

The new boiler will fire only natural gas. According to the US EPA’s “AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors”, Table 1.4-2, the total particulate emission factor for natural gas combustion in a boiler is 7.6 lb/10⁶scf. Using the recommended conversion of 1,020 MMBtu/10⁶scf, the expected particulate emission rate can be calculated: (7.6 lb/10⁶scf) / (1,020 MMBtu/10⁶scf) = 0.007 lb/MMBtu. Because this emission rate is less than the emission limit, compliance with the limit is expected.

No additional monitoring, recordkeeping, or reporting will be required to demonstrate compliance with this rule.

2. 15A NCAC 02D .0512 “Particulates from Miscellaneous Wood Products Finishing Plants”

This rule requires that a facility engaged in wood products finishing build properly designed and adequate ductwork and collectors for particulate emissions. All of the cabinet making processes at this facility (including the new spray booths) are subject to this rule.

The new spray booths will be equipped with integral fabric filters and air handlers. These filters are expected to adequately collect particulate from coating overspray within the spray booths. The new drying ovens will not produce particulate emissions. The relocated spray booths are already equipped with adequate particulate collection, and this will not change as part of their relocation.

In order to demonstrate compliance with this rule, MFC will conduct regular inspections and maintenance of the filters within the spray booths. MFC will keep records of inspections and maintenance and submit a semiannual report.

Compliance with this rule will be determined during the next inspection and reporting period.

3. 15A NCAC 02D .0516 “Sulfur Dioxide Emissions from Fuel Combustion Sources”

This rule limits sulfur dioxide (SO₂) from all fuel combustion sources. In all cases, the limit is 2.3 lb/MMBtu. Each existing combustion source at the facility and the new boiler B2 are subject to this rule.

The new boiler B2 will only fire natural gas. According to AP-42 Table 1.4-2, the SO₂ emission factor for natural gas combustion in a boiler is 0.6 lb/10⁶scf. Using the recommended conversion of 1,020 MMBtu/10⁶scf, the expected SO₂ emission rate can be calculated: (0.6 lb/10⁶scf) / (1,020 MMBtu/10⁶scf) = 0.0006 lb/MMBtu. Because this emission rate is less than the emission limit, compliance with the limit is expected.

No additional monitoring, recordkeeping, or reporting will be required to demonstrate compliance with this rule.

4. 15A NCAC 02D .0521 “Control of Visible Emissions”

This rule limits non-fugitive visible emissions (VE) from emission sources that are not subject to a different specific VE limit. In general, the VE limit is 20% opacity. The new spray booths, new boiler, and new drying ovens will be subject to this rule.

Spray booths: In order to demonstrate compliance with the VE limit, MFC will first observe the emission points of each of the new sources to determine “normal” operation of the sources. Thereafter, MFC will perform regular observations of the emission points of each of these sources. If VE above normal is detected, MFC will take appropriate corrective action. MFC will keep records of observations and submit a semiannual summary report.

Backup boiler: In general, no VE is expected from a natural gas-fired boiler. No monitoring, recordkeeping, or reporting will be required to demonstrate compliance with VE emissions from the backup boiler.

Infrared drying ovens: In general, no VE is expected from the drying ovens because all coating activities that could produce VE occur within the spray booths. MFC performs monthly inspections of the wood finishing operations. The new IR ovens will be included in these inspections.

Washoff tanks: No VE is expected from parts washing activities.

Initial compliance will be determined during the first inspection and reporting period.

5. 15A NCAC 02D .0530 “Prevention of Significant Deterioration” (PSD)

This rule applies to new “major” sources or “major” modifications under 40 CFR Part 51. MFC is an existing major source because it has VOC emissions greater than 250 tpy. This facility initially obtained a PSD permit under this rule in 2002 (T16 permit, issued June 3, 2002). As a result, many sources at the facility are subject to Best Available Control Technology (BACT) limits and an annual 800 tpy VOC limit.

