

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

Issue Date: TBD

Region: Raleigh Regional Office
County: Granville
NC Facility ID: 3900040
Inspector's Name: Abdul Kadir
Date of Last Inspection: 09/12/2023
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): CertainTeed Corporation</p> <p>Facility Address: CertainTeed Corporation 200 CertainTeed Road Oxford, NC 27565</p> <p>SIC: 2952 / Asphalt Felts And Coatings NAICS: 324122 / Asphalt Shingle and Coating Materials 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: .0503, .0515, .0516, .0521, .0524, .0614, .1100, .1111, .1806 02Q: .0317 NSPS: Subparts Dc, UU, OOO NESHAP: Subparts DDDDD, LLLLL PSD: Minor source PSD Avoidance: PM₁₀, NO_x, VOC NC Toxics: 02D .1100 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> Robert Yurek Environmental Coordinator (919) 693-1141 200 CertainTeed Road Oxford, NC 27565	<p style="text-align: center;">Authorized Contact</p> Mark Heilman Plant Manager (919) 693-1141 200 CertainTeed Road Oxford, NC 27565	<p style="text-align: center;">Technical Contact</p> Robert Yurek Environmental Coordinator (919) 693-1141 200 CertainTeed Road Oxford, NC 27565	<p>Application Number: 3900040.20A & .19A Date Received: 09/02/20 (.20A), 11/12/19 (.19A) Application Type: Renewal (.20A) Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 03663/T32 Existing Permit Issue Date: 12/22/2022 Existing Permit Expiration Date: 11/30/2027</p>

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	67.99	23.81	72.08	64.19	101.70	95.03	79.04 [Hydrogen chloride (hydrochlori)]
2021	73.04	22.69	76.10	66.67	104.73	112.53	95.26 [Hydrogen chloride (hydrochlori)]
2020	71.36	21.11	72.09	64.28	100.44	88.37	71.56 [Hydrogen chloride (hydrochlori)]
2019	68.17	21.11	68.43	62.16	99.73	101.07	85.50 [Hydrogen chloride (hydrochlori)]
2018	78.07	22.20	79.00	69.61	109.89	133.33	114.90 [Hydrogen chloride (hydrochlori)]

<p>Review Engineer: Russell Braswell</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 03663/T33 Permit Issue Date: TBD Permit Expiration Date: TBD+5 years</p>
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1. Purpose of Applications

1.1 Application 3900040.20A (Title V permit renewal)

CertainTeed Corporation (CertainTeed; the facility) operates a factory in Granville County under Title V permit 03663T32 (the existing permit). The existing permit “shall expire on the earlier of November 30, 2027 or the renewal of Permit No. 03663T31 has been issued or denied.” Title V permit 03663T31 had an expiration date of May 31, 2021. Prior to the expiration of 03663T31, CertainTeed submitted this application in order to renew the Title V permit. The application for renewal was received September 2, 2020.

Per General Condition K, because this renewal application was received at least nine months¹ before the expiration date of the permit, the existing permit will remain in effect, regardless of expiration date, until DAQ processes this renewal application.

In addition to renewal of the Title V permit, CertainTeed requested corrections and updates to the permit.

1.2 Application 3900040.19A (502(b)(10) notification; consolidated into .20A)

CertainTeed submitted a notification pursuant to 15A NCAC 02Q .0523(a) (a “502(b)(10) notification”) in order to convert a flux tank (ESFT3) in order to store water or an oil/water mixture. CertainTeed asserted that this change would not result in an increase in emissions. CertainTeed 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 .20A.

¹ In General Condition K of permit 03663T31, the submittal deadline was nine months. The deadline was shortened to six months in 03663T32, but this application was received before the T32 revision was issued.

2. Application Chronology

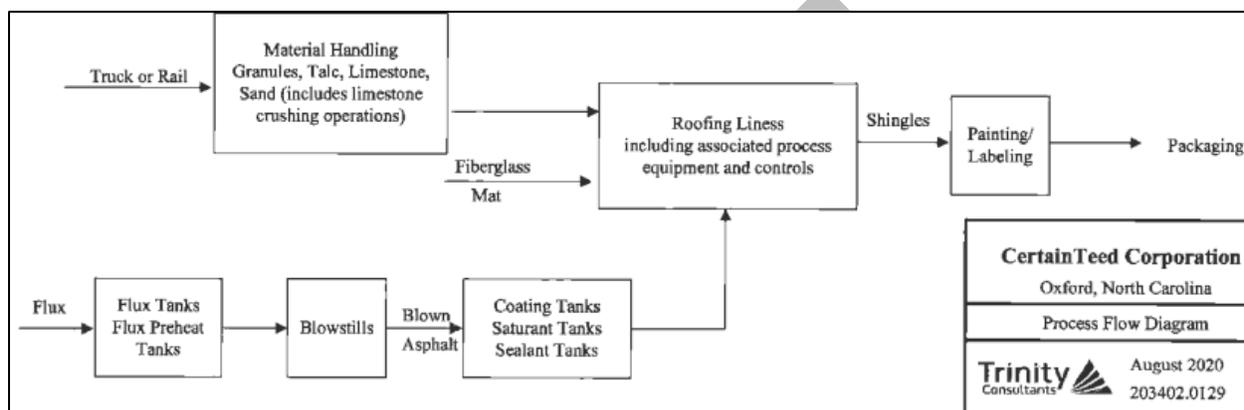
Date	Event
November 12, 2019	Application .19A (502(b)(10) notification) received.
September 2, 2020	Application .20A (Title V renewal) received.
November 3, 2023	Applications transferred to Russell Braswell
January 17, 2024	Request for additional information sent to CertainTeed staff via email: 1. Need the specific filter area of several baghouses. 2. Need the specific size of boiler ESBLR1. 3. Confirm that ESBLR1 is a single boiler. 4. Need the pressure drop ranges for the PM control devices per MACT Subpart LLLLL. 5. Does the facility emit 1-bromopropane? 6. The renewal application mentions “used oil” stored in tanks IN2FO and IN6FO. Is this recycled fuel oil? Will it be burned in boilers?
January 22, 2024	Response received to the January 17 request: 2&3. ESBLR1 was part of a previous project, but was never constructed. 4. CertainTeed supplied the requested pressure drop ranges. 5. “After further investigation we have no reason to believe we emit any 1-bromopropane (1-BP; CAS 106-94-5).” 6. The used oil is used motor oil that would be mixed with asphalt for processing. “Not used at all for fuel.”
January 25, 2024	Response received to the January 17 request: 1. CertainTeed supplied the requested filter areas.
January 25, 2024	Initial draft sent to DAQ Permits staff.
February 14, 2024	Revised draft sent to DAQ RRO staff, DAQ SSCB staff, and CertainTeed staff.
March 5, 2024	The Public Notice and EPA Review periods began.
XXXX	The Public Notice period ended.
XXXX	The EPA Review period ended.
XXXX	Permit issued.

3. Facility and Application Discussion

3.1 Facility description

This facility manufactures asphalt roofing shingles. The facility produces its own asphalt on-site for use in the roofing shingles. The operations at this facility are broadly subject to NSPS Subpart UU and MACT Subpart LLLLL.

The following process diagram was included in the application (the formatting of this diagram was changed slightly to fit this document).



3.2 Title V permit history

This facility first received a Title V permit on March 15, 2004, and the Title V permit was most recently renewed on June 10, 2016. The table below summarizes the recent revisions to the Title V permit and applicability determinations issued by DAQ:

Permit revision (or determination #) (issued)	Application type	Discussion
T31 (June 10, 2016)	Renewal/ TV-Sig. Modification	This revision renewed the Title V permit. In addition: 1. TAP limits were revised/removed in accordance with Session Law 2012-91. 2. The facility was designated as a minor source (i.e., not a major stationary source) for PSD. 3. PSD avoidance limits were added to the permit. 4. Removed a large emergency generator from the permit.
Determination #3873 (October 11, 2022)	Applicability Determination	DAQ determined that the co-located facility also owned by CertainTeed was a separate facility under Title V and PSD.
T32 (December 22, 2022)	TV-Minor Modification	This minor modification allowed for upgrades and replacements for sources connected to Line 3.

3.3 Title V permit renewal

In the application, CertainTeed requested renewal of the Title V permit. In addition, CertainTeed proposed the following changes to the existing permit:

- Remove the following insignificant activities:
 - ISRP
 - ILL
 - IRC
 - Ilaser8

DAQ will remove these sources from the permit.

- Change the descriptions of the following insignificant activities:

ID No.	Previous description	New description
IN2FO	75,000 gallon No. 2 fuel oil storage tank	75,000 gallon No. 2 fuel oil / <u>used oil</u> storage tank
IN6FO	75,000 gallon No. 6 fuel oil storage tank	75,000 gallon <u>used oil</u> storage tank

CertainTeed stated this oil would be used in asphalt production, and specifically, not as fuel in a combustion source.² DAQ will implement this change.

