NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: TBD, 2023

Region: Raleigh Regional Office
County: Nash
NC Facility ID: 6400326
Inspector's Name: Sindy Huang
Date of Last Inspection: 09/13/2022
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Hubbell Lenoir City

Facility Address:
Hubbell Lenoir City
546 English Road
Rocky Mount, NC 27804

SIC: 3082 / Unsupported Plastics Profile Shapes
NAICS: 326121 / Unlaminated Plastics Profile Shape 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 .0515, .0521, .1111, .1806 and .0317 for avoidance of 02D .0530
NSPS: NA
NESHAP: 40 CFR 63, Subpart MMMM and WWWW
PSD: NA
PSD Avoidance: VOCs
NC Toxics: NA
112(r): NA
Other: NA

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Wes Bush Plant Manager (918) 340-4447 546 English Road Rocky Mount, NC 27804	Scott Martz VP & GM, Enclosures and Drains (865) 635-2112 3621 Industrial Park Drive Lenoir City, TN 37771	Shelby Clark EHS Manager (865) 635-2144 3621 Industrial Park Drive Lenoir City, TN 37771

Application Data

Application Number: 6400326.22A
Date Received: 04/14/2022
Application Type: Modification
Application Schedule: TV-1st Time

Existing Permit Data
Existing Permit Number: 10587/R04
Existing Permit Issue Date: 03/03/2022
Existing Permit Expiration Date: 10/31/2026

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	---	---	1.21	---	---	0.7861	0.7730 [Styrene]
2020	---	---	0.0200	---	---	0.0163	0.0163 [Methylene diphenyl diisocyanat]

Review Engineer: Richard Simpson

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

Comments / Recommendations:
Issue 10587/T05
Permit Issue Date: TBD, 2023
Permit Expiration Date: TBD, 2028

I. Introduction:

Hubble Lenoir City currently holds Title V Permit No. 10587R04 with an expiration date of October 31, 2026 for a spray painting/foaming operation and reinforced plastic manufacturing operation in Rocky Mount, Nash County, North Carolina.

II. Description of Facility:

Hubbell Lenoir City (HLC) manufactures above grade water equipment enclosures for the irrigation, plumbing, fire, water, and utility markets that are made from aluminum and have a spray foam coating applied to the inside of the enclosure. Manufactured under the brand name "Hot Box". Also located at this facility is a sister company to HLC called "Pencell Plastics" both with the parent company, Hubbell Incorporated. The "PenCell" brand of grade level and above grade enclosures for the electrical utility, telecommunications, and contractor markets working in underground infrastructure are produced by HDPE injection molding and LDPE rotational molding processes and have been produced at this facility since 2008. Pencell Plastics was acquired by Hubbell in 2014. The facility operates 24 hours per day with the environmental staff on-site for inspections from approximately 7 am to 4 pm. The facility does not have week-long annual or semi-annual scheduled maintenance times during the year.

III. Purpose of Application

The submittal of this application is for the completion of the second step significant modification and the first time Title V Air Permit. Per Air Permit No. 10587R04 issued March 3, 2022, the facility was required to submit a Title V application by March 3, 2023, one year from permit issuance. Permit application No. 6400326.22A was received on April 29, 2022 with payment using the electronic payment option and was considered complete on this date. The proposed second step significant modification application is to add a sheet molding compound (SMC) compression molding operation. The Table of Changes located in Section III includes details associated with the proposed changes to the permit. There are no changes associated with the existing equipment or associated emission sources for this application.

VI. History/Background/Application Chronology

September 14, 2021 – The facility was inspected by RRO engineer Dena Pittman and the facility appeared to operate in compliance with all applicable regulations and permit conditions at the time of the inspection.

March 3, 2022 – Permit 10587R04 was issued.

April 29, 2022 – Permit application 6600326.22A was received for the completion of the second step significant modification and the first time Title V Air Permit. A permit acknowledgement was sent to the facility.

December 14-January 6, 2023 – The facility, Raleigh Regional Office, and Stationary Compliance Section were requested by the Permitting Section to comment on the permit application. Comments were received and included in the permit.

TBD, 2023 – The permit and review were submitted to the required public and EPA comment period. No comments were received.

TBD, 2023– TVEE changes were approved by Jenny Sheppard TVEE Coordinator.

TBD, 2023 – Permit 10587T05 was issued.