In order to comply with the annual VOC limit and BACT limits, MFC tracks material usage and calculates VOC emissions on a monthly basis. MFC must submit a semiannual summary report of the calculations and monitoring.

Once a facility is designated as a major source, subsequent modifications may trigger additional requirements under PSD if they are determined to be major modifications. As discussed in Section 4.2 above, the proposed project is not a major modification under 40 CFR Part 51 and therefore does not have any requirements under this rule.

Note that in order for this project to avoid being classified as a major modification, MFC relied on emission reductions that were contemporaneous to this project. These reductions are the result of several older spray booths being removed from the facility (see Section 4.2.2). These spray booths were covered under the 800 tpy limit.

Any emission reductions must be enforceable to be claimed as a contemporaneous reduction. Therefore, the 800 tpy limit will be adjusted downward by an amount equal to the baseline of the sources being removed. As discussed in Section 4.2.2, the new annual VOC limit will be 659.17 tpy.

Compliance with the new VOC limit will be determined during the next inspection and reporting period.

6. 15A NCAC 02D .1111 “Maximum Achievable Control Technology” (40 CFR Part 63; MACT)

This rule incorporates the MACT standards under 40 CFR Part 63 into North Carolina's SIP. For the purposes of MACT applicability, this facility is a major source of hazardous air pollutants (HAP) because it emits more than 10 tpy of an individual HAP and 25 tpy of total HAP. Because this facility a major source of HAP, MACT rules that apply specifically to area sources of HAP (e.g., the MACT standards for boilers at area sources under 40 CFR Part 63, Subpart JJJJJ) do not apply to this facility.

There are two MACT rules that apply to the proposed project: Subpart JJ “National Emission Standards for Wood Furniture Manufacturing Operations” and Subpart DDDDD “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.”

1. Subpart JJ “National Emission Standards for Wood Furniture Manufacturing Operations”

This rule applies to wood furniture manufacturing operations located at major sources of HAP. The entire MFC facility is subject to this rule. Note that according to §63.800(a), the *entire facility* is an affected source instead of the individual furniture manufacturing emission sources.

Under this rule, MFC is an existing source because it was constructed before December 7, 1995, and has not been reconstructed since that date.

According to §63.2, “reconstruction...means the replacement of components of an affected or a previously nonaffected source to such an extent that (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source...” Therefore, as long as the cost of the proposed project is less than 50% of the cost of a new furniture manufacturing plant, MFC will continue to be considered an existing source for this rule.

According to the application, the total cost of the proposed project is expected to be \$852,821, whereas the entire facility is estimated to be worth approximately \$22.5 million (Application at 9). Therefore, the proposed project will not cause MFC to be classified as a reconstructed source.

In general, this rule limits HAP emitted from the furniture manufacturing process. MFC complies with the HAP limits without using add-on control devices. Instead, MFC uses the averaging method discussed in §63.804(a) or the compliant materials method §63.804(b). The addition of the new spray booths will not affect MFC’s compliance methods for this rule. Continued compliance will be determined during subsequent inspections and reporting periods.

2. Subpart DDDDD “National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters”

This rule applies to boilers located at major sources of HAP. The new boiler B3 will be subject to this rule. The existing boiler B2 is also subject to this rule, but the compliance requirements for B2 will not change as part of the proposed project. Note that, separate to the proposed project, MFC requested changes to the permit condition for Subpart DDDDD in the existing permit.

New boiler (ID No. B3): The requirements of this rule depend on the size, fuel type, and age of the specific boiler. For the purposes of this rule, the new boiler B3 will be:

- Between 5 and 10 million Btu per hour,
- Designed to fire “gas 1” fuels, and

- New.

For this type of boiler, the rule requires:

- An initial tune-up and a subsequent tune-up every two years,
- Operate with good work practice standards, and
- Keep records of maintenance and tune-ups.

MFC will submit a summary report of tune-ups and maintenance on a biennial basis. Compliance with this rule will be determined during the next inspection and reporting period.