- Remove references to 15A NCAC 02D .0958 because it does not apply to this facility.

As discussed in Section 4 below, DAQ agrees that 02D .0958 can be removed from the permit.

- Remove references to equipment no longer at the facility.

The application states that “CertainTeed will no longer operate the Polypropylene Roofing Product Manufacturing line (Line No. 8) at the Oxford plant and the equipment has been removed from the facility.” Therefore, the application requested the removal of the following sources and all references thereto:

- L8RMH
- L8
- L8PG

DAQ will remove these sources from the permit.

² See email from Robert Yurek (environmental coordinator, CertainTeed) to Russell Braswell (engineer, DAQ), received January 22, 2023.

- Remove references to SO₂ and PSD avoidance.

The existing permit does not include any specific condition that limits SO₂ for PSD avoidance, but does include some references to those limits. These erroneous limits will be removed from the permit.

- Remove references to No. 6 fuel oil.

DAQ removed these references with the T32 permit revision. No additional change is required.

- Add a specific condition for NSPS Subpart Dc.

The hot oil heater ESHOH4 is subject to NSPS Subpart Dc, but the permit does not include a specific condition for that rule. As discussed in Section 5.1.1, DAQ agrees that NSPS Subpart Dc applies and the permit should include a specific condition for that rule.

- Update the specific condition for MACT Subpart LLLLL.

The application states that MACT Subpart LLLLL was updated on March 12, 2020. Those regulatory updates should be included in the permit.

As discussed in Section 5.3.3, DAQ will implement the updated rule in the permit.

3.4 **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. CertainTeed submitted a 502(b)(10) notification in 2019. DAQ has consolidated this notification with the Title V renewal application discussed above.

Proposed modifications: CertainTeed explains the proposed modifications:

“CertainTeed plans to utilize a flux tank (ESFT3) to store water or an oil/water mixture for process needs. ESFT3 will continue to be capable of storing flux material after the proposed project, the changes in tank services will result in a decrease in criteria pollutant emissions and will not result in increases emissions of any pollutants subject to the NC Air Toxics program (15A NCAC 02Q .0700 and 02D .1100). Additionally, the change does not meet the definition of modification under any New Source Performance standard (NSPS) or National Emissions Standard for Hazardous Air Pollutants (NESHAP).” (502(b)(10) notification cover letter)

SIP rules: The tank is subject to the following State Implementation Plan (SIP) rules:

- 15A NCAC 02D .0515 “Particulates from Miscellaneous Industrial Processes”
- 15A NCAC 02D .0521 “Control of Visible Emissions”

- 15A NCAC 02D .0524 “New Source Performance Standards” (Part 60 Subpart UU)
- 15A NCAC 02D .1111 “Maximum Achievable Control Technology” (Part 63 Subpart LLLLL)
- 15A NCAC 02Q .0317 “Avoidance Conditions” (PSD Avoidance, NSR Avoidance)

Emissions from ESFT3 are controlled by either a mist eliminator, a regenerative thermal oxidizer, or an electrostatic precipitator. Given that emissions from ESFT3 will not increase based on this change, this change will not cause a change in applicability for any of these rules.

NSPS rules: The tank ESFT3 is not subject to 40 CFR Part 60 Subpart UU because it is not a listed process in §60.470(a). There are no other NSPS rules that would apply to ESFT3. Therefore, any modification to ESFT3 will not trigger NSPS applicability.

MACT rules: The tank ESFT3 is subject to 40 CFR Part 63 Subpart LLLLL. That rule applies to new, reconstructed, and existing sources at asphalt roof manufacturing plants that are also major sources of HAP. ESFT3 is already considered a new source under this rule because it was installed after the applicability date in §63.8682(c).

Under the MACT rules, “reconstruction” is defined as “...the replacement of components of an affected or a previously nonaffected source...” Given that ESFT3 is already an affected source, it cannot be considered a reconstructed source. Because ESFT3 is already a new source, any change to ESFT3 will not cause a change in applicability under the MACT rule.

PSD, NA NSR, and avoidance: CertainTeed is not a major stationary source as defined in 40 CFR 51.166. CertainTeed has accepted enforceable emission limits in order to avoid being designated as a major stationary source. According to CertainTeed, the proposed change will not increase emissions. Therefore, CertainTeed will continue to comply with the avoidance limits in the existing permit without any modification, and no new PSD avoidance limit is required.

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. CertainTeed 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.	CertainTeed will continue to comply with the existing permit, avoidance, and MACT limits in the permit.	No
This change does not cause emissions allowed under the permit to be exceeded.	This change will not cause any emission limits 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.	The proposed change is not a Title I modification.	No

502(b)(10) Qualification Checklist	Discussion	Disallows 502(b)(10)?
This change does not alter (modify or add to) any existing monitoring, reporting or recordkeeping provisions in my current permit.	CertainTeed 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, and no modification to an existing PSD avoidance limit will be required.	No
This change does not require a permit under the NC Toxics program.	The tank ESFT3 are each subject to 40 CFR Part 63 Subpart LLLLL, which is specifically excluded from TAP applicability under 15A NCAC 02Q .0702(a)(23).	No

Based on the above analysis, DAQ agrees that the proposed change qualifies as a 502(b)(10) change.

3.5 Changes to the existing permit

Page No.	Section	Description of Changes
Throughout	Throughout	<ul style="list-style-type: none"> • Updated dates and permit numbers. • Fixed/updated formatting. Formatting changes are for clarity and conformity with DAQ's other Title V permits, and are not intended to affect the Permittee's compliance requirements. • Removed references to an SO₂ limit under 02Q .0317. That limit had previously been removed from the permit, but some errant references remained.

Page No.	Section	Description of Changes
4-11	1	<ul style="list-style-type: none"> Updated description of ESFT3 as requested in the 2019 502(b)(10) notification. Updated description of the following baghouses to include the filter area: <ul style="list-style-type: none"> CDDC25 CDDC22 CDDC23 CDDC17 CDDC16 CDDC24 CDDC12 CDDC13 CDDC19 CDDC18 CDDC15 Removed Line 8 sources as requested in renewal application: <ul style="list-style-type: none"> L8RMH L8 L8PG Removed source ESBLR1 because it was never constructed. Removed all references to 02D .1109. Removed references to previous minor modifications.
12	2.1 A.1 (new)	<ul style="list-style-type: none"> Added specific condition for 02D .0515 because NSPS Subpart UU does not allow for exemption under 02D .0515(a). Renumbered following conditions.
n/a	2.1 B.1.b (former)	<ul style="list-style-type: none"> Removed exemption for sources subject to NSPS Subpart UU because that rule does not allow for exemption under 02D .0515(a).
n/a	2.1 E (former)	<ul style="list-style-type: none"> Removed all requirements from this section because Line 8 has been removed from the permit. Marked this section as "RESERVED".
28-32	2.1 E (new)	<ul style="list-style-type: none"> Renumbered this Section. Removed all references to 02D .1109 and Section 112(j). Combined all specific conditions for 02D .1111 (MACT Subpart DDDDD) into a single condition. This change is intended to reduce repetition and streamline the permit because the requirements under the MACT are broadly the same for units of all sizes at this facility.
n/a	2.1 H (former)	<ul style="list-style-type: none"> Removed all requirements from this section because the source ESBLR1 was never constructed and has been removed from the permit. Removed this section because it no longer has any emission sources.
33	2.1 F.1 (formerly 2.1 I.1)	<ul style="list-style-type: none"> Noted that compliance with 02D .0515 is demonstrated by complying with MACT Subpart LLLLL.
36	2.1 G (formerly 2.1 J)	<ul style="list-style-type: none"> Renumbered this section.
37	2.2	<ul style="list-style-type: none"> Renumbered this section to match DAQ's standard format.

