NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: Month XX, 2024

Region: Mooresville Regional Office
County: Cabarrus
NC Facility ID: 1300117
Inspector's Name: Seth Hall
Date of Last Inspection: 10/09/2023
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Corning Incorporated - Midland

Facility Address:
Corning Incorporated - Midland
14556 Highway 601 South
Midland, NC 28107

SIC: 3229 / Pressed And Blown Glass, Nec
NAICS: 327212 / Other Pressed and Blown Glass and Glassware Manufacturing

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

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0503, .0515, .0516, .0521, .0614, .0958, .1407, .1413, .1414, .1806, and .2100
NSPS: N/A
NESHAP: 15A NCAC 02D .1111 – Subpart ZZZZ and DDDDD
PSD: 15A NCAC 02D .0530
PSD Avoidance: N/A
NC Toxics: 15A NCAC 02D .1100 and 02Q .0711
112(r): 15A NCAC 02D .2100
Other: 15A NCAC 02Q .0317: Avoidance Condition for 15A NCAC 02D .0614

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Janice Del Rio Rosario Environmental Specialist (704) 569-6017 14556 Highway 601 South Midland, NC 28107	Ted Talarek Plant Manager (704) 569-6041 14556 Highway 601 South Midland, NC 28107	Janice Del Rio Rosario Environmental Specialist (704) 569-6017 14556 Highway 601 South Midland, NC 28107

Application Data

Application Number: 1300117.23B
Date Received: 04/10/2023
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 08436/T23
Existing Permit Issue Date: 06/20/2023
Existing Permit Expiration Date: 05/31/2024

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2022	0.0800	409.01	36.79	4.94	9.46	12.69	6.81 [Hydrogen chloride (hydrochlori]
2021	0.0800	365.31	34.94	4.46	84.49	10.14	5.92 [Hydrogen chloride (hydrochlori]
2020	0.0600	325.94	30.58	3.94	77.96	8.50	5.48 [Hydrogen chloride (hydrochlori]
2019	0.0800	345.62	41.20	4.66	95.39	9.97	6.41 [Hydrogen chloride (hydrochlori]
2018	0.1000	377.58	37.50	4.81	103.66	9.24	5.86 [Hydrogen chloride (hydrochlori]

Review Engineer: David B. Hughes

Review Engineer's Signature: **Date: Month XX, 2024**

Comments / Recommendations:
Issue 08436/T24
Permit Issue Date: Month XX, 2024
Permit Expiration Date: Month XX, 2029

I. Purpose of Applications

Application No. 1300117.23B

This permitting action is a renewal of an existing Title V permit pursuant to 02Q .0513. The existing Title V permit **(08436T23)** was issued on **June 20, 2023**, with an expiration date of **May 31, 2024**. The renewal application **1300117.23B** was received on **April 10, 2023**, or at least six months prior to the original expiration date **May 31, 2024**. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

II. Facility Description

Corning Incorporated (Corning) is an optical waveguide manufacturing plant, classified under the Standard Industrial Classification (SIC) Code 3229 "Pressed and Blown Glass and Glassware, Not Elsewhere Classified". It makes optical fibers, which are typically used across the network equipment and semiconductor equipment markets.

Title V Significant Modification To Address Emergency Generator Operation

In October 2022, Corning submitted the first step (Title V Significant Modification 501(b)(2) Part I) of a two-step Title V significant modification application **(1300117.22A)** associated with three emergency generators.

In the October 2022 application, Corning requested the following permit modifications:

1. The removal of emergency generators **(ID Nos. ES-C-PG2b, ES-C-PG2c, and ES-C-PG2d)**. Upon the filing of the October 2022 application, Corning had removed emergency generators **(ID Nos. ES-C-PG2b and ES-C-PG2c)** from the site. Emergency generator **(ID No. ES-C-PG2d)** had never been built. Under a new contract arrangement with Duke Energy, all new emergency generators would be owned and operated by Duke Energy. Emergency generators **(ID Nos. ES-C-PG1a, ES-C-PG1b, and ES-C-PG2a)** remain under the ownership and operational control of Corning and thus remain on the Corning Permit.
2. Corning submitted updated modeling data to remove the emergency generator daily and annual operating restrictions and reporting requirements that were included in **Condition Nos. 2.2 B.1.d, i, and q of Air Permit No. 09436T21.**

The above requests were approved by The Division of Air Quality (DAQ) via issuance of Air Permit No. **08436T22** on **February 9, 2023**.

Corning submitted a Title V Significant Modification 501(b)(2) Part II in application No. **1300117.23B** to ensure that it is complying with the application filing requirements because as soon as Air Permit No. **08436T22** was issued the above units and permit conditions were removed from the permit. In this case there is no construction schedule as there are no new operations.

Corning also requested a renewal along with the Title V Significant Modification 501(b)(2) Part II, since the renewal deadline will be less than a few months away or even be passed once DAQ completes the processing of the significant modification component of this application.

Connie Horne (DAQ) processed and issued Air Permit No. **08436T23** on **June 20, 2023**, for the second step significant modification.

Other Requested Changes

The current permit has the following diesel storage tanks listed in Section 3 Insignificant Activities list.

- Eight diesel storage tanks **(ID Nos. IES-C-DGT1 through IES-C-DGT6; IES-C-FPDT1; and IES-C-FPDT2)**.

Corning has requested that the following storage tanks be removed from the permit:

- Three diesel storage tanks **(ID Nos. IES-C-DGT3, IES-C-DGT4, and IES-C-DGT6)**.

The Division of Air Quality (DAQ) has reviewed and accepted this request. The updates have been implemented into the new Title V Air Permit No. **08436T24**.

III. History/Background/Application Chronology

June 4, 2019 – Permit No. **08436T19** issued as a Title V renewal.

September 13, 2019 – Permit No. **08436T20** issued as a Title V Minor Modification.

April 29, 2020 – Permit No. **08436T21** issued as PSD and Significant Modification.

October 7-10, 2022 – DAQ received Permit Application **1300117.22A**, as a Title V Significant Modification 501(b)(2) Part I. The application was deemed complete for processing.

February 9, 2023 – Permit No. **08436T22** issued as a Title V Significant Modification 501(b)(2) Part I.

April 10, 2023 – DAQ received Permit Application **1300117.23B**, as a Title V renewal and Significant Modification 501(b)(2) Part II. The application was deemed complete for processing.

June 20, 2023 – Permit No. **08436T23** issued as a Title V Significant Modification 501(b)(2) Part II.

October 9, 2023 – Seth Hall of the Mooresville Regional Office (MRO) completed the annual compliance inspection of the facility.

February 22, 2024 – David B. Hughes (DAQ) emailed Tim Haley (Corning Incorporated) requesting dates for the requirements of Initial tune-up, one-time energy assessment, and Notification of Compliance Status for four natural gas-fired humidification boilers (ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b) per Boiler MACT – 40 CFR Part 63, Subpart DDDDD.

March 28, 2024 - David B. Hughes (DAQ) emailed the new Facility/Technical contact Janice I. Del Rio Rosario (Corning Incorporated) requesting dates for the requirements of Initial tune-up, one-time energy assessment, and Notification of Compliance Status for four natural gas-fired humidification boilers (ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b) per Boiler MACT – 40 CFR Part 63, Subpart DDDDD. Ms. Del Rio Rosario responded with just the year (2019).

April 2, 2024 - - David B. Hughes (DAQ) emailed the new Facility/Technical contact Janice I. Del Rio Rosario (Corning Incorporated) requesting exact dates for the requirements of Initial tune-up, one-time energy assessment, and Notification of Compliance Status for four natural gas-fired

humidification boilers (ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b) per Boiler MACT – 40 CFR Part 63, Subpart DDDDD.

April 8, 2024 – Janice I. Del Rio Rosario emailed David B. Hughes the exact dates for one-time energy assessment and Notification of Compliance Status for four natural gas-fired humidification boilers (ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b) per Boiler MACT – 40 CFR Part 63, Subpart DDDDD.

April 11, 2024 - DRAFT permit sent to Permittee, Supervisor, MRO and Samir Parekh for comment. Janice I. Del Rio Rosario (Corning Incorporated) provided comments from Dale Overcash (Trinity Consultants) on draft permit and review via e-mail on **April 30, 2024**. Samir Parekh provided comments pertaining to CAM via email on **May 1, 2024**. MRO had no comments.