V. Permit Modifications/Changes and TVEE Discussion

The following changes were made to Air Permit No. 10587R04.*

Page No.	Section	Description of Changes
Cover and throughout	Throughout	Updated all tables, dates, and permit revision numbers. Permit was updated with the latest Permit Shell 7.0.
----------	Permit	Changed: Permit number, replaces permit number, effective date, application number, effective date of permit.
2	Section A.2.	Removed 15A NCAC 02Q .0304(d) and (f) pursuant to 15A NCAC 02Q .0203(i) since the updated rules are in the General Conditions.
2	Section A.3.	Removed 15A NCAC 02Q .0207 "Annual Emission Reporting" since the rule is in the General Conditions.
2, 3	Sections 2.A.4 and 5	Added Title V noncompliance language for 15A NCAC 02D .0515 and .0521.
3	Section A.6.	Removed 15A NCAC 02D .0535 "Excess Emissions Reporting and Malfunctions" since rule is in the General Conditions.
4	Section A.7.	Removed 15A NCAC 02D .0540 "Fugitive Dust" since rule is in the General Conditions.
4	Section A.8	Moved 15A NCAC 02D .1111 40 CFR Part 63, Subpart MMMM to Section 2.2 A.3.
7, 9	Sections A.9 and 10	Moved 15A NCAC 02D .1111 40 CFR Part 63, Subpart WWWW to Sections 2.2 A.4 and 5.
12	Section A.11	Moved 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions" to Section 2.2 A.2.
12	Section A.12	Moved 15A NCAC 02Q .0317, to comply with this permit and avoid the applicability of 15A NCAC 02D .0530 "Prevention of Significant Deterioration," to Section 2.2 A.1.
13	Section 13.	Deleted section for 15A NCAC 02Q .0504 since this permit is for Title V.
14	Section A.14.	Deleted section for 15A NCAC 02Q .0507 since this rule is in the General Conditions.
Attachment	Attachment	Moved the Insignificant Activities to Section 3.
15-17	Section B	The General Conditions in Section 4 of the permit were updated to the latest version.

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

There were no changes required to the Title V Equipment Editor (TVEE) under this first time Title V application because the recent issuance of the current permit contained all of the most recent versions of the regulations and permit shell revisions.

VI. Statement of Compliance

Five year compliance history

During the most recent inspection conducted on September 14, 2021, Dena Pittman of the RRO indicated that the facility appeared to operate in compliance with all applicable regulations and permit conditions at the time of inspection.

This facility started operation in 2020.

VII. Application Description

There were no changes to the emission sources, regulations, and potential emissions for this first time Title V permit application. For the application (6100326.21B) that triggered the facility to become a Title V source, the facility added a sheet molding compound (SMC) compression molding operation.

SMC Compression Molding (ID No. ES-15)
The application describes the SMC compression molding operation to be added as follows "*In the process, the SMC feedstock (consisting of resin paste and fiber reinforcement, sandwiched between two carrier films) is prepared for molding by automatic equipment and then compression molded to form the product. The preparation step involves removing the film from one charge of SMC material and pre-cutting it to the desired length and width. Please note that the SMC feedstock is purchased in a "ready to use" form; SMC manufacturing will not be performed at the facility.*"

In addition to MACT Subpart WWWW and 15A NCAC 02Q .0317 (Avoidance of PSD) discussed in Section V, the new emission source will be subject to 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions" (State-Only Requirement).

VIII. Regulatory Review/Equipment Changes

The facility is currently subject to the following regulations:

A. 15A NCAC 02D .0515, "Particulates from Miscellaneous Industrial Processes"
B. 15A NCAC 02D .0521, "Control of Visible Emissions"
C. 15A NCAC 02D .1806, "Control and Prohibition of Odorous Emissions"
D. 15A NCAC 02D .1111, "Maximum Achievable Control Technology (40 CFR 63, Subpart WWWW)"
E. 15A NCAC 02D .1111, "Maximum Achievable Control Technology (40 CFR 63, Subpart MMMM)"
F. 15A NCAC 02Q .0317, to comply with this permit and avoid the applicability of 15A NCAC 02D .0530 "Prevention of Significant Deterioration,"

The regulations associated with this first time Title V permit are evaluated below. For a discussion of MACT, CAM, and PSD requirements, see Section X. The permit will be updated to reflect the most current stipulations for all applicable regulations.

1. <u>15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes</u>: This rule applies to particulate matter emissions from these sources (ID Nos. ES-01, ES-08, ES-10, ES-11, and ES-13) shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate 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 weight. To ensure compliance, particulate matter emissions from this source (ID No. ES-13) shall be controlled by the associated downdraft table filter (ID Nos. CD- 13A) and a room ventilation bagfilter (ID No. CD-13B). 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, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following: a monthly visual inspection of the system ductwork and material collection unit for

leaks; and an annual (for each 12 month period following the initial inspection) internal inspection of the control device housing structural integrity. Continued compliance is anticipated.