Page No.	Section	Description of Changes
37-42	2.2 A.1	<ul style="list-style-type: none"> • Updated MACT Subpart LLLLL requirements to reflect recent rule changes: <ul style="list-style-type: none"> ○ Removed exemption for periods of SSM. ○ Added pressure drop ranges for PM control devices. ○ Noted that pressure drop ranges can be established using manufacturer specifications. ○ Added periodic testing requirement. ○ Added requirement to operate with good work practices.
43	2.2 B	<ul style="list-style-type: none"> • Renumbered this section to match DAQ's standard format.
43-48	2.2 B.1, 2.2 B.2, 2.2 B.3	<ul style="list-style-type: none"> • Added requirement that reports must clearly identify deviations.
43-48	2.2 B.1, 2.2 B.2	<ul style="list-style-type: none"> • Changed these conditions to be avoidance of PSD instead of NA NSR. Granville County is not a nonattainment area, and the anti-backsliding provisions of 02D .0531(e) do not apply because CertainTeed was never a major stationary source for NA NSR.
49	2.2 C.1 (new)	<ul style="list-style-type: none"> • Noted date of most recent modeling demonstration.
n/a	2.2 vi.1 (former)	<ul style="list-style-type: none"> • Removed specific condition for 02D .0958 because that rule no longer applies to this facility.
50	2.3	<ul style="list-style-type: none"> • Noted the applicable that triggered CAM. • Updated CAM plan parameters based on MACT Subpart LLLLL updates. The CAM plan now specifies the pressure drop range to match MACT Subpart LLLLL. • Updated CAM plan reporting to more closely match 40 CFR 64.9.
52	3.	<ul style="list-style-type: none"> • Removed the following sources as requested in the renewal application: <ul style="list-style-type: none"> ○ ISRP ○ IRC ○ Ilaser8 • Noted that IN2FO can store used oil. • Noted that IN6FO cannot store No. 6 fuel, but can store used oil. • Noted that I-ESFST-burners is subject to MACT Subpart DDDDD.
53	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. Rules Review

CertainTeed is subject to the following State Implementation Plan (SIP) rules and state-enforceable only rules, in addition to the General Conditions:

- 15A NCAC 02D .0503 “Particulate Emissions from Fuel Burning Indirect Heat Exchangers”
- 15A NCAC 02D .0515 “Particulates from Miscellaneous Industrial Processes”
- 15A NCAC 02D .0516 “Sulfur Dioxide from Combustion Sources”
- 15A NCAC 02D .0521 “Control of Visible Emissions”
- 15A NCAC 02D .0524 “New Source Performance Standards”
- 15A NCAC 02D .0614 “Compliance Assurance Monitoring”
- 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” (state-enforceable only)
- 15A NCAC 02D .1111 “Maximum Achievable Control Technology”
- 15A NCAC 02D .1806 “Control and Prohibition of Odorous Emissions” [state-enforceable only]
- 15A NCAC 02Q .0317 “Avoidance Conditions” (PSD/NA NSR Avoidance)

CertainTeed’s applicability and compliance requirements for each of these rules are discussed in detail below. In addition, certain nonapplicable rules are also discussed.

4.1 15A NCAC 02D .0503 “Particulate Emissions from Fuel Burning Indirect Heat Exchangers”

Applicability: This rule applies to all indirect heat exchangers (such as boilers). Each boiler and heater at this facility is subject to this rule.

Emission limits: The emission limit for this rule is calculated by the equation $E = 1.090 \times Q^{-0.2594}$, where E is the particulate emission limit in lb/MMBtu and Q is the combined heat input of each emission source subject to this rule. Q is determined when an emission source is added to the permit, and the resulting E is not subsequently recalculated when other sources subject to this rule are added to (or removed from) the permit. As a result, different boilers can have different emission limits under this rule.

- 0.32 lb/MMBtu for the following sources: ESPH1, ESPH2, ESB1, ESB2, ESSCH1, ESSCH2, ESSCH3, ESSCH4, ESHOH2, ESHOH4
- 0.29 lb/MMBtu for ESHOH4

The subject sources at this facility can burn natural gas and No. 2 fuel oil. In order to calculate PM emissions from the combustion of these fuels, the emission factors published by EPA in AP-42 can be applied. The published emission factors are not in units of pounds per million Btu, so the emission factor must be converted:

- PM from natural gas (AP-42 Chapter 1.4, Table 1.4-2; PM [Total]):

$$\frac{7.6 \text{ lb}}{\text{million scf}} \times \frac{1 \text{ scf}}{1,020 \text{ Btu}} = \frac{\mathbf{0.007 \text{ lb}}}{\mathbf{\text{million Btu}}}$$

Therefore, natural gas is expected to comply with the PM limit by a wide margin.

- PM from No. 2 fuel oil (AP-42 Chapter 1.3, Tables 1.3-1 and 1.3-2; Filterable PM + CPM-TOT):

$$\frac{[2+1.3] \text{ lb}}{1,000 \text{ gal}} \times \frac{1,000 \text{ gal}}{140 \text{ million Btu}} = \frac{\mathbf{0.023 \text{ lb}}}{\mathbf{\text{million Btu}}}$$

Note that AP-42 Chapter 1.3 differentiates emission factors for sources with heat input greater than or less than 100 million Btu per hour. However, the PM emission factor is the same for either case. Based on the above, No. 2 fuel oil is expected to comply with the PM limit by a wide margin.

Monitoring, Recordkeeping, and Reporting: Based on the wide margin of compliance for natural gas, propane, and No. 2 fuel oil, DAQ has determined that no monitoring, recordkeeping, or reporting is required to demonstrate compliance with 15A NCAC 02D .0503. DAQ has reviewed this analysis for the existing permit and agrees with this analysis.

Compliance: CertainTeed is expected to remain in compliance with this rule.

4.2 15A NCAC 02D .0515 “Particulates from Miscellaneous Industrial Processes”

Applicability: This rule applies to emission sources that exhaust through a stack and are not subject to another particulate matter (PM) emission limit. Note that, when demonstrating compliance with this rule, facilities must perform emission testing using EPA Methods 5 and 202 (i.e., test for filterable and condensable PM).³ Therefore, rules that only apply to filterable PM are not considered for the purposes of this rule. Each source at this facility, excluding those listed below, is subject to this rule.

- Boilers are generally not subject to this rule because they do not have a process rate.
- The nail paint line applicator also does not have a process rate.

Emission limit: The emission limit for this rule is calculated by the equations $E = 4.10 \times P^{0.67}$ (for $P \leq 30$) or $E = 55(P)^{0.11} - 40$, where E is the emission limit in pounds per hour and P is the process rate of the emission source measured in tons per hour. The equations are listed in the permit as the emission limit.

Compliance requirements: In general, CertainTeed demonstrates compliance with this rule by operating PM control devices.

- For asphalt sources subject to NSPS Subpart UU and MACT Subpart LLLLL, the permit requires CertainTeed to comply with those rules.
- For the material handling, crushing sources, and other sources, CertainTeed must conduct regular inspections and maintenance of the associated control devices.

Recordkeeping: For sources not subject to MACT Subpart LLLLL, CertainTeed must keep records of maintenance and monitoring activities.

Reporting: For sources not subject to MACT Subpart LLLLL, CertainTeed must submit a semiannual summary report.

³ See 15A NCAC 02D .2609(a).

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections and reports.

Changes to the existing permit: The existing permit does not include a specific condition for 02D .0515 regarding the blowing stills. DAQ chose to remove the specific condition for these sources when CertainTeed triggered applicability to NSPS Subpart UU for these sources. However, this is a mistake; NSPS Subpart UU only regulates filterable PM,⁴ and as stated above, this rule regulates filterable *and* condensable PM. Therefore, a specific condition for this rule will be added to the permit for the blowing stills.

CertainTeed has previously performed an emission test for condensable PM from the blowing stills (test reference number 2013-250ST). The results of this test were:

Process rate: 67.2 ton/hr

“Front Half” PM emissions (i.e., filterable PM): 3.6 lb/hr

“Back Half” PM emissions (i.e., condensable PM): 1.3 lb/hr

Total PM: 4.9 lb/hr

E for a P of 67.2: $55 \times (67.2)^{0.11} - 40 = 47.37 \text{ lb/hr}$

Therefore, the contribution of condensable PM is small when compared to the allowable emission limit under this rule. Given that the blowing stills are already subject to MACT Subpart LLLLL and NSPS Subpart UU, each of which include emission limits for filterable PM, it is reasonable to assume that following the compliance requirements of MACT Subpart LLLLL and NSPS Subpart UU will be sufficient for CertainTeed to demonstrate compliance with this rule.

The permit will be updated to show that CertainTeed must continue to comply with MACT and NSPS in order to demonstrate compliance with this rule. Given that CertainTeed is already complying with MACT and NSPS, this change will have a minor impact on the facility’s compliance requirements.

4.3 15A NCAC 02D .0516 “Sulfur Dioxide from Combustion Sources”

Applicability: This rule applies to combustion sources that are not subject to an SO₂ emission limit under NSPS or MACT. None of the combustion sources at this facility are subject to an alternate SO₂ limit, and therefore they are subject to this rule.

Emission limit: In all cases, the emission limit is 2.3 pounds of SO₂ per million Btu of heat input. In general, SO₂ emitted by combustion sources is a function of the amount of sulfur present in the fuel. Fuel burning sources at this facility can burn natural gas and No. 2 fuel oil. In order to calculate SO₂ emissions from the combustion of natural gas, the emission factors published by EPA in AP-42 can be applied. The published emission factors are not in units of pounds per million Btu, so the emission factor must be converted:

⁴ See 40 CFR 60.474(c)(2), which only requires Method 5A (i.e., filterable PM) to show compliance with NSPS Subpart UU.