May 15, 2024 – David B. Hughes emailed Janice I. Del Rio Rasorio the four comments made from Dale Overcash and DAQ's responses for her review. Comments 3 and 4 were in regards to removing testing requirements in Section 2.2 A.1.b and 2.2 B.2.d.i & iv or adding the statement "*This testing requirement has been met*." David B. Hughes could not find all of the testing that was required in Section 2.2 A.1.b and 2.2 B.2.d.i & iv. Therefore, the testing requirement could not be taken out of the permit or a statement *"This requirement has been met"* be added to the permit.

May 17, 2024 – Dale Overcash emailed David B. Hughes and Mark Cuilla responses to Comment's 3 and 4 which have to do with either removing test requirements in Section 2.2 A.1.b and 2.2 B.2.d.i & iv, or adding the statement "*This testing requirement has been met."* Dale Overcash states that all of the testing has been performed and sent to the State and that his original comments be included in the permit and review.

May 20, 2024 – Internal Teams meeting with DAQ personal - David B. Hughes, Mark Cuilla, Rahul Thaker, Brian Phillips, Samir Parekh, Melinda Wolanin, Denise Hayes, and Seth Hall, to discuss the testing received and approved and what language would be used in Section 2.2 A.1.b and 2.2 B.1.d.i & iv. It was decided by the group that the statement "*This testing requirement has been conditionally met and pending review of approved testing results, the condition can be removed from the permit."* since some of the testing reports had not been reviewed and approved.

May 29, 2024 – David B. Hughes emailed Dale Overcash and Janice I. Del Rio Rasorio updated language in Sections 2.2 A.1.b and 2.2 B.1.d.i & iv with the agreed upon statement *"This testing requirement has been conditionally met and pending review of approval testing results, the condition can be removed from the permit."* He also sent the updated DAQ response to Corning's comments 3 and 4.

May 31, 2024 – Janice I. Del Rio Rasorio emailed David B. Hughes, Dale Overcash and Jennifer H. Adams comments on latest draft permit and review.

June 7, 2024 - Draft permit and review sent to 30-day public comment and 45-day EPA review periods.

July 7, 2024 - 30-day public comment period ended; no comments received.

July 22, 2024 – 45-day EPA Review period ended; no comments received.

Month XX, 2024 – Mark Cuilla/Connie Horne (DAQ) reviewed/approved TVEE from David B. Hughes changes.

Month XX, 2024 – Air Permit No. **08436T24** issued as a Title V permit.

IV. Permit Modifications/Changes and TVEE Discussion

The following table provides a summary of the changes to the permit.

Page No.	Section	Description of Changes
Global	Global	-Updated the application number and complete date. -Updated permit revision number to T24. -Updated the issuance/effective dates to permit.
Cover Letter	Cover Letter	-Updated PSD increment tracking statement.
3	List of Acronyms	-Moved List of Acronyms from end of permit.
8	2.1 A.4.b.i	-Changed monitoring frequency from "once every 15 minutes" to "once every 24-hour period" per Permittee request.
13 & 14	2.1 D.3	-Updated language for 15A NCAC 02D .1111: Maximum Achievable Control Technology (MACT) – 40 CFR Part 63, Subpart ZZZZ.
22 - 24	2.1 G.5	-Updated language for 15A NCAC 02D .1111: Maximum Achievable Control Technology (MACT) – 40 CFR Part 63, Subpart DDDDD.
26	2.2 A.1.b	-Added statement "*This testing requirement has been conditionally met and pending review of approved testing results, the condition can be removed from the permit."* for completed permit testing requirements.
31	2.2 B.1.d.i & iv	-Added statement "*This testing requirement has been conditionally met and pending review of approved testing results, the condition can be removed from the permit."* for completed permit testing requirements.
35	Section 3 Insignificant Activities	-Removed Diesel generator fuel storage tanks (ID Nos. IES-C-DGT3, IES-C-DGT4, and IES-C-DGT6) because Emergency Generators (ID Nos. ES-C-PG2b, ES-C-PG2c, and ES-C-PG2d) were removed in Application No. 1300117.23A - Air Permit No. 08436T23.
36 - 45	Section 4 General Conditions	-Updated General Conditions (v7.0, 08/21/2023).

There were minor modifications to the equipment descriptions needed in Title V Equipment Editor (TVEE).

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 02D .0503, "Particulates from Fuel Burning Indirect Heat Exchangers"
15A NCAC 02D .0515, "Particulates from Miscellaneous Industrial Processes"
15A NCAC 02D .0516, "Sulfur Dioxide Emissions from Combustion Sources"
15A NCAC 02D .0521, "Control of Visible Emissions"
15A NCAC 02D .0530, "Prevention of Significant Deterioration"
15A NCAC 02D .0614, "Compliance Assurance Monitoring"
15A NCAC 02D .0958, "Work Practices for Sources of Volatile Organic Compounds"
15A NCAC 02D .1100, "Control of Toxic Air Pollutants" *(State-Enforceable Only)*

15A NCAC 02D .1111, "Maximum Achievable Control Technology (40 CFR 63, Subparts ZZZZ, and DDDDD)"
15A NCAC 02D .1407, "Boilers and Indirect-Fired Process Heaters"
15A NCAC 02D .1413, "Sources not Otherwise Listed in this Section"
15A NCAC 02D .1414, "Tune-up Requirements"
15A NCAC 02D .1806, "Control and Prohibition of Odorous Emissions" *(State-Enforceable Only)*
15A NCAC 02D .2100, "Risk Management Program"
15A NCAC 02Q .0317, "Avoidance Conditions" for 15A NCAC 2D .0614, "Compliance Assurance Monitoring"
15A NCAC 02Q .0711, "Emission Rates Requiring a Permit" *(State-Enforceable Only)*

A. Two optical waveguide laydown processes (ID Nos. ES-C-001 and ES-C-005) with gas-oxy firing with associated bagfilter (ID No. CD-C-BH-6) in series with one of two sieve tray scrubbers operating in parallel (ID Nos. CD-C-HCL-5 or CD-C-HCL-6) in series with one of two sieve tray scrubbers operating in parallel (ID Nos. CD-C-CL-5 or CD-C-CL-6)

One optical waveguide laydown process (ID No. ES-C-002) with gas-oxy firing with associated cartridge filter (ID No. CD-C-BH-2)

One optical waveguide laydown process (ID No. ES-C-006) with gas-oxy firing with associated bagfilter (ID No. CD-C-BH-7)

One optical waveguide laydown process (ID No. ES-C-009) with gas-oxy firing with associated bagfilters (ID Nos. CD-C-BH-7 and CD-C-BH-10)

One optical waveguide laydown process (ID No. ES-C-012) with gas-oxy firing with associated bagfilter (ID No. CD-C-BH-11)

1. 15A NCAC 02D .0515 – Particulates from Miscellaneous Industrial Processes

Emissions of particulate matter from these sources **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)** shall not exceed an allowable emission rate as calculated by the following equations:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

Where: E = allowable emission rates in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process rate.

Monitoring/Recordkeeping/Reporting Requirements

Particulate matter emissions from the Optical Waveguide Laydown Processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)** shall each be controlled by associated bagfilters and cartridge filter **(ID Nos. CD-C-BH-2, CD-C-BH-6, CD-C-BH-7, CD-C-BH-10, and**

CD-C-BH-11) as described above. To ensure that optimum control efficiency is maintained, the Permittee shall perform periodic inspections and maintenance on the bagfilters and cartridge filter as recommended by the manufacturer.

The results of each inspection, maintenance activity, and alarm condition with corrective action shall be maintained in a logbook (written or electronic format), kept on-site, and made available to an authorized DAQ representative upon request.

Corning shall submit the results of any maintenance performed on the bagfilters within 30 days of receipt of a written request by the DAQ. Semi-annual reports are due on January 30 and July 30 for the preceding six months.

Continued compliance is expected.

2. 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources

Emissions of sulfur dioxide from these sources **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-12)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. Compliance is expected based on the low sulfur dioxide emissions associated with natural gas combustion.