2. 15A NCAC 02D .0521, Control of Visible Emissions: This rule limits visible emissions to 20% opacity (except a six-minute averaging period can exceed 20% once per hour and four times per 24-hour period, provided visible emissions do not exceed 87% opacity). Monitoring/ recordkeeping/reporting is required for these sources **(ID Nos. ES-01, ES-08, ES-10, ES-11, and ES-13)**.

   Monitoring [15A NCAC 02Q .0508(f)]
   To ensure compliance, once a month the Permittee shall observe the emission points of these sources **(ID Nos. ES-01, ES-08, ES-10, ES-11, and ES-13)** for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. For all new emission sources or control devices listed in the above table, the Permittee shall establish "normal" in the first 30 days following the commencement of operation. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monthly monitoring period and record the action taken as provided in the \recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.2.a above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required monthly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for these sources in the first 30 days of beginning operation.

   Recordkeeping [15A NCAC 02Q .0508(f)]
   The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site for five years 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 observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

   Reporting [15A NCAC 02Q .0508(f)]
   The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.2.c and d above 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.

   Continued compliance is anticipated.

3. 15A NCAC 02D .1806 "Control and Prohibition of Odorous Emissions" (State-Only Requirement)

Facility-wide, the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary. Continued compliance is anticipated.

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

NSPS

There are no applicable NSPS regulations for this facility.

NESHAPS/MACT

The Permittee is currently subject to the Maximum Achievable Control Technology Standards 40 CFR 63 Subpart MMMM and WWWW for its existing sources. The permit currently includes references to the requirements in each of the paragraphs of this Subpart. Continued compliance is anticipated.

1. 40 CFR 63, National Emission Standards for Surface Coating of Miscellaneous Metal Parts and Products (Subpart MMMM). This Subpart is applicable to the spray foaming /paint booth (ID No. ES-01).

Emission Limits [40 CFR 63.3890(a)(1)]

a. For the spray foaming /paint booth (ID No. ES-01), the Permittee shall limit organic HAP emissions to less than 0.23 kilograms per liter (1.9 pounds per gallon) of coating solids used during each 12-month compliance period.
b. As allowed by 40 CFR 63.3891, the Permittee may use any of the three methods below in Sections i through iii for demonstrating compliance with the emission limit in Section a. The Permittee may use different compliance options when different coatings are applied to the same part, or when the same coating is applied to different parts. However, the Permittee may not use different compliance options at the same time on the same coating operation.
    i Compliant material option - Demonstrate that the organic HAP content of each coating used is less than or equal to the emission limit in Section a, and that each thinner and/or other additive, and cleaning material used contains no organic HAP. For this option, the Permittee must meet all the requirements of 40 CFR 63.3940, 63.3941, and 63.3942.
    ii. Emission rate without add-on controls option - Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation, the organic HAP emission rate for the coating operation is less than or equal to the applicable emission limit in Section a, calculated as a rolling 12-month emission rate and determined on a monthly basis. For this option, the Permittee must meet all the requirements of 40 CFR 63.3950, 63.3951, and 63.3952.
    iii. Emission rate with add-on controls option - Demonstrate that, based on the coatings, thinners and/or other additives, and cleaning materials used in the coating operation, and the emissions reductions achieved by emission capture systems and add-on controls, the organic HAP emission rate for the coating operation is less than or equal to the applicable emission limit in Section a, calculated as a rolling 12-month emission rate and determined on a monthly basis.

General Compliance Requirements [40 CFR 63.3900]

e. At all times, the Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Recordkeeping [40 CFR 63.3930]

f. The Permittee shall maintain the following records:
   i. A copy of each notification;
   ii. A current copy of information provided by materials suppliers/manufacturers (e.g. manufacturer's formulation data) used to determine the mass faction of organic HAP, volume fraction of coating solids (as applicable), and density for each material;
   iii. A record of the compliance option used and the time periods for each option used
   iv. For the compliant material option, a record of the calculation of the organic HAP content for each coating, using Equation 2 of 40 CFR 63.3941;
   v. For the emission rate without add-on controls option, a record of the calculation of the total mass of organic HAP emissions for the coatings, thinners and/or other additives, and cleaning materials used each month using Equations 1, 1A through 1C, and 2 of 40 CFR 63.3951; and, if applicable, the calculation used to determine mass of organic HAP in waste materials according to 40 CFR 63.3951(e)(4); the calculation of the total volume of coating solids used each month using Equation 2 of 40 CFR 63.3951; and the calculation of each 12-month organic HAP emission rate using Equation 3 of 40 CFR 63.3951;
   vi. A record of the name and volume of each coating, thinner and/or other additive, and cleaning material used during each compliance period. If the compliant material option is used for all coatings at the source, the Permittee may instead maintain purchase records for each material used rather than a record of the volume used;
   vii. The material specifications listed in 40 CFR 63.3930(e), (f), (g), and (h);
   viii. Records of the date, time, and duration of each deviation. After January 5, 2021, this shall also include the information required by 40 CFR 63.3930(j)(1) – (4);
   ix. If the Permittee changes compliance options as allowed by 40 CFR 63.3891, the Permittee shall maintain a record of the change.