- SO₂ from natural gas combustion (AP-42 Chapter 1.4, Table 1.4-2; SO₂):

$$\frac{0.6 \text{ lb}}{\text{million scf}} \times \frac{1 \text{ scf}}{1,020 \text{ Btu}} = \frac{\mathbf{0.001 \text{ lb}}}{\mathbf{\text{million Btu}}}$$

Therefore, natural gas is expected to comply with the SO₂ limit by a wide margin.

- SO₂ from No. 2 fuel oil combustion (AP-42 Chapter 1.3, Table 1.3-1; distillate oil, SO₂, S=0.5):

$$\frac{\left(\frac{142 \times 0.5 \text{ lb}}{1,000 \text{ gal}}\right)}{\left(\frac{140 \text{ million Btu}}{1,000 \text{ gal}}\right)} = \frac{\mathbf{0.507 \text{ lb}}}{\mathbf{\text{million Btu}}}$$

Therefore, No. 2 fuel oil is expected to comply with the SO₂ limit by a wide margin.

Monitoring, Recordkeeping, and Reporting: Based on the wide margin of compliance for natural gas, DAQ has determined that no monitoring, recordkeeping, or reporting is required to demonstrate compliance with 15A NCAC 02D .0516.

Compliance: CertainTeed is expected to remain in compliance with this rule.

4.4 15A NCAC 02D .0521 “Control of Visible Emissions”

Applicability: This rule applies to sources of visible emissions (VE) that are not subject to another VE standard under 02D .0500. Generally, this rule is not applied to sources that are not expected to produce any VE (e.g., from a storage tank).

- NSPS Subpart OOO and NSPS Subpart UU both include VE standards. Therefore, sources subject to those rules are not subject to 02D .0521.
- NSPS Subpart Dc includes a VE standard, but that standard does not apply to gas-fired sources. ESHOH4 is a gas-fired source, so the VE standard under NSPS Subpart Dc does not apply, and therefore the VE standard under 02D .0521 does apply.

Emission limits: The VE limit for this rule depends on the construction date of the individual source in question. At this facility, the VE limit is 20% for each source subject to this rule. The rule allows for one exceedance of the specific limit per hour, and four exceedances per 24-hour period.

Monitoring and recordkeeping: CertainTeed must conduct regular VE observations of all sources subject to this rule (except boilers, which are not expected to generate substantial VE) and keep records of observations and any corrective actions taken.

Reporting: CertainTeed must submit a semiannual summary report.

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections and reports.

4.5 15A NCAC 02D .0524 “New Source Performance Standards”

This rule incorporates the requirements of 40 CFR Part 60 (the NSPS rules) into North Carolina’s SIP. See Section 5.1 for a discussion of applicable NSPS rules for this facility.

4.6 15A NCAC 02D .0614 “Compliance Assurance Monitoring”

Background: This rule incorporates the CAM requirements under 40 CFR Part 64 into North Carolina’s SIP.

Applicability: Facilities that are required to develop a CAM plan per 15A NCAC 02D .0614(a) are subject to this rule. CertainTeed has previously developed a CAM plan for this facility.

Requirements: In general, CertainTeed must continuously monitor parameters of the control devices CDAFB, CDRTO, CDESP, and CDME. The monitoring approach is the same as MACT Subpart LLLLL. The CAM plan includes ranges for excursions and the threshold at which a quality improvement plan is required.

Recordkeeping: CertainTeed must keep records of control device parameters and excursions.

Reporting: CertainTeed must submit a semiannual summary report.

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections and reports.

Changes to the existing permit:

- MACT Subpart LLLLL now requires a pressure drop range for control devices used to control PM. Because the CAM plan is linked to MACT Subpart LLLLL, the CAM plan will be updated to reflect the pressure drop range under the MACT.
- The reporting requirement of the CAM plan has been updated slightly to more closely match the requirements of 40 CFR 64.9.

4.7 15A NCAC 02D .0958 “Work Practices for Sources of Volatile Organic Compounds” [not applicable]

Background: North Carolina implements the so-called Reasonably Available Control Technology (RACT) rules for VOC emissions through portions of 15A NCAC Section 02D .0900. In general, these RACT rules apply to areas of current or former ozone nonattainment. Granville County was formerly an area of ozone nonattainment, but was redesignated to attainment on December 16, 2007.

In addition, portions of Section 02D .0900 were amended on November 1, 2016, which resulted in changing the applicability of several rules under Section 02D .0900. In general, the RACT rules now only apply to areas designated as nonattainment prior to January 2, 2014 (i.e., maintenance areas, see 02D .0902(f) and (g)).

Applicability: This rule applies to facilities that use VOC as solvents, carriers, etc. However, per 02D .0902(f), this rule (and most other rules under Section 02D .0900) only apply to facilities located in the seven areas listed in 02D .0902(f)(1)-(7). CertainTeed is located in Granville County, which is not a listed area. Therefore, this rule does not apply.

Changes to the existing permit: The existing permit includes a specific condition for this rule. As stated above, this rule no longer applies to CertainTeed. References to this rule will be removed from the permit.

**4.8 15A NCAC 02D .1100 “Control of Toxic Air Pollutants”
[state-enforceable only]**

Background: CertainTeed has previously performed air dispersion modeling in order to demonstrate compliance with the acceptable ambient limits (AAL) for the toxic air pollutants (TAP) listed in 02D .1104. The modeled emission rates are listed in the Title V permit as emission limits. A discussion of CertainTeed’s previous modeling efforts is in Section 6.0 below.

Monitoring, recordkeeping, and reporting: CertainTeed demonstrates compliance with the modeled emission rates by complying with MACT Subpart LLLLLL.

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections. See Section 6.0 for additional discussion of CertainTeed’s requirements for TAP emissions.

**4.9 15A NCAC 02D .1109 “112(j) Case-by-Case Maximum Achievable Control Technology”
[not applicable]**

Background: Broadly, if US EPA fails to promulgate a MACT rule by the deadline set in Section 112(d) of the Clean Air Act, Section 112(j) requires the States to develop an equivalent emission limit (a.k.a. “MACT Hammer”). In 2009, the US Court of Appeals for DC Circuit vacated US EPA’s MACT for boilers (MACT Subpart DDDDD) and, as required by Section 112(j) and 02D .1109, North Carolina developed a case-by-case MACT (CBCM) for boilers.

Applicability: North Carolina’s CBCM for boilers applied to boilers located at major sources of hazardous air pollutants. CertainTeed operates boilers and is a major source of HAP, and therefore the CBCM applied to the boilers at this facility. US EPA has re-promulgated MACT Subpart DDDDD, and therefore the CBCM no longer applies. CertainTeed now complies with the new MACT Subpart DDDDD, and the CBCM has expired.

Changes to the existing permit: All references to the CBCM and Section 112(j) will be removed from the permit. CertainTeed will continue to comply with MACT Subpart DDDDD.

4.10 15A NCAC 02D .1111 “Maximum Achievable Control Technology”

This rule incorporates the MACT rules (40 CFR Part 63) into North Carolina’s SIP. See Section 5.3 for a discussion of MACT rules that apply to this facility.

**4.11 15A NCAC 02D .1806 “Control and Prohibition of Odorous Emissions”
[state-enforceable only]**

Applicability: This rule applies to facilities that emit, or could potentially emit, odorous emissions. The existing permit includes a specific condition for this rule.

Monitoring, recordkeeping, and reporting: The existing permit does not require any monitoring, recordkeeping, or reporting for this rule.

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections.

4.12 15A NCAC 02Q .0317 “Avoidance Conditions”

Background: A facility may accept an enforceable emission limit or operating limit in order to avoid the applicability of specific rules (see 02Q .0317(a)). CertainTeed has previously accepted several emission limits in order to avoid the applicability of PSD and NA NSR. See Section 5.5 and Section 5.6 for additional discussion of PSD and NA NSR requirements. As discussed below, CertainTeed will no longer be subject to NA NSR avoidance.

4.12.1 PSD Avoidance (Avoidance of 15A NCAC 02D .0530)

Applicability: In order to avoid being designated a major stationary source under PSD, CertainTeed has accepted a facility-wide limit on PM₁₀ emissions to less than 250 tpy.⁵ Furthermore, CertainTeed will avoid being designated a major source under PSD by complying with the following NO_x and VOC limits:

Sources	NO _x limit (tpy)	VOC limit (tpy)
Roofing Lines 1 and 2	100	92
Roofing Line 3	100	99

Former NA NSR avoidance limits: The NO_x and VOC limits were previously included in the permit as NA NSR avoidance limits. Now that Granville County has been designated as an attainment (maintenance) area, NA NSR can no longer apply to this facility. The NA NSR limits have therefore been converted to PSD avoidance limits. The PSD major source threshold for NO_x and VOC is 250 tpy (see 40 CFR 51.166(b)(1)(i)(b)). The sum of the former avoidance limits is each less than 250 tpy, so by continuing to comply with those limits, CertainTeed can continue to avoid applicability of PSD.