Monitoring/Recordkeeping/Reporting Requirements

No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing natural gas in these sources **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-12)**.

Continued compliance is expected.

3. 15A NCAC 02D .0521 – Control of Visible Emissions

The optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. To ensure compliance, the facility is required to observe emission points once monthly to determine if emissions are above normal. In the event emissions are above normal, the facility must take appropriate actions to correct the above normal emissions as soon as practicable and within the same monitoring period or demonstrate that the above normal emissions are less than 20% opacity when averaged over 12 minutes using EPA Method 9. Logs of all weekly observations must be maintained in a logbook. The logbook shall record the following: the date and time of each recorded action; the results of each observation; and the results of any corrective actions performed. They are also required to submit a semiannual summary report of the observations.

Continued compliance is expected.

4. 15A NCAC 02D .0614 – Compliance Assurance Monitoring

See Section VI. for discussion.

5. 15A NCAC 02D .1413 – Sources Not Otherwise Listed in this Section

   a. The owner or operator of any source of nitrogen oxides, except boilers, indirect-fired process heaters, stationary combustion turbines, or stationary internal combustion engines, at a facility that has the potential to emit 100 tons per year or more of nitrogen oxides or 560 pounds per calendar day or more from May 1 through September 30 shall apply RACT.
   b. The Director has approved the proposed RACT limitation and finds gas-oxy burners are RACT for these sources **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, and ES-C-009)** and RACT is no additional control. If the Permittee does not comply with the requirements in this Section 2.1 A.1.5.b, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1413.
   c. The Permittee shall comply with the RACT of 45.6 lbs/hr for NOx emissions from optical waveguide laydown process **(ID No. ES-C-012)**, upon start-up, using a gas-oxy firing technology, during all periods of operation (normal, startup, shutdown, and malfunctions).

      Testing [15A NCAC 02Q .0508(f)]

      i. Compliance with the stack testing requirement for optical waveguide laydown process **(ID No. ES-C-012)** in Section 2.2 B.1.e below shall ensure compliance with the RACT for this source. If emissions testing in Section 2.2 B.1.e.v below is not performed for the source, or the results of the test are above the limit given in Section 2.1 A.5.c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1413.

      Monitoring/Record keeping/Reporting [15A NCAC 02Q .0508(f)]

      ii. Monitoring/Recordkeeping/Reporting requirements in Sections 2.2 B.1.j and 2.2 B.1.m below for optical waveguide laydown process **(ID No. ES- ES-C-012)** shall be sufficient to ensure compliance with the RACT requirement in 15A NCAC 02D .1413.
      iii. NOTIFICATION - Pursuant to 15A NCAC 02Q .0203(e), the Permittee shall, in addition to their existing annual fee, be assessed the nonattainment area RACT/LAER fee. Within 15 days after the commencement of operation of the optical waveguide laydown process **(ID No. ES-C-012)**, the Permittee shall notify the Mooresville Regional Office in writing.

B. Glass drying operations (ID Nos. ES-C-003) with associated one of two packed tower scrubbers (ID Nos. CD-C-CL-3 or CD-C-CL-4)

Glass drying operations (ID No. ES-C-007) with associated two of three packed tower C1 scrubbers operating in parallel (ID Nos. CD-C-CL-8, CD-C-CL-9 or CD-C-CL-10)

Glass drying operations (ID No. ES-C-010) with associated two of three packed tower C1 scrubbers operating in parallel (ID Nos. CD-C-CL-8, CD-C-CL-9 or CD-C-CL-10)

Glass drying operations (ID No. ES-C-011) with associated two of three packed tower C1 scrubbers operating in parallel (ID Nos. CD-C-CL-8, CD-C-CL-9 or CD-C-CL-10)

Glass drying operations (ID No. ES-C-012) with associated two of three packed tower C1 scrubbers operating in parallel (ID Nos. CD-C-CL-8, CD-C-CL-9 or CD-C-CL-10)

1. 15A NCAC 02D .0515 – Particulates from Miscellaneous Industrial Process

Emissions of particulate matter from these sources **(ID Nos. ES-C-003, ES-C-007, ES-C-010, ES-C-011, and ES-C-014)** shall not exceed an allowable emission rate as calculated by the following equations:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour), or
$E = 55.0 \times P^{0.11} - 40$ (for process rates greater than 30 tons per hour)

Where: E = allowable emission rates in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process rate.

Testing

If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the test are above the limit calculated from the above equations, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting Requirements

Particulate matter emissions from these glass drying operations **(ID Nos. ES-C-003, ES-C-007, ES-C-010, ES-C-011, and ES-C-014)** shall each be controlled by associated pack tower scrubbers **(ID Nos. CD-C-CL-3, CD-C-CL-4, CD-C-CL-8, CD-C-CL-9, and CD-C-CL-10)** as described above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer and/or establish by the Permittee via operational experience

The results of each inspection, maintenance activity, and alarm condition with corrective action shall be maintained in a logbook (written or electronic format), kept on-site, and made available to an authorized DAQ representative upon request.

Corning shall submit the results of any maintenance performed on the bagfilters within 30 days of receipt of a written request by the DAQ. Semi-annual reports are due on January 30 and July 30 for the preceding six months.

Continued compliance is expected.

2. 15A NCAC 02D .0521 – Control of Visible Emissions

The glass drying operations **(ID Nos. ES-C-003, ES-C-007, ES-C-010, ES-C-011, and ES-C-014)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. To ensure compliance, the facility is required to observe emission points once monthly to determine if emissions are above normal. In the event emissions are above normal, the facility must take appropriate actions to correct the above normal emissions as soon as practicable and within the same monitoring period or demonstrate that the above normal emissions are less than 20% opacity when averaged over 12 minutes using EPA Method 9. Logs of all weekly observations must be maintained in a logbook. The logbook shall record the following: the date and time of each recorded action; the results of each observation;

and the results of any corrective actions performed. They are also required to submit a semiannual summary report of the observations.

Continued compliance is expected.

C. Miscellaneous small source exhausts (including, but not limited to, laboratory hoods, the acid tank vent, emergency relief rupture discs, emergency vents, chlorine cylinder change out/header maintenance and bulk tank vents; ID No. ES-C-004) with associated one of two vertical spray chamber/venturi wet scrubbers (ID Nos. CD-C-HCL-3 and CD-C-HCL-4)

1. 15A NCAC 02D .0515 – Particulates from Miscellaneous Industrial Process

Emissions of particulate matter from this source **(ID No. ES-C-004)** shall not exceed an allowable emission rate as calculated by the following equations:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour)

Where: E = allowable emission rates in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process rate.

Testing

If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the test are above the limit calculated from the above equation, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting Requirements

No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source **(ID No. ES-C-004)**.

Continued compliance is expected.

2. 15A NCAC 02D .0521 – Control of Visible Emissions

The miscellaneous small source exhausts **(ID No. ES-C-004)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing

If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the test are above the limits given above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting Requirements

No monitoring/recordkeeping/reporting is required for visible emissions from this source **(ID No. ES-C-004)**.

Continued compliance is expected.

3. 15A NCAC 02D .0530 – Prevention of Significant Deterioration
See Section VI. for more details.

4. 15A NCAC 02D .1100 – Control of Toxic Air Pollutants *(State-Enforceable Only)*

See Section VI. for more details.

5. 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions *(State-enforceable only)*

The facility is subject to this regulation because it has the potential to be a source of odorous emissions. It requires the facility to utilize management practices or odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable emissions beyond the facility boundaries.

6. 15A NCAC 02Q .0711 – Emission Rates Requiring a Permit *(State-Enforceable Only)*

See Section VI. for more details.

D. Three diesel fuel-fired emergency generators (ID Nos. ES-C-PG1a, ES-C-PG1b, and ES-C-PG2a)

1. 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources

Emissions of sulfur dioxide from the diesel-fired emergency generators **(ID Nos. ES-C-PG1a, ES-C-PB1b, and ES-C-PG2a)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. Compliance is expected based on the Ultra Low Sulfur Diesel (ULSD).

Testing

If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the test are above the limit calculated from the above equation, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting Requirements

No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from firing of diesel fuel in these sources **(ID Nos. ES-C-PG1a, ES-C-PB1b, and ES-C-PG2a)**.