Existing boiler (ID No. B2): As allowed by Subpart DDDDD, MFC operates an O₂ trim system on the wood-fired boiler. The rule requires a facility to set the O₂ trim setting to the excess O₂ value determined during the most recent emission test (see 40 CFR 63.7525(a)(7)). In addition, the rule requires the facility to monitor and maintain the boiler operating load to not exceed the boiler steam load during the most recent emission test.

The existing permit includes the specific O₂ trim setting and boiler operating load from an emission test conducted in 2019. Since that test was conducted, MFC has conducted subsequent emission testing. As a result, the MFC has been operating the boiler B2 according to the values generated from the most recent emission test, rather than the values included in the existing permit.

DAQ has determined that because Subpart DDDDD includes a specific procedure for determining and updating the O₂ trim setting and boiler operating load (see 40 CFR 63.7520(c) and 63.7525(a)(7)), there is no need to include the specific values in the permit. These values, and a requirement that MFC submit a permit application to update the values in the permit, will be removed in the new permit. MFC will continue to comply with the O₂ trim and boiler operating load requirements in Subpart DDDDD. Compliance with this rule will be determined during the next inspection and reporting period.

7. 15A NCAC 02Q .0317 “Avoidance Conditions” (PSD Avoidance)

This rule allows a facility to accept an enforceable limit to avoid applicability of a different rule. As discussed in Section 4.2, MFC will accept a limit of 180.79 tpy for VOC in order to avoid the proposed project being classified as a major modification for PSD.

In order to demonstrate compliance with the PSD avoidance limit, MFC will calculate VOC emissions from the following sources every month:

- New spray booths (Barerban5 through 7),
- New washoff tanks (ESWO6 through 8), and
- New backup boiler (B3)

MFC will calculate the VOC emissions from the spray booths and washoff tanks using mass-balance calculations (i.e., 100% of VOC used in these sources will be considered emitted) and using AP-42 factors for the backup boiler. MFC will keep records of VOC usage and emission calculations and submit a semiannual summary report.

Compliance with the annual VOC emission limit will be determined during the next inspection and reporting period.

8. 15A NCAC 02Q .0504 “Option for Obtaining Construction and Operation Permit”

MFC submitted this application as a first step of a two-step significant modification as allowed by 15A NCAC 02Q .0502(b)(2). When a facility makes such a modification, the facility is required to submit an additional permit application within 12 months of commencing operation of the modified facility. The application must follow the requirements in 02Q .0504.

A specific condition for 02Q .0504 will be added to the permit. In addition to requiring the additional permit application, MFC will be required to notify DAQ upon commencing operation of the modified facility.

Compliance with this rule will be determined when the notification and subsequent application are received.

9. 15A NCAC 02Q .0706 “Modifications,” 15A NCAC 02Q .0711 “Emission Rates Requiring a Permit,” and 15A NCAC 02D .1100 “Control of Toxic Air Pollutants”

In general, these rules require a facility to perform air dispersion modeling if the facility makes a modification that increases toxic air pollutant (TAP) emission rates above the thresholds in 02Q .0711. This Title V permit has previously included specific conditions for these rules based on TAP emission rates. All specific conditions related to these rules were removed from the Title V permit with the T21 permit revision (issued April 7, 2015) because all sources at this facility are subject to a MACT rule and therefore exempt from TAP requirements per 02Q .0702(a)(27)(B).

The proposed project will not trigger applicability of 02Q .0711 or 02D .1100. See Section 6 for a discussion of TAP requirements.

6. Toxic Air Pollutants

Under 15A NCAC 02Q .0706 “Modifications,” a modification that causes a net increase in TAP emissions may be required to comply with the TAP emission requirements in 15A NCAC 02D .1100 or 02Q .0711. However, 02Q .0706(a)(2) specifically exempts modifications that are covered by 02Q .0702 “Exemptions.” If a proposed modification is exempt under 02Q .0702, the facility would have no TAP requirements for that modification.

MFC’s proposed project involves adding new furniture finishing operations (spray booths and washoff tanks), adding a new boiler, and relocating existing furniture finishing operations. The proposed project will increase production at MFC and therefore will cause a net increase in TAP emissions, so TAP emissions must be reviewed.