Reporting [40 CFR 63.3920]

g. The Permittee shall submit a summary submit the following reports:
   i. A semiannual compliance report that contains the information required by 40 CFR 63.3920(a)(1) – (7).
   ii. Performance test reports as required by 40 CFR 63.3920(d).

Notifications [40 CFR 63.3910]

i. The Permittee shall submit a notification of compliance status that contains the information in 40 CFR 63.3910(c)(1) through (11). This notification is due no later than 30 calendar days following the end of the initial compliance period described in 40 CFR 63.3940 or 40 CFR 63.3950, as applicable.

2. 40 CFR 63, National Emission Standards for Reinforced Plastic Composites Production (Subpart WWWW).).

   a. The following definitions given in 40 CFR 63.5935 apply to batch mixing and casting operations (ID No. ES-08) activities at this facility:
      i. Closed molding means a grouping of processes for fabricating composites in a way that HAP-containing materials are not exposed to the atmosphere except during the material loading stage (e.g., compression molding, injection molding, and resin transfer molding). Processes where the mold is covered with plastic (or equivalent material) prior to resin application, and the resin is injected into the covered mold are also considered closed molding.
      ii. Composite means a shaped and cured part produced by using composite materials.

iii. Composite materials means the raw materials used to make composites. The raw materials include styrene containing resins. They may also include gel coat, monomer, catalyst, pigment, filler, and reinforcement.

iv. Polymer casting means a process for fabricating composites in which composite materials are ejected from a casting machine or poured into an open, partially open, or closed mold and cured. After the composite materials are poured into the mold, they are not rolled out or worked while the mold is open, except for smoothing the material and/or vibrating the mold to remove bubbles. The composite materials may or may not include reinforcements. Products produced by the polymer casting process include cultured marble products and polymer concrete.

Covered Activities (40 CFR 63.5790(c) and 40CFR 63.5795)

b. This rule applies to each new affected source. Affected source consists of all parts of the facility that engage in casting activities, cleaning of associated activities, storage of HAP-containing materials, and repair operations.

c. Polymer casting and closed molding operations (except for compression/injection molding) are specifically excluded from any requirements in Subpart WWWW. The batch mixing and casting operation (ID No. ES-08) meets the definition of polymer casting, and the comcore area and light resin transfer molding (ID Nos. I-02 and I-04) meet the definition of closed molding.

Standards

d. Activities at this facility (excluding activities mention in §63.5790(c)) must meet the applicable work practice standards in Table 4 to Subpart WWWW:

Excerpt from Table 4 to 40 CFR Part 63, Subpart WWWW

For:	You must:
1. A new or existing cleaning operation	Not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin.
2. A new or existing materials HAP-containing materials storage operation	Keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety.

General Requirements (40 CFR 63.5835)

e. The Permittee must be in compliance at all times with the work practice standards in Section d. In addition, the Permittee must always operate and maintain the affected source according to the provisions in 40 CFR 63.6(e)(1)(i).

Recordkeeping (40 CFR 63.5915)

f. The Permittee shall keep records of all notifications submitted and a statement that the Permittee is in compliance with the work practice standards in Section d.

Reporting (40 CFR 63.5905 and 40 CFR 63.5910)

f. The Permittee shall submit the following:
   i. The notifications specified in 40 CFR 63.9(b)(4) and (5). The notifications shall be submitted by the deadlines in 40 CFR 63.9(b)(4) and (5);
   ii. The Permittee shall submit a semi-annual summary report that contains the information specified by Table 14 to Subpart WWWW.

Emission Limits

a. For the dry filter-type fiberglass chop spray operation consisting of two spray booths (ID No. ES-10), the dry filter-type gel coat application booth (ID No. ES-11), and SMC compression molding (ID No. ES-15), the emission limits from Table 3 to Subpart WWWW of Part 63 (facility operations shown as Table A below) shall not be exceeded.