Continued compliance is expected.

2. 15A NCAC 02D .0521 – Control of Visible Emissions

The diesel fuel-fired emergency generators **(ID Nos. ES-C-PG1a, ES-C-PG1b, and ES-C-PG2a)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing

If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the test are above the limits given above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting Requirements

No monitoring/recordkeeping/reporting is required for visible emissions from these sources **(ID Nos. ES-C-PG1a, ES-C-PG1b, and ES-C-PG2a)**.

Continued compliance is expected.

3. 15A NCAC 02D .0530 – Prevention of Significant Deterioration

See Section VI. for more details.

4. 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

See Section VI. for more details.

5. 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions *(State-enforceable only)*

The facility is subject to this regulation because it has the potential to be a source of odorous emissions. It requires the facility to utilize management practices or odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable emissions beyond the facility boundaries.

E. Acrylate coating process (ID No. ES-C-ACP)
Miscellaneous maintenance and cleaning operations (ID No. ES-C-Cleaning)

1. 15A NCAC 02D .0530 – Prevention of Significant Deterioration

See Section VI. for more details.

2. 15A NCAC 02D .0958 – Work Practices for Sources of Volatile Organic Compounds

The facility is subject to the work practice standards as set by 02D .0958. This regulation requires the facility to store all VOC-containing materials not in use in covered containers, to

clean up spills as soon as possible, to store wipe rags in closed containers, etc. The facility is required to observe all operations using VOCs monthly and record the observations in a logbook. The facility is also required to submit a semi-annual summary report of the observations.

Continued compliance is expected.

3. 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions *(State-enforceable only)*

The facility is subject to this regulation because it has the potential to be a source of odorous emissions. It requires the facility to utilize management practices or odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable emissions beyond the facility boundaries.

4. 15A NCAC 02Q .0711 – Emission Rates Requiring a Permit *(State-Enforceable Only)*

See Section VI. for more details.

F. Soot Handling System, Silo 1 (ID No. ES-C-SHP1) with associated bin vent filter (ID No. CD-C-BH-3)

Soot Handling System Silo 2 (ID No. ES-C-SHP2) with associated bin vent filter (ID No. CD-C-BH-4)

Soot Handling System, Bagging Operations (ID No. ES-C-SHP3) with associated bin vent filter (ID No. CD-C-BH-5)

1. 15A NCAC 02D .0515 – Particulates from Miscellaneous Industrial Process

Emissions of particulate matter from these sources **(ID Nos. ES-C-SHP1, ES-C-SHP2, and ES-C-SHP3)** shall not exceed an allowable emission rate as calculated by the following equations:

$E = 4.10 \times P^{0.67}$ (for process rates less than or equal to 30 tons per hour)

Where: E = allowable emission rates in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process rate.

Testing

If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the test are above the limit calculated from the above equation, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting

Particulate matter emissions from the soot handling systems **(ID Nos. ES-C-SHP1, ES-C-SHP2, and ES-C-SHP3)** shall be controlled by three bagfilters **(ID Nos. CD-C-BH-3, CD-C-BH-4, and CD-C-BH-5)**. To ensure compliance, the Permittee shall perform inspections and

maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include an annual internal inspection of the bagfilter's structural and fabric integrity.

The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 and July 30 for the preceding six months.

Continued compliance is expected.

2. 15A NCAC 02D .0521 – Control of Visible Emissions

The soot handling systems **(ID Nos. ES-C-SHP1, ES-C-SHP2, and ES-C-SHP3)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. To ensure compliance, the facility is required to observe emission points once monthly to determine if emissions are above normal. In the event emissions are above normal, the facility must take appropriate actions to correct the above normal emissions as soon as practicable and within the same monitoring period or demonstrate that the above normal emissions are less than 20% opacity when averaged over 12 minutes using EPA Method 9. Logs of all weekly observations must be maintained in a logbook. The logbook shall record the following: the date and time of each recorded action; the results of each observation; and the results of any corrective actions performed. They are also required to submit a semiannual summary report of the observations.

Continued compliance is expected.

3. 15A NCAC 02D .0530 – Prevention of Significant Deterioration

See Section VI. for more details.

4. 15A NCAC 02Q .0317: Avoidance Conditions for 15A NCAC 02D .0614: Compliance Assurance Monitoring

a. In order to avoid applicability of 15A NCAC 02D .0614, the soot handling system, bagging operations **(ID No. ES-C-SHP3)** shall discharge into the atmosphere less than 100 tons of particulate matter per consecutive 12-month period.

Operational Restriction

b. In order to maintain particulate matter emissions below the limit of 100 tons of particulate matter per consecutive 12-month period, the Permittee shall not operate this source **(ID No. ES-C-SHP3)** for more than 2,900 hours per consecutive 12-month period.

Monitoring/Recordkeeping

c. The Permittee shall maintain daily records of operational hours of this source **(ID No. ES-C-SHP3)** in a logbook.

Recordkeeping

d. The Permittee shall submit a summary report January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. The report shall contain the following:

i. The monthly operational hours of source (ID No. ES-C-SHP3) during each of the previous 17 months; and

ii. The total operational hours of source (ID No. ES-C-SHP3) during each of the consecutive 12-month periods ending during the reporting period.

G. Four natural gas-fired humidification boilers (ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b)

- Two natural gas-fired humidification boilers (ID Nos. ES-C-HB1a and ES-C-HB1b, 5.02 million Btu per hour each)
- Two natural gas-fired humidification boilers (ID Nos. ES-C-HB2a and ES-C-HB2b, 8.37 million Btu per hour each)

1. 15A NCAC 02D .0503 – Particulate from Fuel Burning Indirect Heat Exchangers

a. Emissions of particulate matter from the combustion of natural gas that are discharged from these sources **(ID Nos. ES-C-HB1a, ES-C-HB1b)** into the atmosphere shall not exceed 0.60 pounds per million Btu heat input.

b. Emissions of particulate matter from the combustion of natural gas that are discharged from these sources **(ID Nos. ES-C-HB2a and ES-C-HB2b)** into the atmosphere shall not exceed 0.46 pounds per million Btu heat input.

Monitoring/Recordkeeping/Reporting

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of natural gas in these sources **(ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, ES-C-HB2b, and ES-C-HB3)**.

Continued compliance is expected.

2. 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources

Sulfur dioxide emissions from the humidification boilers **(ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b)** are limited to 2.3 pounds per million Btu heat input.

Using AP-42 emission factors, SO_2 emissions from natural gas are estimated to be less than 2.3 lb/MM/Btu, as follows:

AP-42 emission factor for natural gas = 0.6 lbs /million standard cubic feet
AP-42 heat value for natural gas = 1,020 million Btu

$$\frac{0.6\ lbs}{1\ x\ 10^6\ scf} \times \frac{1\ x\ 10^6\ scf}{1{,}020\ mmBtu} = \frac{0.0006\ lb\ SO_2}{mmBtu}$$

Because worst case SO_2 emission rates are estimated to be less than the allowable SO_2 emission rate (2.3 lb SO_2/mmBtu), no monitoring recordkeeping, or reporting shall be required to demonstrate compliance with this limitation. Compliance is indicated, as natural gas combustion results in negligible sulfur dioxide emissions.

Continued compliance is expected.

3. 15A NCAC 02D .0521 – Control of Visible Emissions

The humidification boilers **(ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b)** are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing

If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of the test are above the limits given above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting Requirements

No monitoring/recordkeeping/reporting is required for visible emissions from these sources **(ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b)**.

Continued compliance is expected.

4. 15A NCAC 02D .0530 – Prevention of Significant Deterioration

See Section VI. for more details.

5. 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

See Section VI. for more details.

6. 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions *(State-enforceable only)*

The facility is subject to this regulation because it has the potential to be a source of odorous emissions. It requires the facility to utilize management practices or odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable emissions beyond the facility boundaries.

7. 15A NCAC 02D .1407 Boilers and Indirect-Fired Process Heaters and 15A NCAC 02D .1414 Tune-up Requirements

a. Facilities with boilers with maximum heat input rate of less than or equal to 50 million Btu per hour shall comply with the annual tune-up requirements of 02D .1414. The Permittee shall maintain records of all tune-ups performed for each source according to 02D .1404.