CertainTeed may, in the future, apply to have the NO_x and VOC limits changed to match the PSD major source threshold in 40 CFR 51.166(b)(1)(i)(b).

Operating limits:

- CertainTeed has demonstrated that limiting production of asphalt in the blowstills to less than 350,000 tons per year will ensure compliance with the PM₁₀ emission limit.
- CertainTeed will calculate emissions of NO_x and VOC from Lines 1, 2, and 3 using production records, fuel usage records, and the emission factors and equations included in the permit.

Monitoring and recordkeeping: CertainTeed must keep records of asphalt production and fuel usage on a monthly basis and calculate the rolling 12-month asphalt production.

Reporting: CertainTeed must submit a semiannual summary report.

⁵ The Title V permit previously included two PSD avoidance limits for SO₂. Those limits were initially included in the T19 permit revision (issued July 18, 2005) and the T20 permit revision (issued August 9, 2005). The SO₂ limits were removed with the T31 permit revision (issued June 4, 2016).

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections.

Changes to the existing permit:

- The reporting requirement will be updated to include the following language “All instances of deviations from the requirements of this permit must be clearly identified.” This language is required by 15A NCAC 02Q .0508(f)(2)(B), and is present in other reporting requirements in the existing permit.
- As discussed above, the former NA NSR avoidance limits will be relabeled as PSD avoidance limits. No other changes to those limits will be made at this time.

**4.12.2 NA NSR Avoidance (Avoidance of 15A NCAC 02D .0531)
[not applicable]**

Applicability: 02D .0531 applies to facilities located in areas of nonattainment (see 02D .0531(f)). In order to avoid being designated a major stationary source under nonattainment (NA) NSR, CertainTeed has previously accepted several limits on NO_x and VOC emissions. These limits were first included in the Title V permit with the T20 revision, issued August 9, 2005.

Redesignation: CertainTeed is located in Granville County, which was formerly designated as nonattainment. However, it was redesignated as attainment on December 16, 2007. Given that Granville County is no longer an area of nonattainment, there is no need for CertainTeed to continue to avoid applicability of 02D .0531.

Note that the so-called anti-backsliding provision in 02D .0531(e) does not apply in this case. CertainTeed has always avoided applicability of 02D .0531, and therefore none of the paragraphs contained within 02D .0531 have ever applied to CertainTeed.

Changes to the existing permit: The VOC and NO_x avoidance limits that were associated with NA NSR avoidance in the existing permit will be changed to be PSD avoidance limits instead. See Section 4.12.1 for a discussion of PSD avoidance requirements.

5. NSPS, NESHAP, MACT, CAM, PSD/NA NSR, and §112(r)

5.1 New Source Performance Standards (NSPS; 40 CFR Part 60)

5.1.1 NSPS Subpart Dc “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units”

Applicability: This rule applies to “steam generating units” (see §60.41c) that were constructed, modified, or reconstructed after June 9, 1989 and have a heat input capacity between 10 and 100 million Btu per hour, except as provided in §60.40c(e)-(i). This rule was most recently revised on February 16, 2012 (See 77 FR 9463).

- The boiler ESHOH4 is subject to this rule.
- The preheaters ESPH1 and ESPH2, and the boilers ESB1, ESB2 were constructed before the applicability date and have not been modified or reconstructed following that date and are therefore not subject to this rule.
- The small boilers and heaters (e.g., ESSCH1) have a heat input capacity less than 10 million Btu per hour and are therefore not subject to this rule.
- The direct-fired heaters (e.g., ESCMH3) do not meet the definition of “steam generating unit” under the rule and therefore are not subject to the rule.

Requirements: The requirements of this rule differ based on the size, fuel types, and construction date of the boiler in question. For the purposes of this rule, ESHOH4 is a gas-fired source with heat input capacity less than 30 million Btu per hour.

The rule includes emission limits for SO₂, PM, and VE depending on the boiler. The rule also includes monitoring and recordkeeping.

SO₂ emission limit: There is no SO₂ emission limit for gas-fired boilers (see 40 CFR 60.42c).

PM emission limit: There is no PM emission limit for gas-fired boilers (see 40 CFR 60.43c).

VE emission limit: There is no VE emission limit for gas-fired boilers, only for oil-fired boilers (see 40 CFR 60.43c(c)).

Monitoring, recordkeeping, and reporting: The rule requires CertainTeed to keep records of the amount of fuel burned in the boilers (see §60.48c(g)(2)).

Compliance: According to the application, CertainTeed is in compliance with this rule. The existing permit does not include a specific condition for this rule; compliance will be determined during the next inspection.

Changes to the existing permit: The existing permit does not include a specific condition for this rule; this will be corrected in the renewed Title V permit. The renewal application notes that the specific condition for NSPS Subpart Dc was “inadvertently removed” with the T31 permit revision (Application at 4-2). According to the application, CertainTeed is already aware of, and in compliance with, the requirements of this rule.

5.1.2 NSPS Subpart UU “Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture”

Applicability: This rule applies the processes described in §60.470(a) that were constructed or modified after November 18, 1980. Several activities at CertainTeed are subject to this rule. This rule was most recently amended on February 27, 2014 (see 79 FR 11250).

Sources subject to MACT Subpart LLLLL: Per §63.8681(b), blowing stills, asphalt storage tanks, saturators, wet loopers, and coaters that are subject to the MACT are required to comply only with the MACT Subpart LLLLL. NSPS Subpart UU still applies, but for these sources, CertainTeed has no requirements under this rule:

ID No.	Description
ESBS1	Blowstill No. 1
ESBS2	Blowstill No. 2
ESBS3	Blowstill No. 3
ESLC1	Line No. 1 fiberglass mat coater
ESLC2	Line No. 2 fiberglass mat coater
ESMA3	Modified asphalt or sealant recirculation tank; 900 gal
ESMS2	Modified sealant recirculation tank; 500 gal
ESLAT6	One 80 gallon laminate use tank for Line No. 1
ESLAT7	One 140 gallon laminate use tank for Line No. 1
ESMA7	One 800 gallon laminate day tank for Line No. 1
ESSEA6	One 80 gallon sealant use tank for Line No. 1
ESMA9	One 800 gallon sealant day tank for Line No. 1
ESFST3 and ESFST4	Two asphalt flux storage tanks (1,000,000 gallons capacity each)
ESAC20	Line No. 3 AC-20 asphalt storage tank; 30,000 gal
ESLC3	Line No. 3 fiberglass mat coater
ESMA8	Line No. 3 laminate swell tank
ESLAT3	Line No. 3 laminate adhesive day tank
ESMA10	Line No. 3 sealant swell tank
ESSEA3	Line No. 3 sealant adhesive day tank
ESSA5	Line No. 3 sealant applicator
ESLA2	Line No. 3 laminating adhesive applicator

For these sources, the permit states that CertainTeed must comply with MACT Subpart LLLLL, and has no further requirements under NSPS Subpart UU. Note that not all sources subject to NSPS Subpart UU are also subject to MACT Subpart LLLLL.

Standards: This rule limits PM from several types of activities. For some sources, VE is used as a surrogate pollutant.

- Mineral handling: 1% VE (§60.472(d)). ID Nos. ESPSTS, ESGS, ESSTS, ESSS1, ESSS2, ESHLT, ESHLS, and ESLSV3.
- All other types of activities and sources subject to this rule are also subject to MACT Subpart LLLLL and are therefore not required to comply with the limits under NSPS Subpart UU.

Monitoring: For sources subject to VE limits, CertainTeed must conduct regular VE observations. All other types of activities and sources subject to this rule are also subject to MACT Subpart LLLLL and are therefore not required to comply with monitoring requirements under NSPS Subpart UU.

Recordkeeping: CertainTeed must keep records of VE observations. No other recordkeeping requirements under NSPS Subpart UU apply to CertainTeed because CertainTeed also complies with MACT Subpart LLLLL.

Reporting: CertainTeed must submit a semiannual summary report. No other reporting requirements under NSPS Subpart UU apply to CertainTeed because CertainTeed also complies with MACT Subpart LLLLL.

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections and reports.

5.1.3 NSPS Subpart OOO “Standards of Performance for Nonmetallic Mineral Processing Plants”

Applicability: This rule applies to mineral processing plants that operate a crusher (with exceptions as noted in §60.670(a)(2), (b), (c), and (d)), which were constructed or modified after August 31, 1983. The material handling crushers, screens, and conveyors are all subject to this rule. This rule was most recently amended on April 28, 2009 (see 74 FR 19309).