Table A:

Permitted Source(s)	Affected Source(s)	Pollutant	Application Type	Emissions Limit
ES-10	Open Molding - non-corrosion resistant and/or high strength (CR/HS)	Organic HAP	Mechanical resin application	88 lb/ton
ES-11	Open Molding - gel coat	Organic HAP	All other pigment gel coating	377 lb/ton
			Clear production gel coat	522 lb/ton

   i. Although the compliance option in 40 CFR 63.5810(a) is detailed in this permit, the Permittee shall demonstrate compliance using any one of the methods specified in 40 CFR 63.5810. As provided in 40 CFR 63.5810(a), the Permittee shall demonstrate that an individual resin or gel coat, as applied, meets the applicable emission limit for open molding operations as listed in Table 3 to Subpart WWWW of Part 63.
      (A) Calculate the actual organic HAP emissions factor for each different process stream within each operations type using the appropriate equations in Table 1 to Subpart WWWW of Part 63 (equations for facility operations are reproduced in Table B, below) or site-specific organic HAP emissions factors discussed in 40 CFR 63.5796. [40 CFR 63.5810(a)(1)]
      (B) If the actual organic HAP emission factor is less than the emission limit in Table 3 to Subpart WWWW of Part 63, the Permittee has demonstrated compliance with the emission limit for that individual process stream. [40 CFR 63.5810(a)(2)]

Table B:

Source	Activity	EF for materials < 33 % organic HAP[a,b]	EF for materials ≥ 33 % organic HAP[a,b]
ES-10	Fiberglass Chop Spray Operation	EF= 0.107 x %HAP	EF= (0.157 x %HAP) - 0.0165
Source	Activity	EF for materials < 19 % organic HAP[a,b]	EF for materials ≥ 19 % organic HAP[a,b]
ES-11	Gelcoat Operation	EF= 0.185 x %HAP	EF= (0.4506 x %HAP) - 0.0505

[a] Where %HAP is entered as a decimal. For example, 0.30 for a 30% HAP material.
[b] EF is pounds of styrene emitted per pound of resin or gelcoat processed.

Work Practice Standards

b. As required by 15A NCAC 02D .1111 and 40 CFR Part 63, Subpart WWWW, the Permittee shall comply with the following work practice standards: [Table 4 to Subpart WWWW of 40 CFR Part 63]
   i. A new or existing closed molding operation using compression/injection molding: Uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting;
   ii. For cleaning operations, the Permittee shall not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin;
   iii. For HAP-containing materials storage operations, the Permittee shall keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety;
   iv. For all mixing or BMC (bulk molding compound) manufacturing operations the Permittee shall:[1]
      (A) Use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation. Mixers where the emissions are fully captured and routed to a 95 percent efficient control device are exempt from this requirement.
      (B) Close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety. Vents routed to a 95 percent efficient control device are exempt from this requirement.
      (C) Keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels.

      [1]Keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels.

c. Repair operations subject to this subpart as defined in 40 CFR 63.5785 must meet the requirements in Tables 3 and 4 to Subpart WWWW of Part 63 and are not required to meet the 95 percent organic HAP emissions reduction requirements in paragraph (a)(1) or (d) of 40 CFR 63.5785. [40 CFR 63.5805(g)]

Recordkeeping Requirements

d. In addition to any other recordkeeping requirements of the EPA, the results of the monitoring 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. All data, assumptions, and calculations used to determine organic HAP emission factors including records of resin and gel coat use, organic HAP content, and operation where the resin is used. Resin use records may be based on purchase records if the Permittee can reasonably estimate how the resin is applied. The organic HAP content records may be based on MSDS or on resin specifications supplied by the resin supplier. [40 CFR 63.5895(c) and 40 CFR 63.5915(c)]
   ii. A certified statement that the Permittee is in compliance with the work practice requirements listed above. [40 CFR 63.5915(d)]

Reporting Requirements 40 CFR 63.753(d)(1)

e. In addition to any other reporting requirements of the EPA, the Permittee shall submit the following:
   i. The Permittee shall submit a semi-annual 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. In addition, the report shall contain:
      (A) A statement that there were no deviations during the reporting period if there were no deviations from any emission limitation and that there were no deviations from the requirements for work practice standards.
      (B) The information in 40 CFR 63.5910(d) if there was a deviation from any emission limit or work practice standard during the reporting period.
   ii. The notifications specified in 40 CFR 63.9(b)(4) and (5). The notifications shall be submitted by the deadlines in 40 CFR 63.9(b)(4) and (5). [Table 13 to Subpart WWWW of Part 63]
   iii. A Notification of Compliance Status as specified in 40 CFR 63.9(h) no later than 30 calendar days after the compliance date. [Table 13 to Subpart WWWW of Part 63]
f. All instances of deviations from the requirements of this permit must be clearly identified.