Monitoring

b. When a tune-up to a boiler or indirect-fired process heater is required for compliance with this Section, the owner or operator shall at least annually (on or by December 31st of each calendar year) and according to the manufacturer's recommendations.

Recordkeeping

c. The owner or operator shall maintain records of tune-ups performed to comply with Rule 02D .1404. The information required by the permit shall be included for each source.

d. The results of the monitoring shall be maintained in a logbook.

Reporting

e. The Permittee shall submit a summary report of the observations by January 30 and July 30 for the preceding six months.

Continued compliance is expected.

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

NSPS

The Permittee is not currently subject to any New Source Performance Standards. This permit renewal does not affect this status.

NESHAPS/MACT

National Emissions Standards for Hazardous Air Pollutants (NESHAP) are applicable to major sources of HAP. A HAP major source is defined as having potential emissions in 10 tpy or more for any individual HAP and/or potential emissions of 25 tpy or more for total HAP. The following NESHAPs are applicable to emission sources at the Corning facility.

40 CFR Part 63, Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines (RICE MACT)

On January 30, 2013, EPA finalized the newest portions of the RICE NESHP. The Corning plant has the following emergency units at the site subject to 40 CFR Part 63, Subpart ZZZZ.

- Three diesel-fired emergency generators (**ID Nos. ES-C-PG1a, ES-C-PG1b, and ES-C-PG2a**, 2000 kW electric power output capacity, each, 2,935 hp engine power output capacity, each). These sources are considered existing stationary RICE, pursuant to 40 CFR 63.6590(a)(1)(i), for the purposes of Subpart ZZZZ. Pursuant to 40 CFR 63.6590(b)(3)(iii), these sources do not have to meet the requirements of 40 CFR Part 63, Subparts ZZZZ or A "General Provisions." (i.e. an initial notification is not required for these sources). [40 CFR 63.6590(b)(3)(iii)]

- Two diesel fuel-fired fire pumps (**ID Nos. IES-C-FP1 and IES-C-FP2**, 183 hp each) that were manufactured in July of 1997 and November of 2000. Based on the engine

manufactured dates, the engines will be subject exclusively to Subpart ZZZZ. The fire pumps are currently listed in the Insignificant activities list of the permit based on the engine size and potential emissions of each unit.

Three diesel fuel-fired emergency generators (ID Nos. ES-C-PG1a, ES-C-PG1b, and ES-C-PG2a)

Emergency Engine Compliance Requirements [15A NCAC 02Q .0508(b)]

c. For the purposes of Section 2.1 D.3, the Permittee shall only operate these sources(s) as emergency stationary reciprocating internal combustion engine(s) (RICE), which is defined as follows: Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in c.i through c.ii below. All emergency stationary RICE must comply with the requirements specified in Section 2.1 D.3.d below in order to be considered emergency stationary RICE. If an engine does not comply with the requirements specified in Section 2.1 D.3.d below, then it is not considered to be an emergency stationary RICE.

   i. The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

   ii. The stationary RICE is operated under limited circumstances for situations not included in c.i above, as specified in Section 2.1 D.3.d below.

d. In order for the engine to be considered an emergency stationary RICE as defined in Section 2.1 D.3.c above, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in d.i through d.iii below, is prohibited.

   i. There is no time limit on the use of emergency stationary RICE in emergency situations.

   ii. The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in d.ii.(A) below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by d.iii below counts as part of the 100 hours per calendar year allowed by this paragraph d.ii.

      (A) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

   iii. Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-

emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in d.ii above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

Stationary RICE subject to limited requirements

e. Sources that meet the requirements of Section 2.1 D.3. c and d above do not have any other applicable requirements under 40 CFR 63 Subpart ZZZZ and Subpart A, including initial notification requirements.

Recordkeeping [15A NCAC 02Q .0508(f)]

f. To ensure compliance with Section 2.1 D.3.c and d above, the Permittee shall maintain the following records. The Permittee shall record:

i. the hours for each engine spent in emergency operation, including what classified the operation as emergency;

ii. the hours for each engine spent for non-emergency operation; and

iii. the dates of operation of each engine.

The records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request.
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

g. No reporting is required.

This permit renewal does not affect these requirements. Continued compliance is expected.

40 CFR Part 63, Subpart DDDD – Boiler and Process Heater NESHAP

The EPA issued a new, final Boiler NESHAP rule in the Federal Register on January 31, 2013. The requirements of 40 CFR Part 63, Subpart DDDDD applies to industrial, commercial, and institutional boilers and process heaters located at a major source of HAP emissions. An affected source is any existing, new or reconstructed industrial, commercial, and institutional boilers and process heaters located at a major source of HAP emissions.

The boilers (ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b) exclusively fire natural gas and are subject to the final Subpart DDDDD rule. These boilers are currently not operating but Corning desires to retain them on its permit. Corning conducted an energy assessment as required by the rule. The boilers are subject to only tune up requirements, which will be conducted when recommissioned. Even though not operating, biennial reports are filed for the boilers.

The Boiler MACT was modified effective October 6, 2022. There are no changes in the October 6, 2022 rule for boilers that fire natural gas.

Four natural gas-fired humidification boilers (ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b)

Compliance Date

d. The Permittee shall complete the initial tune up and the one-time energy assessment no later than May 20, 2019. [40 CFR 63.56(b), 63.7510(e)] *The initial tune up will be completed within 30 days of start-up (currently not in operation). One-time energy assessment was done on April 15, 2019.*

Notifications

e. The Permittee shall submit a Notification of Compliance Status to the DAQ. The notification must be signed by a responsible official and submitted by July 19, 2019. [40 CFR 63.7545(e), 63.7530(e)] *This requirement was met June 24, 2019.*

Work Practice Standards [15A NCAC 02Q .0508(b)]

f. The following work practice standards apply:

i. The Permittee shall conduct a tune-up of the process biennially while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up, as specified below:

(A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burn inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown.

(B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. The Permittee may delay the inspection until the next scheduled unit shutdown;

(D) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and

(E) Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

ii. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up.

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

iv. At all times, the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these work practice requirements are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(b)]

g. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor.[40 CFR 63.7500(a)(1), Table 3 to 40 CFR 63 Subpart DDDDD] *This requirement has been met on April 15, 2019.*

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

h. The following recordkeeping requirements apply:

i. keep a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or biennial compliance report that has been submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).

ii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:

(A) the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the source;

(B) a description of any corrective actions taken as a part of the tune-up; and

(C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

iii. keep the associated records for Section 2.1 G.5.f through g.

iv. keep:

(A) records in a form suitable and readily available for expeditious review;

(B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and

(C) each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these recordkeeping requirements are not met.

Reporting Requirements [15A NCAC 02Q .0508(f)]

i. The following reporting requirements apply:

i. The Permittee shall submit compliance reports to the DAQ on a biennial basis. The first report shall cover the period beginning on the May 20, 2019 and ending on December 31, 2020. Subsequent 2-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 30 for the preceding reporting period.

ii. The compliance report shall also be submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

iii. The compliance report must contain the following information:

(A) company name and address;

(B) process unit information, emissions limitations, and operating parameter limitations;

(C) date of report and beginning and ending dates of the reporting period;

(D) include the date of the most recent tune-up for each unit required according to Section 2.1 G.5.f. Include the date of the most recent burner inspection if it was not done as scheduled and was delayed until the next scheduled or unscheduled unit shutdown; and

(E) statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these reporting requirements are not met.

This permit renewal does not affect these requirements. Continued compliance is expected.