Standards: This rule limits PM (or VE as a surrogate) from sources based on their category and construction date. All of the sources subject to this rule were constructed before April 22, 2008 and have not been modified or reconstructed after that date. Therefore, the standards under this rule are:

- Exhaust from stacks: PM less than 0.05 grams per dry standard cubic meter or VE less than 7% opacity.
- Fugitive emissions: VE less than 10% opacity.
- Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt [§60.672(d)].

Monitoring: CertainTeed must control PM and VE using fabric filters as described in the list of permitted emission sources. CertainTeed must inspect those control devices and perform required maintenance. In addition, CertainTeed must conduct a weekly VE observation on the subject emission sources.

Recordkeeping: CertainTeed must keep records of control device maintenance and inspections and the VE observations.

Reporting: CertainTeed must submit a semiannual summary report.

Compliance: Based on the most recent inspection report, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections and reports.

5.2 National Emission Standards for Hazardous Air Pollutants (NESHAP; 40 CFR Part 61)

There are no specific rules under 40 CFR Part 61 that apply to the operations at CertainTeed.

5.3 National Emission Standards for Hazardous Air Pollutants for Source Categories (a.k.a. Maximum Achievable Control Technology, MACT; 40 CFR Part 63)

5.3.1 Major Source Status

CertainTeed is a major source of hazardous air pollutants (HAP) because the facility has actual emissions of HAP greater than the thresholds listed in the definition of “major source” in 40 CFR 63.2. Because this facility is a major source of HAP, rules that apply exclusively to area sources of HAP (e.g., Subpart JJJJJ) categorically do not apply to this facility.

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

Applicability: This rule applies to boilers and process heaters (defined by 40 CFR 63.7575) located at major sources of HAP. The natural gas/No. 2 fuel oil-fired boilers and heaters are subject to this rule. The in-line drying furnaces are not subject to this rule because they are not process heaters. The limestone heater (ID No. ESLFH) and crushing mill heater (ID No. ESCMH3) are direct-fired, and therefore cannot meet the definition of boiler or process heater under the rule. This rule was most recently revised on October 6, 2022 (see 87 FR 60842).

Subcategories: For each boiler, the requirements of this rule are based on the specific subcategory of boiler. Each subject source at this facility is in the “Units designed to burn gas 1 fuels” subcategory (a.k.a. “gas 1 boilers,” see 40 CFR 63.7499(1)). The rule defines this subcategory:

Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

Note that although boilers ESB1 and ESB2 can burn fuel oil, gas 1 boilers are allowed to burn oil during certain periods (such as maintenance or gas curtailment).

Requirements: For gas 1 boilers (i.e., each boiler at this facility), the rule requires:

- Operate with good work practices
- Conduct initial and regular tune-ups
 - Every five years for boilers with capacity less than 5 MMBtu/hr
 - Every other year for boilers with capacity between 5 and 10 MMBtu/hr
 - Every year for boilers with capacity greater than 10 MMBtu/hr
- For existing boilers, conduct an initial, one-time energy assessment.

Monitoring, recordkeeping, and reporting: The facility must keep records of the tune-ups and other maintenance activities and submit regular reports.

Compliance: During DAQ’s most recent inspection, CertainTeed appeared to be in compliance with this rule. Continued compliance will be determined during subsequent inspections and reports.

Changes to the existing permit:

- The specific conditions for MACT Subpart DDDDD will be rewritten to match the format of DAQ's other Title V permits. Formatting changes are only for clarity and are not intended to EGFA's compliance requirements.
- The new permit will include only one specific condition for MACT Subpart DDDDD. Due to the broad similarity of the requirements for the boilers and process heaters, all boilers and process heaters will be consolidated into this single condition.
- References to 15A NCAC 02D .1112 "112(j) Case-by-Case MACT" will be removed from the permit because the case-by-case MACT has been replaced by this rule.
- The source I-ESFST-burners provide heat to the flux storage tanks "indirectly with a heat exchanger."⁶ Therefore, these burners are process heaters under MACT Subpart DDDDD and are subject to this rule. The description of these sources will be updated. Note that this change only affects insignificant activities, and will not cause a change to any specific conditions within the Title V permit.

5.3.3 MACT Subpart LLLLL "National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing"

Applicability: This rule applies to asphalt processing facilities and asphalt roofing manufacturing facilities (defined in §63.8698) that are located at major sources of HAP. Most of the activities related to asphalt manufacturing at this facility are subject to this rule. Note that not all sources that are subject to NSPS Subpart UU are subject to this rule, and not all sources subject to this rule are subject to NSPS Subpart UU.

New, existing, and reconstructed sources: For this rule, a source is existing if commenced construction before November 21, 2001 (see §63.8682(c), (d), and (e)). According to the application, Lines 1 and 2 are existing, and Line 3 is new. Note that, based on Table 1 to the rule, emission limits under this rule are the same for new, existing, and reconstructed sources.

Rule updates: This rule was originally promulgated on May 7, 2003. As pointed out in the application, US EPA promulgated updates to this rule on March 12, 2020.⁷ According to the application, "the primary changes affecting the Oxford plant include the following:

- Corrections related to emissions from periods of startup, shutdown and malfunction (SSM);
- A new requirement for periodic performance testing;
- Revision to monitoring requirements for a control device used to comply with the PM standards; and
- Updates to the notification and reporting requirements." (Application at 4-4)

The updated requirements and changes to the existing permit will be discussed below.

Emission limits: This rule limits emissions based on the type of activity, and provides several options for emission limits. In general, CertainTeed is required to route emissions from asphalt sources to a combustion

⁶ See DAQ's review of the T29 permit revision (issued November 14, 2011), page 2.

⁷ See 85 FR 14548 (March 12, 2020).

device with 99.5% combustion efficiency, and limit PM and VE from specific processes. Emission limits are listed in Table 1 to the rule.

Compliance requirements: In general, the rule requires:

- Compliance with the emission limits at all times
- Operate with good work practices
- Develop and maintain a site-specific monitoring plan

CertainTeed demonstrates compliance with this rule by operating several control devices, and operating continuous parameter monitoring systems (CPMS) on those control devices. CertainTeed has previously established acceptable parameters for the control devices, and has verified those parameters during the most recent emission test. Note that this rule no longer provides exemptions for periods of SSM. References to SSM will be removed from the new permit.

Testing requirements: The rule requires an initial compliance test, and CertainTeed has previously performed the initial compliance test.

As part of rule updates, EPA has added a requirement for subsequent compliance testing. For sources operating before March 12, 2020 (i.e., all sources at this facility), the rule requires the first subsequent performance test no later than March 13, 2023. As part of the subsequent compliance test, CertainTeed must update or verify control device parameters during that test.

CertainTeed completed the required test on March 9, 2023,⁸ and DAQ determined that the test demonstrated compliance with this rule. In addition, CertainTeed verified all control device parameters in the permit.

The rule requires additional testing every 60 months after the previous test.

Monitoring and recordkeeping: CertainTeed must operate and keep records of CPMS output. The permit specifies tolerances, recording periods, and data collection procedures for each CPMS. CertainTeed must perform regular maintenance of each CPMS and keep records of maintenance and monitoring activities.

Site-specific monitoring plan: The rule requires CertainTeed to develop and maintain a site-specific monitoring plan. CertainTeed has developed the required plan and that plan is included in the permit.

Reporting: CertainTeed must submit a semiannual summary report.

Compliance: Based on the most recent inspection report and emission testing, CertainTeed appears to be in compliance with this rule. Continued compliance will be determined with subsequent inspections, reports, and tests.

Changes to the existing permit:

- This rule no longer provides exemption for emissions during periods of SSM. References to SSM will be removed from the specific conditions for this rule and replaced with the general language found in §63.8685: “you must be in compliance with the emission limitations (including operating

⁸ Test reference number 2023-016ST.

limits) in this subpart at all times, except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.”

- This rule previously required a site-specific plan for periods of SSM. This requirement has been removed from the rule and therefore will be removed from the permit.
- This rule now requires compliance with the limits at all times and operating with good work practices. This requirement will be added to the permit.
- This rule now requires subsequent compliance testing. The permit will be updated to require subsequent testing and control device parameter verification every 60 months.
- This rule now requires the facility to monitor the pressure drop range for PM control devices (see Table 4 to Subpart LLLLL). Previously, only the maximum pressure drop was required. In addition, the rule now allows facilities to establish pressure drop ranges based on the manufacturer’s recommendation (see §63.8689(d)). The permit will be updated to reflect these changes.
- The rule now allows the facility to set the maximum inlet temperature for PM control devices to be 20% higher than the value measured during the most recent emission test (see Table 3 [section 12] to Subpart LLLLL). The permit will be updated to include this allowance.