PSD

This facility is subject to 15A NCAC 02Q .0317 "Avoidance Conditions" for avoidance of 15A NCAC 02D .0530 "Prevention of Significant Deterioration" – The facility will be classified as PSD minor. The facility has enforceable limits so that emissions of volatile organic compounds (VOCs) remain below the 250 tpy PSD major source thresholds. Continued compliance is anticipated.

a. To ensure compliance with the above limitations, the Permittee shall:
   i. Calculate the facility-wide VOC emissions for that month and the 12-month period ending with that month;
   ii. Calculate VOC emissions from the spray foaming/painting booth (ID No. ES-01) and Spray Foaming Operations (ID No. I-12) using the following methods;
      (A) For spray painting, VOC emissions are equal to 100% of the VOC content in all materials used;
      (B) For spray foaming, VOC emissions are equal to the MDI emissions estimated using the latest version of the emission estimation tool from the American Chemistry Council for the polyurethane industry.
   iii. Calculate VOC emissions from the Comcore area (ID No. I-02) and light resin transfer molding (ID No. I-04) where VOC emissions are equal to 1% of the VOC content in all materials used;
   iv. Calculate VOC emissions from the storage tank (ID No. I-07) by using the latest version of the TANKS program from the US EPA or a calculation methodology based on AP-42 Section 7.1;
   v. Calculate VOC emissions from the batch mixing and casting operation (ID No. ES-08) using the following methods:
      (A) For materials that do not contain styrene, VOC emissions are equal to 100% of the VOC content in the materials used;

(B) For materials that do contain styrene, VOC emissions are equal to 2% of the VOC content in the materials used.

vi. Calculate VOC emissions from Dry filter-type Fiberglass Chop Spray Operation consisting of Two Spray Booths (ID No. ES-10) and Dry filter-type Gel Coat Application Booth (ID No. ES-11) using the following methods:
(A) For materials that do not contain styrene, VOC emissions are equal to 100% of the VOC content in the materials used;
(B) For materials that do contain styrene, VOC emissions shall be calculated using applicable emission factor equations from latest version of 40 CFR Part 63, Subpart WWWW (Table 1) substituting VOC content for styrene content, to account for VOCs that are retained in the final product.

vii. Calculate VOC emissions from SMC Compression Molding (ID No. ES-15) using the following methods:
(A) For materials that do not contain styrene, VOC emissions are equal to 100% of the VOC content in the materials used;
(B) For materials that do contain styrene, VOC emissions shall be calculated using applicable emission factor equation from latest version of UEF Emission Factors for Open Molding and Other Composite Processes, to account for VOCs that are retained in the final product.

viii. Calculate VOC emissions from other activities using the appropriate AP-42 factors or another method approved by DAQ.

Monitoring and Recordkeeping [15A NCAC 02Q .0308(a)]

b. The Permittee shall record monthly and total monthly (for the previous 12 months) the total tons of VOC emissions from facility-wide sources.
c. A log book shall be kept on site for each control device and made available to Division of Air Quality personnel upon request.

Reporting Requirements: [15A NCAC 02Q .0308(a)]

d. The Permittee shall submit the results of any maintenance performed on the baghouses within 30 days of a written request by the DAQ.
e. The Permittee shall submit a semi-annual summary report of monitoring and recordkeeping activities. The report shall contain the monthly VOC emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

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

CAM – 40 CFR 64 requires that a compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold and use a control device to meet an applicable standard. CAM is not applicable for this facility.

X. Facility Wide Air Toxics (State Enforceable Only)

North Carolina General Statute (NCGS) 143-215.107(a) was approved on June 28, 2012 and this Act exempts from State Air Toxics those sources of emissions that are subject to certain Federal emissions requirements under 40 CFR Part 61 (NESHAP), Part 63 (MACT). This statute was placed into the North Carolina State Air Toxics regulations on May 1, 2014 under Regulation 15A NCAC 2Q .0702(a)(27).

Pursuant to 15A NCAC 02D .1100, 15A NCAC 2Q .0700, and in accordance with the approved application for an air toxic compliance demonstration, the emission limits contained in the current permit shall not be exceeded. To ensure compliance with these regulations the Permittee shall maintain records of production rates, throughput, material usage, and other process operational information as is necessary to determine compliance with the air toxic emission limits specified above for a minimum of five years from the date of recording.