PSD

North Carolina has implemented the federal PSD requirements of 40 CFR 51.166 under North Carolina Regulation 15A NCAC 02D .0530. The PSD program regulates emissions from major

stationary sources of regulated air pollutants. For the purposes of the PSD program, a major stationary source is defined as any one of the following;

1. *Any stationary source that is listed as one of the 28 named source categories in Title 40 of the Code of Federal Regulations (40 CFR), Part 51.166(b)(1)(i) which emits, or has the potential to emit, 100 tons per year (tpy) or more of any pollutant subject to regulation under the ACT;*

2. *Any stationary source that is not listed as one of the 28 named source categories in 40 CFR Part 51.166(b)(1)(i) which emits, or has the potential to emit, 250 tons per year (TPY) or more of any pollutant subject to regulation under the ACT.*

a. The Permittee shall comply with emission limits, testing, monitoring, recordkeeping, and reporting requirements, in accordance with 15A NCAC 02D .0530, "Prevention of Significant Deterioration of Air Quality".

b. The Permittee shall comply with the Best Available Control Technology (BACT) outlined in the permit during all periods of operation including normal, start-up, shutdown, and malfunctions, for all equipment listed in Section 2.2 A of the permit, pursuant to 15A NCAC 02D .0530(g).

c. The Permittee shall comply with the emissions limits given in the permit for optical waveguide laydown process **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)** and glass drying operations **(ID Nos. ES-C-003, ES-C-007, ES-C-010, ES-C-011, and ES-C-014)**, pursuant to the requirements in 15A NCAC 02D .0530(g), specifically, compliance with National Ambient Air Quality Standards and PSD increments.

d. **Testing**

i. The Permittee shall demonstrate compliance with the emissions limits for $PM/PM_{10}/PM_{2.5}$ in Section 2.2 B.1.b of the permit for each optical waveguide laydown process **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, and ES-C-009),** each glass drying operations **(ID Nos. ES-C-003, ES-C-007, ES-C-010, and ES-C-011),** and miscellaneous small source exhausts **(ID No. ES-C-004)**, within 180 days of issuance of Air Quality Permit No. 08436T21. *This testing requirement has been met.*

The Permittee shall demonstrate compliance with the emissions limits for $PM/PM_{10}/PM_{2.5}$ in Section 2.2 B.1.c above at each stack for optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, and ES-C-009)**, glass drying operations **(ID Nos. ES-C-003, ES-C-007, ES-C-010, and ES-C-011)**, and miscellaneous small source exhausts **(ID No. ES-C-004)**, by summing the emissions rates (determined through emission source testing) of these sources, as applicable in Section 2.2 B.1.c above, within 180 days of issuance of Air Quality Permit No. 08436T21. *This testing requirement has been met.*

ii. The Permittee shall demonstrate compliance with the emissions limits for $PM/PM_{10}/PM_{2.5}$ in Section 2.2 B.1.b above for optical waveguide laydown process **(ID No. ES-C-012)**, within 180 days of its start-up.
The Permittee shall demonstrate compliance with the emissions limits for $PM/PM_{10}/PM_{2.5}$ in Section 2.2 B.1.c above at the stack for optical waveguide laydown process **(ID No. ES-C-012)**, by summing the emissions rates (determined through emission source testing) of this source **(ID No. ES-C-012)** with the source **(ID No. ES-009)**, within 180 days of start-up of the source **(ID No. ES-C-012)**.

iii. The Permittee shall demonstrate compliance with the emissions limits for $PM/PM_{10}/PM_{2.5}$ for glass drying operation **(ID No. ES-C-014)** in Section 2.2 B.1.b above, within 180 days of its start-up.
The Permittee shall demonstrate compliance with the emissions limits for $PM/PM_{10}/PM_{2.5}$ in Section 2.2 B.1.c above at the stack for glass drying operation **(ID No. ES-C-014)**, by summing the emissions rates (determined through emission source testing) of this source **(ID No. ES-C-014)** with the sources **(ID Nos. ES-C-001, ES-C-005, ES-C-006, ES-C-007, ES-C-009, ES-C-010, and ES-C-011)**, within 180 days of start-up of the source **(ID No. ES-C-014)**.

iv. The Permittee shall demonstrate initial compliance with the emissions limits for NOx in Section 2.2 B.1.b above for each optical waveguide laydown process **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, and ES-C-009)**, within 180 days of issuance of Air Quality Permit No. 08436T21. *This testing requirement has been met.*

v. The Permittee shall demonstrate initial compliance with the emissions limits for NOx in Section 2.2 B.1.b above for optical waveguide laydown process **(ID No. ES-C-012)**, within 180 days of its start-up.

vi. The Permittee shall subsequently demonstrate compliance with the emissions limits for NOx in Section 2.2 B.1.c above at the stack for optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)** on an annual basis (no more than 13 months after the previous performance test) for five years. The Permittee may petition the DAQ for less frequent compliance demonstration (testing) for NOx under this paragraph after completion of five annual tests and each demonstrating compliance with the emissions limits in Section 2.2 B.1.c above.

vii. Each stack test shall be conducted in accordance with General Condition JJ in Section 3 of the permit.

viii. If the above required stack tests are not conducted or the results of any stack tests exceed limits in Section 2.2 B.1.b or c. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping

e. For $PM/PM_{10}/PM_{2.5}$ emissions from optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)** and glass drying operations **(ID Nos. ES-C-003, ES-C-007, ES-C-010, ES-C-011, and ES-C-014)**, and miscellaneous small source exhausts **(ID No. ES-C-004)**, the Permittee shall comply with the monitoring and recordkeeping requirements in Section 2.1 A.1.c and d, Section 2.1 B.1.c and d, and 2.1 C.1.c of the permit respectively. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the monitoring and recordkeeping requirements in Section 2.1 A.1.c and d, of the permit, Section 2.1 B.1.c and d, of the permit, or Section 2.1 C.1.c of the permit, are not complied with.

f. For acrylate coating process **(ID No. ACP)** and miscellaneous maintenance and cleaning operations **(ID No. ES-C-Cleaning)**, the Permittee shall determine VOC emissions per month based upon the amount of solvent or cleaner(s) used per month and VOC content of each solvent or cleaner. The Permittee shall assume that the VOC content is either 100 percent or obtain from the vendor of the material information confirming the VOC content included in the material safety data sheet (MSDS) or use formulation data. If the vendor of the material provides a range of

VOC content for such material, the Permittee shall use the highest value of the range to calculate the VOC emissions unless the DAQ approves the site-specific data (such as Method 24 analysis) showing that another that another value in the range is more appropriate. Calculations and the total amount of VOC emissions for each of these sources shall be recorded monthly in a logbook (written or electronic format), and emissions totaled for each consecutive 12-month period using VOC emissions for the current month and the previous 11-month period. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the 12-month rolling VOC emissions exceed the BACT for either acrylate coating process **(ID No. ACP)** or miscellaneous maintenance and cleaning operations **(ID No. ES-C-Cleaning)** in Section 2.2 B.1.b of the permit, or the VOC emissions are not recorded.

g. For $PM/PM_{10}/PM_{2.5}$ emissions from soot handling system sources **(ID Nos. ES-C-SHP1, ES-C-SHP2, and ES-C-SHP3)**, the Permittee shall comply with the monitoring and recordkeeping requirements in Section 2.1 F.1.c and d of the permit. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the monitoring and recordkeeping requirements in 2.1 F. 1.c and d of the permit are not complied with.

h. The Permittee shall keep records of operating hours for each month, and time and date for each readiness testing, for emergency generators and fire pumps **(ID Nos. ES-C-PG1a, ES-C-PG1b, ES-C-PG2a, IES-C-FPDT1, and IES-C-FPDT2)**. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not kept.

i. No monitoring/recordkeeping shall be required to comply with the NO_x BACT and other emissions limits for optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-012)** in Section 2.2 B.1.b and c of the permit, respectively.

j. No monitoring/recordkeeping shall be required to comply with the VOC BACT in Section 2.2 B.1.b of the permit, for optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)**.

k. No monitoring/recordkeeping shall be required to comply with the $PM/PM_{10}/PM_{2.5}$, NO_x, and VOC BACTs, as applicable, in Section 2.2 B.1.b of the permit, for boilers **(ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b)** and insignificant activities **(ID Nos. IES-C-1 through IES-C-14, IES-C-DGT1 through IES-C-DGT6, IES-C-FPDT1, IES-C-FPDT2, IES-C-FP1, IES-C-FP2, IES-C-GC1 through IES-C-GC5, IES-C-MFB, IES-C-MS1 through IES-C-MS3, IES-C-DC, IES-C-SV1 through IES-C-SV4, IES-C-FS, and IES-C-CWT1 through IES-C-CWT5)**.