All of the furniture finishing operations at this facility are subject to MACT Subpart JJ. According to 02Q .0702(a)(23), such activities are exempt from TAP requirements. Furthermore, the new boiler is subject to MACT Subpart DDDDD. According to 02Q .0702(a)(27)(B), any source subject to 40 CFR Part 63 (a.k.a. MACT) is exempt from TAP requirements. Therefore, all of the sources covered by the proposed project are exempt from TAP requirements, and MFC has no requirements under 02D .1100 or 02Q .0711.

Regardless of exemption, 02Q .0712 “Calls by the Director” states that if a facility emitting TAPs presents an “unacceptable risk to human health,” that facility shall comply with the requirements of 02D .1100 “Toxic Air Pollutants.”

In order to determine if the facility poses an unacceptable risk after the proposed project is implemented, DAQ performed air dispersion modeling. DAQ requested the maximum possible emission rates of all TAPs that met the following criteria:

- Had ever previously been modeled for the facility, or
- Appeared to be increasing beyond the TAP permitting emission rate (TPER) in 02Q .0711 based on pre-application discussions with MFC.¹⁵

In addition, DAQ requested predicted emission point parameters (such as location, height, and exhaust velocity) for the facility once the proposed project was completed. DAQ used this information to perform air dispersion modeling and compared the results with the acceptable ambient limits (AAL) in 02D .1104. Table 1 summarizes the emission rates used in the model and the modeled results.¹⁶

Table 1: Summary of Modeling Results

Pollutant	Averaging period	Sum of emission rates used in model	Maximum modeled impacts (% of AAL)
Ethyl acetate	Hourly	14.46 lb/hr	1
Formaldehyde	Hourly	0.40 lb/hr	23.8
Methyl ethyl ketone	Hourly	6.94 lb/hr	1
	24-hour	166.59 lb/day	6.3
Methyl isobutyl ketone	Hourly	1.62 lb/hr	< 1
	24-hour	38.89 lb/day	2
Toluene	Hourly	3.02 lb/hr	1
	24-hour	72.48 lb/day	3
Xylene	Hourly	22.77 lb/hr	4.4
	24-hour	546.50 lb/day	36.4

Based on the results of the model, there will not be an exceedance of the AAL for any of these pollutants. Therefore, it can be concluded that the TAP emission increases as a result of the proposed project will not pose an unacceptable risk to human health.

Note that the existing permit includes a permit shield (as allowed by 15A NCAC 02Q .0512(a)(1)(B)) for all TAP emission requirements. The permit shield will be updated to reflect the above new modeling information.

7. Compliance Status and Other Regulatory Concerns:

- *Compliance status:* This facility was most recently inspected on May 27, 2021 by Robert Barker. MFC appeared to be in compliance with the Title V permit during that inspection.
- *Compliance history:* Since the previous Title V permit renewal, MFC has been issued two Notices of Violation (NOV).
 - February 14, 2022: During the course of preparing this permit application, MFC discovered an error in the material accounting and tracking software used to track and calculate

¹⁵ Email to Russell Braswell from Bruce Braswell (regulatory compliance manager for MFC), October 4, 2021.

¹⁶ See memorandum to Russell Braswell from Mark Yoder (meteorologist, DAQ-AQAB), dated April 12, 2022 for detailed modeling inputs and results.

emissions of HAP and VOC. The software had been over-counting VOC removed as hazardous waste (thereby under-counting VOC emitted to the atmosphere). MFC noted the error and corrected previous emission reports. On February 14, 2022, DAQ issued an NOV for the previously submitted under-reported VOC emissions. DAQ marked this NOV as “resolved” on March 31, 2022.