5.4 Compliance Assurance Monitoring (CAM; 40 CFR Part 64)

Background: The compliance assurance monitoring (CAM) rule requires owners and operators to conduct monitoring to provide a reasonable assurance of compliance with applicable requirements under the act. Per 02D .0614(a), this rule potentially applies to any facility required to obtain a permit under 02Q .0500 (i.e., a Title V permit). This facility is required to obtain a permit under 02Q .0500. Therefore, CAM applicability must be examined.

Applicability: Monitoring focuses on emissions units that rely on pollution control device equipment to achieve compliance with applicable standards. An emission unit is subject to CAM, under 40 CFR Part 64, if all of the following conditions are met:

- I. The unit is subject to any (non-exempt, e.g., pre-November 15, 1990, Section 111 or 112 standard) emission limitation or standard for the applicable regulated pollutant.
- II. The unit uses any control device to achieve compliance with any such emission limitation or standard.
- III. The unit’s pre-control potential emission rate exceeds 100 percent of the amount required for a source to be classified as a major source under Title V.

During the initial Title V renewal, DAQ determined that CAM applied to the afterburner CDAFB, electrostatic precipitator CDESP, mist eliminators CDME and CDME3, and regenerative thermal oxidizer CDRTO, but none of the other control devices at the facility.⁹ According to the application, there have been no changes to the facility since that CAM analysis that would result in a change of CAM applicability (Application at 4-5).

⁹ See DAQ’s application review for Title V permit 03663T26 (issued June 19, 2009).

CAM Plan: CertainTeed has developed a CAM plan for the control devices subject to CAM. The CAM plan is incorporated into the permit under Specific Condition 2.3.1.

5.5 Prevention of Significant Deterioration (PSD)

Background: The Federal rules for PSD are implemented into North Carolina's SIP under 15A NCAC 02D .0530. In general, a facility is a major stationary source for PSD if the facility has actual or potential emissions of a pollutant greater than the threshold listed in 40 CFR 51.166(b)(1). For facilities that fall under the specific categories listed in 40 CFR 51.166(b)(1)(i)(a), the threshold is 100 tpy. CertainTeed is an asphalt shingle manufacturer, which is not one of the listed categories; therefore the threshold is 250 tpy (see 40 CFR 51.166(b)(1)(i)(b)).

Major stationary source: CertainTeed has previously been designated as a major stationary source for PSD. However, in application 3900040.14A, CertainTeed requested facility-wide emission limits in order to avoid being designated as a major stationary source. DAQ approved this request with the T31 permit revision (issued June 4, 2016).

Avoidance: A facility may choose to accept an enforceable limit on actual emissions in order to avoid being designated as a major stationary source for PSD. As mentioned above, CertainTeed has previously requested a facility-wide limit on PM₁₀, and has demonstrated that the facility does not have potential emissions of other regulated NSR pollutants greater than the threshold. Therefore, CertainTeed is not a major stationary source for PSD.

In addition, CertainTeed will continue to comply with the former NA NSR avoidance limits for NO_x and VOC. By doing so, CertainTeed will continue to avoid being designated a major stationary source for PSD. Note that CertainTeed may, in the future, apply to change these former NA NSR avoidance limits.

Co-located facilities: The CertainTeed corporation recently received an air permit to begin operating a separate facility that is adjacent to this facility. That facility ("CertainTeed LLC - Oxford Facility", facility ID 3900120) produces fiberglass mats. Given that both facilities are operated by the same owner, it is possible that, under PSD, they should be considered a single facility.

Before issuing an air permit to the Oxford Facility, DAQ determined that this facility and the Oxford Facility are *not* part of the same industrial grouping, and therefore should not be considered the same facility for PSD.¹⁰

5.6 Nonattainment New Source Review (NA NSR)

Background: In addition to PSD, a facility located in an area of nonattainment with the National Ambient Air Quality Standards (NAAQS) must also comply with Nonattainment New Source Review (NA NSR) requirements under 15A NCAC 02D .0531. In general, a facility is a major stationary source for NA NSR if it has actual or potential emissions of a pollutant greater than 100 tpy (or less in some circumstances, see §51.165(a)(1)(iv)(A)(I)). Note that Granville County has previously been designated as a nonattainment area.

Avoidance: A facility may choose to accept an enforceable limit on actual emissions in order to avoid being designated as a major stationary source for NSR. CertainTeed has previously accepted specific VOC and

¹⁰ See Permit Applicability Determination #3873 (issued October 11, 2022).

NOx limits in order to avoid major stationary source status under NA NSR. Therefore, CertainTeed was never a major stationary source for NA NSR.

Areas redesignated as attainment: Granville County has previously been designated as a nonattainment area. Granville County was redesignated to attainment on December 16, 2007. Per 15A NCAC 02D .0531(e), facilities must continue to comply with existing NA NSR requirements even though the County has been redesignated. However, as stated above, CertainTeed has never been a major stationary source for NA NSR, and therefore 02D .0531(e) does not apply to this facility or any NA NSR avoidance limits.

5.7 Section 112(r) of the Clean Air Act (and 15A NCAC 02D .2100 “Risk Management Program”)

Background: This rule requires facilities that store materials above the threshold quantities in 40 CFR 68.130 above their respective thresholds to prepare and submit a risk management plan (RMP).

Applicability: In the renewal application on Form A3, CertainTeed indicates that an RMP is not required for this facility because the facility “does not store regulated chemicals onsite in quantities above the applicability thresholds.” Therefore, CertainTeed does not have any increased requirements under §112(r). Note that other parts of that rule, such as the General Duty clause, may still apply to this facility; those portions of §112(r) are beyond the scope of the Title V permit.

6. Toxic Air Pollutants

Background: In general, a facility that emits toxic air pollutants (TAP) at rates greater than the TAP permitting emission rate (TPER) listed in 15A NCAC 02Q .0711 must perform air dispersion modeling following the procedures in 15A NCAC 02D .1106. The results of this modeling must be less than the acceptable ambient limits (AAL) listed in 15A NCAC 02D .1104.

Previous modeling: CertainTeed most recently submitted air dispersion modeling for several TAPs in June 2008. DAQ approved that modeling demonstration on July 1, 2008 and integrated the modeled emission rates into the permit as emission limits.

TAPs from MACT sources: Per 15A NCAC 02Q .0702(a)(27)(B), a permit for TAP emission is not required for any source that is subject to a rule under 40 CFR Part 63 (i.e., a MACT-affected source). In application 3900040.13B, CertainTeed pointed out that nearly all sources at this facility are subject to a MACT rule and therefore all TAP emission limits (except benzene) should be removed from the permit. DAQ determined that the removal of TAP limits (excluding benzene) for MACT-affected sources as proposed by application 3900040.13B would not pose an unacceptable risk to human health.¹¹

Co-located facilities: Under North Carolina's rules, a "facility" is defined in 15A NCAC 02Q .0103(a)(15) as "all of the pollutant-emitting activities, except transportation facilities, that are located on one or more adjacent properties under common control."¹² The CertainTeed corporation recently received an air permit to begin operating a separate facility that is adjacent to this facility. That facility ("CertainTeed LLC - Oxford Facility", facility ID 3900120) is also under common control with CertainTeed, and therefore is considered the same facility under 15A NCAC 02Q .0103(a)(15). Before DAQ issued the air permit to the Oxford Facility, CertainTeed performed air dispersion modeling for both the proposed Oxford Facility and the existing CertainTeed facility. The modeling demonstration was performed at maximum potential emission rates. DAQ reviewed the modeling and approved the demonstration on September 26, 2023. DAQ determined that TAP emissions from the two facilities did not pose an unacceptable risk to human health, and did not require any specific monitoring or recordkeeping for TAP emissions from either CertainTeed or the Oxford Facility.¹³

Because the CertainTeed corporation performed modeling covering both facilities, and DAQ determined that no specific monitoring or recordkeeping would be required to demonstrate compliance with the AALs, there is no change needed to CertainTeed's Title V permit.

¹¹ See DAQ's application review for Title V permit 03663T31 (issued June 4, 2016).

¹² Note that this definition is separate and different than the definition of "major source" under 40 CFR 70.2 and 51.166(b)(5) and (6). Those definitions require two facilities to be part of the same "industrial grouping" in order to be considered a single source, whereas North Carolina's rules do not.

¹³ See DAQ's air permit 10773R00 and associated application review (issued October 12, 2023).

7. Compliance Status and Other Regulatory Concerns

Compliance status:

- The application includes a signed Form E5 “Title V Compliance Certification.” In this form, CertainTeed certified compliance with all applicable requirements.
- This facility was most recently inspected on September 12, 2023, by Abdul Kadir. CertainTeed appeared to be in compliance with the Title V permit at that time.
- This Title V permit was most recently renewed on June 10, 2016. CertainTeed has not been issued any Notices of Violation since that date.