Reporting

l. The Permittee shall submit a written report of the results of each performance test required in Section 2.2 B.1.e of the permit, before the close of business on the 60^{th} day following the completion of the performance test.

m. For acrylate coating process **(ID No. ACP)** and miscellaneous maintenance and cleaning operations **(ID No. ES-C-Cleaning)**, the Permittee shall report VOC emissions for each consecutive 12-month period.

n. Reporting requirements for optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)**, glass drying operations **(ID Nos. ES-C-003, ES-C-007, ES-C-010, ES-C-011, and ES-C-014)**, and miscellaneous small sources exhausts (ID

No. ES-C-004), in Section 2.1 A.1.e, Section 2.1 B.1.e, and Section 2.1 C.1.c of the permit, respectively, shall be sufficient to ensure compliance with the $PM/PM_{10}/PM_{2.5}$ requirements in 15A NCAC 02D .0530.

o. Reporting requirements for soot handling system sources **(ID Nos. ES-C-SHP1, ES-C-SHP2, and ES-C-SHP3)** in Section 2.1 F.1.e of the permit shall be sufficient to ensure compliance with the $PM/PM_{10}/PM_{2.5}$ requirements in 15A NCAC 02D .0530.

p. No reporting shall be required to ensure compliance with NOx and VOC requirements in 15A NCAC 02D .0530 for optical waveguide laydown processes **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-012)**.

q. No reporting shall be required to ensure compliance with PM/PM10/PM2.5, NOx, and VOC requirements, as applicable, in 15A NCAC 02D .0530, for boilers **(ID Nos. ES-C-HB1a, ES-C-HB1b, ES-C-HB2a, and ES-C-HB2b)** and insignificant activities **(ID Nos. IES-C-1 through IES-C-14, IES-C-DGT1 through IES-C-DGT6, IES-C-FPDT1, IES-C-FPDT2, IES-C-FP1, IES-C-FP2, IES-C-GC1 through IES-C-GC5, IES-C-MFB, IES-C-MS1 through IES-C-MS3, IES-C-DC, IES-C-SV1 through IES-C-SV4, IES-C-FS, and IES-C-CWT1 through IES-C-CWT5)**.

r. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

All emission sources at the site have been through PSD review. Corning submitted Application No. 1300117.19A in January 2019 that addressed the requirements of 40 CFR 51.166 and 02D .0530. Air Permit No. 08436T21 was issued on April 29, 2020 by Rahul Thaker that addressed all of the required PSD elements, permit limits and permit requirements.

112(r)

15A NCAC 02D .2100: Risk Management Program Section 112(r) Of the Clean Air Act – Prevention of Accidental Releases

a. The Permittee is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in accordance with 40 CFR Part 68.

Monitoring/Recordkeeping/Reporting

b. The Permittee shall develop, implement and submit a Risk Management Plan to EPA pursuant to 40 CFR 68.150 as specified in 40 CFR 68.10. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .2100 if the Permittee does not develop, implement and submit a Risk Management Plan to EPA.

This permit modification does not affect this status.

CAM

40 CFR Part 64 is applicable to any pollutant-specific emission unit, if the following three conditions are met:

- the unit is subject to any (non-exempt: e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- the unit's pre-control potential emission rate exceeds either 100 tpy (for criteria pollutants) or 10/25 tpy (for HAP's).

a. For the sources **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-012)**, the Permittee shall comply with 40 CFR Part 64 and 15A NCAC 0614 and shall ensure that these emission sources comply with the emission limits of 15A NCAC 02D .0515 by complying with Section 2.1 A.4.b in the permit.

Monitoring/Recordkeeping

b. Particulate matter emissions from these sources **(ID Nos. ES-C-001, ES-C-002, ES-C-005, ES-C-006, ES-C-009, and ES-C-012)** shall be controlled by associated bagfilters or cartridge filter **(ID Nos. CD-C-BH-2, CD-C-BH-6, CD-C-BH-7, CD-C-BH-10, CD-C-BH-11)** as described above.

i. To ensure compliance, the Permittee shall monitor the differential pressure drop across the bagfilters and cartridge filter at least once every day via an electronic parametric monitoring system that notifies the operator of any out-of-range values. The Permittee shall install, maintain, operate, and calibrate the differential pressure drop monitoring system, as recommended by the monitoring equipment manufacturer.

ii. If a differential pressure drop monitoring across a bagfilter or cartridge filter less than 0.5 inches of water column (unless the occurrence is less than 200 operational hours from installation of a new filter) or greater than 14 inches of water column is observed then an excursion has occurred.

A. In the event of an excursion, the Permittee shall take appropriate action to correct the excursion as soon as possible.

B. Based on the results of the approved monitoring, the permitting authority may require the owner or operator to develop and implement a Quality Improvement Plan in accordance with 40 CFR 64.8.

iii. The results of monitoring, inspections, maintenance, and calibrations conducted pursuant to Sections 2.1 A.4.b.i and ii of the air permit shall be maintained in a logbook.

Reporting

c. Semi-annual reports are due on January 30 and July 30 for the preceding six months. All instances of deviations from the requirements of this permit must be clearly identified.

VII. Facility Wide Air Toxics

15A NCAC 02D .1100: Control of Toxic Air Pollutant Emissions

This regulation outlines the procedures that must be followed if modeling is required under 15A NCAC 02Q .0700. The facility has previously developed a Toxic Air Pollutant (TAP) modeling analysis for HCl and Cl_2, which are emitted from the site. The TAPs are emitted out of stacks 1 and 2 **(ID Nos. EP-C-01 and ES-C-02)**. The state-only air toxic limits can be seen in Table 1 below.

a. Pursuant to 15A NCAC 02D .1100 and in accordance with the completed application (1300117.19A) dated January 30, 2019, the following permit limits shall not be exceeded:

Table 1

Stack ID No.	Emission Source ID No.	Emission Limits		
		Hydrogen Chloride (7647-01-0)	Chlorine (7782-50-5)	
		lb/hr	lb/hr	lb/day
EP-C-01	ES-C-003 ES-C-004	1.25	2.27	54.54
EP-C-02	ES-C-001 ES-C-005 ES-C-007 ES-C-010 ES-C-011 ES-C-014	6.46	6.08	145.92

Testing

b. The Permittee shall demonstrate compliance with the emissions limits of hydrogen chloride and chlorine for stack **(ID No. EP-C-01)**, while operating each of the sources **(ID Nos. ES-C-003 and ES-C-004)** and within 180 days of issuance of Air Quality Permit No. 08436T21. *This testing requirement has been met.*

The Permittee shall demonstrate compliance with the emissions limits of hydrogen chloride and chlorine for stack **(ID No. EP-C-02)**, while operating each of the sources **(ID Nos. ES-C-001, ES-C-005, ES-C-007, ES-C-010, ES-C-011, and ES-C 014)**, within 180 days of issuance of Air Quality Permit No. 08436T21, even if the source **(ID No. ES-014)** has not commenced operation. *This testing requirement has been met.*

The Permittee shall demonstrate compliance with the emissions limits of hydrogen chloride and chlorine for stack **(ID No. EP-C-02)**, while operating each of the sources **(ID Nos. ES-C-001, ES-C-005, ES-C-007, ES-C-010, ES-C-011, and ES-C 014)**, within 180 days of initial start-up of glass drying operation **(ID No. ES-C-014)**.

Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ.

During this stack testing, the Permittee shall measure and document liquid injection rates, differential pressure drop across the scrubbers, and pH values of the liquid injected into the scrubbers associated with each of the emission sources, for ensuring compliance with hydrogen chloride and chlorine limits in Section 2.2 A.1.a above.

Upon DAQ approval of stack test results for chlorine and hydrogen chloride, ensuring compliance with the limits in Section 2.2 A.1.a above, the Permittee shall request an administrative amendment of its Title V permit, to revise the liquid injection rates of each scrubber included in Section 1 of the permit with the observed liquid injection rate for each scrubber during this stack testing.