The latest modeling report was approved by the Division of Air Quality per memo dated March 21, 2016. The modeling adequately demonstrates compliance, on a source-by-source basis, for all toxics modeled.

Facility styrene emissions will exceed the (15A NCAC .02Q .0711) Toxic Pollutant Emission Rate (TPER). Hubbell performed a modeling analysis and included it in Appendix E of the permit application. The modeling, described in a January 4, 2022, memorandum from the Air Quality Analysis Branch (AQAB), "adequately demonstrates compliance, on a source-by-source basis, for styrene." No changes were required to the air permit as a result of the modeling.

The modeling parameters and emission rates were included in the application and are also available as part of the January 4, 2022, AQAB memorandum. . However, in accordance with 15A NCAC 02Q .0702(a)(27), emission sources subject to a standard under 40 CFR 63 are exempt from the toxic air pollutant rule. The maximum impact for styrene is presented in the following table:

Table 1 - Potential Emissions Modeled Impacts
Hubbell Lenoir City, Inc. – Rocky Mount, NC

TAP	Averaging Period	Max. Conc. (µg/m3)	AAL (µg/m3)	% of AAL
Styrene	1-hour	2,999.8	10,600	28.3 %

The sources will continue to comply with all requirements for 15A NCAC 02D .1104 and 15A NCAC 2Q .0700. There are no other unacceptable risk sources with this first time Title V permit and the current status of the facility is not affected.

XI. Facility Emissions Review

The actual emissions from the annual reporting inventories are listed in the first page of this review.

<u>Emissions Summary of New Sources in initial Application No. 6400326.21B that triggered the first time Title V permit.</u>

ES-15 emissions information is reproduced here:

<u>Assumptions:</u>

Maximum hours of operation 6240 hours/yr (24 hours x 5 days x 50 weeks)
Anticipated maximum SMC usage rate 700,000 lb/yr (rounded up)

Material info:
Lyondell Basell PREMI-GLAS 1288
VOC Content 31%
Styrene Content 30%

Styrene emission factor[1] 0.0045 lb/lb matl
VOC emission factor[2] 0.0047 lb/lb matl

[1] Calculated using the American Composites Manufacturers Association (ACMA) UEF Emission Factors for Open Molding and Other Composite Processes (for SMC part compression molding) where EF= 0.015 * styrene content

[2] Used ACMA UEF emission factor equation, substituting VOC content for styrene content to account for VOCs that are retained in the final product. In response to an additional information request, EnSafe, the preparer of the application, stated "We believe the proposed emission calculation methodology is appropriate for the TBPB fraction of the VOC content because, like styrene, TBPB is consumed in the reaction that forms the solid parts that are produced in the SMC process. TBPB serves as an initiator of the polymerization reaction that involves cross-linking of the styrene. This reaction destroys both the initiator (TBPB) and the monomer (styrene), creating an intermediate compound that is capable of bonding with other styrene monomers to form the styrene polymer."

Process	ID No.	VOC		Styrene	
SMC Compression Molding	ES-15	0.52 lb/hr	1.63tpy	0.50 lb/hr	1.58tpy

Sample Calculation: (700,000 lb SMC/yr)(0.0045 lb styrene/lb SMC)(1 ton/2000 lbs) =
1.58 tons/year styrene emitted

Potential Emissions
The following table is the estimated potential to emit (PTE) from the first time Title V application. Detailed facility-wide emissions for criteria pollutants are located in Appendix 1 of this review.

Estimated PTE	VOC (tpy)	NO_x (tpy)	PM (tpy)	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	SO_2 (tpy)	CO (tpy)	CO_2e (tpy)	Total HAPs (tpy)
April 2022	100.58	0	2.59	2.59	2.59	0	0	0	97.42

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

A thirty-day public notice period and a forty-five-day EPA review period is required for the first time Title V Permit. 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. 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 the 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.

EPA's 45 Day Review period

Brad Akers (U.S. EPA, Region IV) was provided a PROPOSED permit for review on December XX, 2022. EPA 45-day review period ended on February XX, 2023. No comments were offered or received.

Public Notice
The 30-day public notice of the PROPOSED permit was posted on the NCDAQ website on December XX, 2022. No comments were offered or received.

XIII. Other Regulatory Considerations

- An ePayment of $3,090 for this application was received on April 29, 2022
- The appropriate number of application copies was received by the DAQ.
- A Professional Engineer's seal is not required for this application.
- A zoning consistency determination is not required for this application.
- Nash County has triggered increment under PSD for PM_{10} and SO_2. For PSD increment tracking purposes, this first time Title V permit does not consume PM_{10} or SO_2 increments.
- The application was signed by Scott Martz, Vice President and General Manager, Enclosures and Drains, on April 13, 2022.