Application fee:

- Applications for Title V permit renewal without modification do not require an application fee.
- 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 Title V renewal applications without modification.
- No PE Seal is required for a 502(b)(10) notification.

Zoning Consistency Determination:

- A zoning consistency determination per 15A NCAC 02Q .0507(d) is not required for a Title V renewal application.
- 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.¹⁴ CertainTeed has not previously quantified emissions of 1-BP. As part of processing application .20A, DAQ asked CertainTeed to quantify 1-BP emissions from the facility. CertainTeed responded: “After further investigation we have no reason to believe we emit any 1-bromopropane (1-BP; CAS 106-94-5).”

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.¹⁵ Moreover, per EPA, the removal of these provisions is also consistent

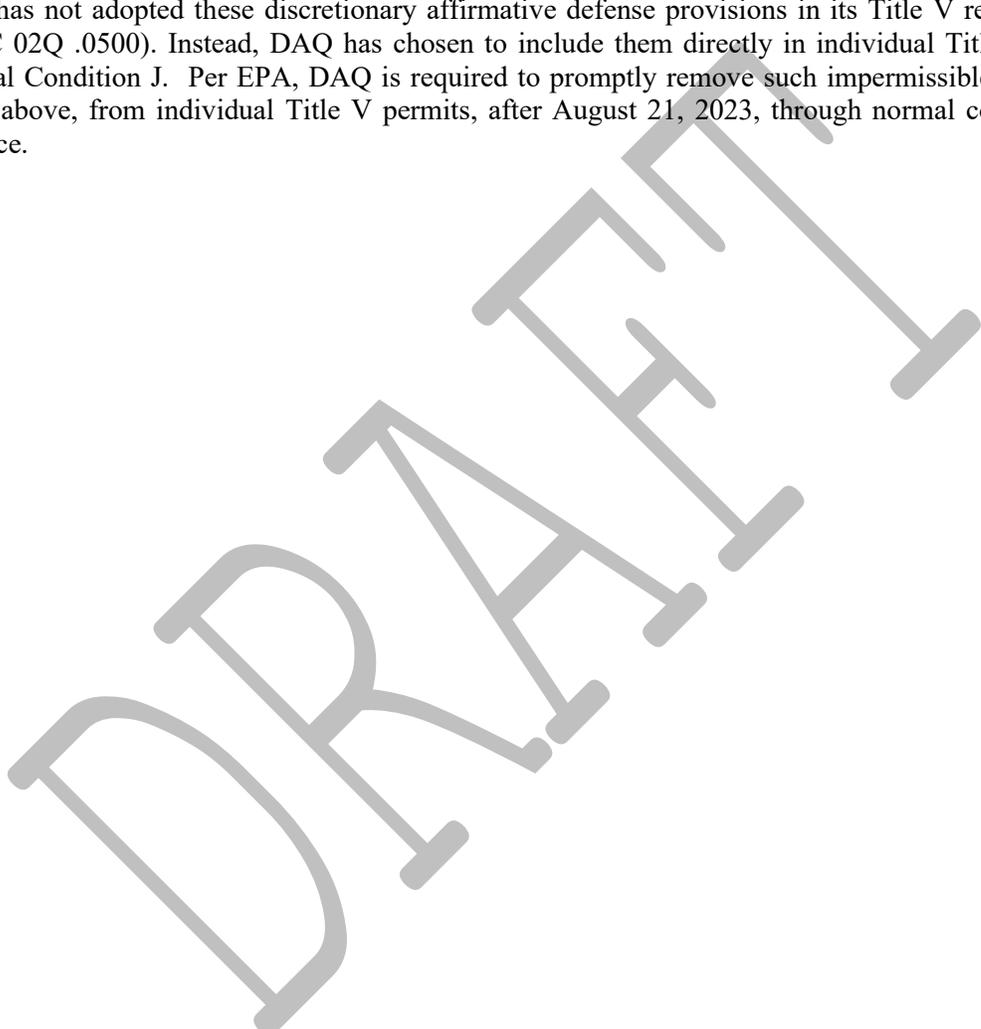
¹⁴ See 87 FR 393 (published January 5, 2022).

¹⁵ NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

with other recent EPA actions involving affirmative defenses¹⁶ 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.



¹⁶ 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).

8. Facility Emissions Review

Emission changes based on modified sources: According to the 502(b)(10) notification submitted by CertainTeed, the proposed change to flux tank ESFT3 will not cause an increase in any pollutant emissions.

Title V: CertainTeed is a major source for Title V because it has actual emissions of criteria pollutants greater than the major source threshold in 40 CFR 70.2. Neither the Title V permit renewal nor 502(b)(10) notification will affect CertainTeed's status as a major source for Title V.

HAP: CertainTeed is a major source of hazardous air pollutants (HAP) because it has actual emissions of HAP greater than the major source threshold in 40 CFR 63.2. Neither the Title V permit renewal nor 502(b)(10) notification will affect CertainTeed's status as a major source of HAP. Note that CertainTeed has reviewed potential emissions of 1-BP and concluded that no 1-BP is emitted from this facility.

PSD: CertainTeed has avoided being designated as a major stationary source for PSD (see 40 CFR 51.166(b)(1)(i)) by accepting emission limits for VOC, NO_x, and PM₁₀. Therefore, CertainTeed is not a major stationary source for PSD. Neither the Title V permit renewal nor 502(b)(10) notification will cause CertainTeed to be a major stationary source.

PSD Increment Tracking: The Granville County airshed has not been triggered for PSD Increment Tracking. Therefore, neither the Title V permit renewal nor 502(b)(10) notification will require PSD Increment Tracking.

9. Draft Permit Review Summary, Public Notice, and EPA Review

9.1 Initial draft:

An initial draft of the Title V permit and this application review were sent to DAQ Permits staff on January 25, 2024. Comments were received on February 13, 2024.

DAQ Permits Comment 1: Granville County was previously a nonattainment area, but is no longer in nonattainment. The anti-backsliding provisions for NA NSR only apply to facilities in former nonattainment areas if those facilities were actually subject to NA NSR in the first place. CertainTeed was never subject to NA NSR, only avoidance thereof. Therefore, the anti-backsliding provisions do not apply. As a result, all NA NSR avoidance conditions should be changed to be PSD avoidance conditions instead.

Response: After considering this further, it is clear that CertainTeed cannot avoid NA NSR, because NA NSR has never applied, and can not apply at this time. The permit will be updated to change all of these limits to PSD avoidance conditions, but the limits will not be changed at this time. CertainTeed may, in the future, apply for the former NA NSR limits to be changed to match the relevant PSD avoidance limits (presumably, 250 tpy).

The application review will include a discussion of this change.

DAQ Permits Comment 2: Various typos in the draft permit and application review.

Response: These issues were fixed.

DAQ Permits Comment 3: The application review should be clearer as to how MACT and NSPS can be used for the blowstills to demonstrate compliance with the condensable PM limit under 02D .0515.

Response: CertainTeed has previously performed emission testing for condensable PM from the blowstills, which shows compliance with 02D .0515 by a wide margin. This information will be included in the application review.

DAQ Permits Comment 4: The reporting requirement for CAM should be updated based on previous comments Permits has received from SSCB.

Response: The reporting language previously supplied by SSCB has now been added to the draft permit.

9.2 Subsequent draft:

A revised draft of the Title V permit and this application review were sent to DAQ SSCB staff, DAQ RRO staff, and CertainTeed staff on February 14, 2024. DAQ RRO staff had no comments.

DAQ SSCB Comment 1: The CAM plan in Section 2.3 of the permit should list the applicable requirements.

Response: This has been added to Section 2.3 of the draft permit.

DAQ SSCB Comment 2: The CAM plan should be mentioned in summary tables throughout the permit.

Response: This has been added to permit where appropriate.

CertainTeed Comment 1: The condition for MACT Subpart LLLLL should include the temperature allowance in Table 3 Item 12.

Response: This has been added to permit where appropriate. Note that this +20% allowance applies only to control devices used to control PM (i.e., not the RTO or AFB). As an example:

2.2 A.1.

n. If the Ceco filter (**ID No. CDFTR2**) is being used to comply with any of the emission standards provided above, the Permittee shall maintain the following:

- i. 3-hour average inlet gas temperature at or below 103.4 degrees Fahrenheit, or the temperature value established during the most recent test that demonstrated compliance with the emission standard **(plus 20% as allowed by Table 3 to Subpart LLLLL)**...

This text will be added to Sections 2.2 A.1.k, l, m, and n. The application review will be updated to discuss this change.

9.3 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 March 5, 2024.
- The Public Notice period ended on XXXXX.
- The EPA Review period ended on XXXXX.

10. 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. 03663T33. RRO, SSCB, and CertainTeed have received a copy of this permit and submitted comments that were incorporated as described in Section 9.0.

DRAFT