Operational Requirements

c. To ensure compliance with the emission limits rates in Section 2.2 A.1.a above, the Permittee shall not operate the emission sources listed therein, without the concurrent operation of the associated scrubbers. In addition, while the emission sources listed in Section 2.2 A.1.a above are operating, the Permittee shall:

   i. Maintain hourly liquid injection rates in the associated scrubbers equal to or greater than the liquid injection rates listed in Section 1, above, for each associated scrubber;

   ii. Maintain hourly differential pressure drops across the associated scrubbers equal to or greater than the differential pressure drops recommended by the manufacturer or established by the Permittee via operational experience for each associated scrubber; and

   iii. Maintain hourly scrubber liquid pH values equal to or greater than the liquid pH values recommended by the manufacturer or established by the Permittee via operational experience for each associated scrubber.

Monitoring/Recordkeeping

d. The Permittee shall monitor hourly values of the three operational parameters listed in Sections 2.2 A.1.c.i through 2.2 A.1.c.iii above via an electronic parametric monitoring system that notifies the operator of any out-of-range values. The parametric monitoring system shall be installed, maintained, operated and calibrated as recommended by the monitoring system manufacturer.

e. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the scrubber manufacturer and/or established by the Permittee via operational experience. As a minimum, to ensure optimum control efficiency is maintained, the inspection and maintenance requirements shall include:

   i. Inspections of packing material, if applicable, to ensure proper packing depth and to check for clogging;

   ii. Inspections of spray nozzles to detect clogging or corrosion damage of nozzles; and

   iii. Inspections of chemical feed system, if applicable;

   iv. Inspection, cleaning, and calibration of all associated instrumentation; and

   iv. Annual internal scrubber inspection for structural integrity.

f. The Permittee shall maintain daily records of the hourly values of the following operational parameters in a logbook (written or electronic format) on-site and made available to an authorized representative upon request:

   i. Liquid injection rates in each scrubber;

   ii. Differential pressures across each scrubber; and

   iii. Scrubber liquid pH values for each scrubber.

g. The results of monitoring, and inspections and maintenance, conducted pursuant to Section 2.2 A.1.d and 2.2 A.1.e above, shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

   i. The date and time of each recorded action;

ii. The results of each inspection;

iii. The results of any maintenance performed on the scrubber and the parametric monitoring system; and

iv. Any variance from the inspections and maintenance requirements recommended by the equipment manufacturer and/or established by the Permittee via operational experience, if any, and corrections made.

Reporting

h. The Permittee shall submit the results of any maintenance performed on the scrubbers within 30 days of receipt of a written request by the DAQ.

i. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

j. The Permittee shall submit the stack EP-C-01 and EP-C-02 test results for hydrogen chloride and chlorine to the Mooresville Regional Office within 60 days of test completion.

15A NCAC 02Q .0700: Toxic Air Pollutant Procedures

This rule establishes procedures for documenting compliance for a modification that results in an increase in NC air toxics. Compliance can be demonstrated by:

1. Documenting that facility wide emissions are below the thresholds in 15A NCAC 02Q .0711
2. Netting to show there has been a no net increase in NC air toxics; or
3. Modeling to document compliance with the ambient levels in 15A NCAC 02D .1100.

As stated above, Corning has previously modeled HCl and Cl_2 from stacks 1 and 2 **(ID Nos. EP-C-01 and EP-C-02)**.

a. Pursuant to 15A NCAC 02Q .0711 “Emission Rates Requiring a Permit,” for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that actual emissions from the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions), do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 02Q .0711. The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility (excluding those sources exempt under 15A NCAC 02Q .0702 "Exemptions), including fugitive emissions, will not exceed TPERs listed in 15A NCAC 02Q .0711.

i. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.

ii. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 02D.1100 "Control of Toxic Air Pollutants.”

b. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

TPERs				
Pollutant (CAS Number)	**Carcinogens lb/yr**	**Chronic Toxicants lb/day**	**Acute Systemic Toxicants lb/hr**	**Acute Irritants lb/hr**
Benzene (71-43-2)	8.1			
p-dichlorobenzene (106-46-7)				16.8
Formaldehyde (50-00-0)				0.04
n-Hexane (110-54-3)		23		
Toluene (108-88-3)		98		14.4
Xylene (1330-20-7)		57		16.4

VIII. Facility Emissions Review

See Table in the header for a summary of the actual emissions as reported to DAQ from the years 2018 to 2022.

IX. Compliance Status

The facility was last inspected by Seth Hall on **10/9/2023**. Based on his observations the facility appeared to be in compliance with their Title V permit requirements.

X. Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant 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.

XI. Other Changes

Removal of Affirmative Defense Provision from General Condition J

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[1]. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses[2] and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

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

[2] In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial,

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

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

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

NAICS PFAS Lookup Tool

The following information was entered into the NCAICS PFAS Lookup Tool.
SIC: 3229 / Pressed and Blown Glass, Nec
NAICS: 327212 / Other Pressed and Blown Glass and Glassware Manufacturing

The result was a No.

XII. Conclusions, Comments, and Recommendations

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 professional engineer's seal (PE Seal) was not required for this renewal.

Zoning
A zoning consistency determination was not required for this renewal.

Comments and Response

Pre-Public Notice version of the drafts of the permit and review were sent to the applicant, Mooresville Regional Office and Stationary Source Compliance Branch (SSCB) on April 11, 2024. The applicant sent their comments via email on April 30, 2024. There are several substantial comments.

Comment 1

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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).

The applicant argues "CD-C-BH-11 controls ES-C-012. This source ES-C-012 and its baghouse CD-C-BH-11 have not been constructed. Thus CD-C-BH-11 should be removed from this permit condition." The applicant requests that because emission source ES-C-012 controlled by control device CD-C-BH-11 are not yet constructed, that the references in Section 2.1 A.4.b for emission source ES-C-012 and control device CD-C-BH-11 be removed.

DAQ Response

DAQ disagrees that the emission source ES-C-012 and control device CD-C-BH-11 should be removed from Section 2.1 A.4.b. General Condition LL **Reporting Requirements for Non-Operating Equipment** specifics what the Permittee needs to do when the sources are not in operation.

Comment 2

The applicant states "The current permit 08436T23 contains CAM monitoring for an emission source that has Post-control emissions > 100 TPY. Each of Corning emission sources are < 100 TPY. See additional supporting information for this requested change in our comment letter." Corning states in their April 30, 2024 letter "During the review of the CAM requirements listed in Air Permit No. 08436T23, that Permit Condition 2.1 A.4.b.i contains a monitoring frequency of "once every 15 minutes." This monitoring frequency has been in our permit since the CAM requirements were added to our permit but is a CAM requirement a large pollutant-specific emission unit (§64.3(b)(4)(ii) and §64.5 of 40 CFR Part 64). Even though the waveguide laydown emission sources are subject to CAM requirements, each emission source meets the requirements of other pollutant-specific emissions unit as defined in §64.5(b) and qualifies for daily monitoring (24-hour period) as specified in §64.3(b)(4)(iii) of the CAM regulations."

DAQ Response

DAQ and Samir Parekh (SSCB Supervisor) agrees with applicant and will revise the monitoring frequency under Permit Condition 2.1 A.4.b.i from "once every 12 minutes" to "24-Hour period."

Comments 3 and 4

The applicant states "It is requested that either these two requirements be amended as suggested or either these conditions be removed from the permit." for the testing requirements for State-Enforceable Air Toxic requirements (Section 2.2 A.1.b), Prevention of Significant Deterioration (PSD) (Section 2.2 B.1.d.i,iv, and v), and National Ambient Air Quality Standards (NAAQS) (Section 2.2 B.1.d.vi). Both comments are associated with completed permit testing requirements for certain emission sources and pollutants. Applicant requests that those completeness test requirements either be removed, or the following statement be added, *"This testing requirement has been met."*

DAQ Response

DAQ has decided at this time, because several other testing requirements have yet to be approved, that it will be better to add the following statement "*This testing requirement has been conditionally met and pending review of approved testing results, the condition can be removed from the permit."* to the completed testing requirements in Sections 2.2 A.1.b and 2.2 B.1.d.i & iv for the future

permitting and compliance needs. When all remaining test requirements are satisfied, the Agency will take out the entire testing conditions from the permit in Sections 2.2 A.1.b and 2.2 B.1.d.i & iv.

Recommendations

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

The Raleigh Central Office (RCO) concurs with MRO's recommendation to issue Air Permit No. 08436T24.