- March 22, 2022: NOV issued for violations associated with MACT Subpart DDDDD and the wood-fired boiler B2. As of the issuance of this permit, DAQ was continuing to investigate this issue.
- *Application fee:* Applications for significant modification require an application fee. MFC paid the required fee on April 1, 2022.
- *PE Seal:* Pursuant to 15A NCAC 02Q .0112 “Application requiring a Professional Engineering Seal,” a professional engineer’s seal (PE seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in Rule .0103 of this Section that involve:
 - (1) design;
 - (2) determination of applicability and appropriateness; or
 - (3) determination and interpretation of performance; of air pollution capture and control systems.A PE Seal was **NOT** required for this application because the above criteria were not met.
- *Zoning:* A Zoning Consistency Determination per 02Q .0304(b) **was** required for this application. The required determination was received on April 4, 2022.

8. Facility Emissions Review

The table on the first page of this permit review presents the criteria pollutant (plus total HAP) from the latest available approved facility emissions inventory (CY2020). The HAP emitted in the largest quantity from the facility is methanol.

This facility is a Title V facility due to potential VOC emissions greater than 100 tpy. The changes discussed above will not affect Title V applicability thresholds because this facility is already subject to Title V.

This facility is a major source of HAP due to potential individual/total HAP emissions greater than 10/25 tpy. The changes discussed above will not affect the HAP major source thresholds because this facility is already a major source.

This facility is a major source for PSD because the facility has actual VOC emissions greater than 250 tpy and the facility has submitted a PSD major application in the past. As discussed above, the proposed project will not be a major modification for PSD, but the facility will remain a major source for PSD.

This facility is located in Guilford County, which has triggered PSD Increment Tracking for PM₁₀ and SO₂. Based on the emission calculations in Section 4.1.1 and 3 above, PM₁₀ emissions are expected to increase by 0.57 tpy, or 0.13 pounds per hour. This increased amount will be noted on the cover letter to the new permit. SO₂ emissions will increase by less than 0.01 pounds per hour.

9. Draft Permit Review Summary

Initial draft: An initial draft of the Title V permit and this application review were sent to RCO staff on May 16, 2022. On May 19, 2022, RCO staff pointed out typos in the drafts, but no substantial changes.

Subsequent draft: The issues with the initial draft were corrected, and a new draft of the Title V permit and this application review were sent to SSCB staff, WSRO staff, and MFC staff on May 23, 2022.

WSRO Comment: MFC has recently been issued an NOV for violating the O₂ trim setting requirement of MACT Subpart DDDDD. Can the O₂ trim setting be updated as part of this current application, or will a separate application be required?

Response: A separate application will be required to update a parameter if the new parameter would be less stringent than the old one. However, as discussed below, the new permit will not include any specific O₂ trim value, rendering this issue moot in the future. Note that this act will not affect the previously issued NOV.

SSCB Comment: Include updated reporting language for CAM. This does not change the facility's requirements, but does make the overall CAM reporting requirements clearer.

Response: Done.

MFC Comment 1: Typos throughout the draft permit and application review.

Response: The indicated issues have been corrected.

MFC Comment 2: The permit should not include the specific O₂ trim setting and boiler operating load in the MACT Subpart DDDDD condition for boiler B2.

Response: After consulting with DAQ staff in the Winston-Salem Regional Office, Stationary Source Compliance Branch, and Central Office Permits Section, DAQ agrees with this proposal. The permit will continue to include the requirement to operate the O₂ trim system and boiler operating load monitor according to the most recent emission test, but the permit will not include the specific values from the most recent test. MFC must continue to comply with the O₂ trim system procedures included in MACT Subpart DDDDD.

Final draft: The above issues were corrected and a final draft of the Title V permit was sent to MFC on July 14, 2022. On July 19, 2022, MFC stated that there were no additional comments on the final draft.

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

No public notice, EPA review period, or affected state review period is required for the first step of a two-step significant modification as allowed by 15A NCAC 02Q .0501(b)(2).

When MFC submits the second step application, the Title V permit will be made available for public notice, EPA review, and affected state review at that time.

11. Recommendations

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

Recommend issuance of Permit No. 03786T37. WSRO has received a copy of this permit and no comments were received, as described in Section 9.

DRAFT