XIV. Recommendations

The first time Title V permit application for Hubbell Lenoir City in Rocky Mount, Nash County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 10587T05.

ATTACHMENT 1

Hubbell Lenoir City, Inc.
Rocky Mount, North Carolina
Uncontrolled Potential Emission Summary
Facility Wide (tons/year)

Process	Emission Unit ID	VOC	PM/PM10	Methyl Ethyl Ketone	Cumene	Acetophenone	Ethylbenzene	Styrene	N,N-Dimethylaniline	Cobalt Compounds
Spray Foaming/Painting Booth	ES-01	1.27	0.46				0.05			
Comcore Area	I-02	1.03		1.14E-03			0.02	0.99		
Aluminum Plasma Cutting	I-03		1.51							
Light Resin Transfer Molding	I-04	1.03		1.14E-03			0.02	0.99		
Aggregate Truck Unloading	I-05		1.45							
Aggregate Transfer/Conveying	I-06		0.12							
Resin Storage Tanks	I-07	0.10						0.10		
Batch Mixing and Casting	ES-08	42.70	0.03	0.26	5.05	0.49	0.62	27.92	6.20	7.89E-06
Engraver	I-09		0.08							
Fiberglass Chop Spray Operation	ES-10	40.26	19.20					37.43	1.60	0.12
Gel Coat Operation	ES-11	12.54	2.98					12.54		0.04
Spray Foaming Operation	I-12	0.03								
Trimming	ES-13		10.37							
Aggregate Blending	I-14		1.76E-03							
SMC Compression Molding	ES-15	1.63						1.58		
	Total =	**100.58**	**36.19**	**0.27**	**5.05**	**0.49**	**0.71**	**81.55**	**7.80**	**0.16**

Hubbell Lenoir City, Inc.
Rocky Mount, North Carolina
Uncontrolled Potential Emission Summary
Facility Wide (tons/year)

Process	Emission Unit ID	4,4'-MDI	Xylene	Hexamethylene Diisocyanate	Methyl Isobutyl Ketone	Methanol	Methyl Methacrylate	Total HAPs	Total TAPs
Spray Foaming/Painting Booth	ES-01	0.33	0.10	7.96E-04	0.06			0.53	0.16
Comcore Area	I-02							1.02	1.00
Aluminum Plasma Cutting	I-03								
Light Resin Transfer Molding	I-04							1.02	1.00
Aggregate Truck Unloading	I-05								
Aggregate Transfer/Conveying	I-06								
Resin Storage Tanks	I-07							0.10	0.10
Batch Mixing and Casting	ES-08							40.27	28.18
Engraver	I-09								
Fiberglass Chop Spray Operation	ES-10					0.34		39.49	37.43
Gel Coat Operation	ES-11						0.81	13.39	12.54
Spray Foaming Operation	I-12	0.03						0.03	
Trimming	ES-13								
Aggregate Blending	I-14								
SMC Compression Molding	ES-15							1.58	1.58
Total =		**0.35**	**0.10**	**7.96E-04**	**0.06**	**0.34**	**0.81**	**97.42**	**81.98**

Hubbell Lenoir City, Inc.
Rocky Mount, North Carolina
Controlled Potential Emission Summary
Facility Wide (tons/year)

Process	Emission Unit ID	VOC	PM/PM10	Methyl Ethyl Ketone	Cumene	Acetophenone	Ethylbenzene	Styrene	N,N-Dimethylaniline	Cobalt Compounds
Spray Foaming/Painting Booth	ES-01	1.27	0.02				0.05			
Comcore Area	I-02	1.03		1.14E-03			0.02	0.99		
Aluminum Plasma Cutting	I-03		1.51E-04							
Light Resin Transfer Molding	I-04	1.03		1.14E-03			0.02	0.99		
Aggregate Truck Unloading	I-05		0.14							
Aggregate Transfer/Conveying	I-06		0.12							
Resin Storage Tanks	I-07	0.10						0.10		
Batch Mixing and Casting	ES-08	42.70	0.03	0.26	5.05	0.49	0.62	27.92	6.20	7.89E-06
Engraver	I-09		0.02							
Fiberglass Chop Spray Operation	ES-10	40.26	1.92					37.43	1.60	0.01
Gel Coat Operation	ES-11	12.54	0.30					12.54		4.38E-03
Spray Foaming Operation	I-12	0.03								
Trimming	ES-13		0.03							
Aggregate Blending	I-14		1.76E-03							
SMC Compression Molding	ES-15	1.63						1.58		
	Total =	**100.58**	**2.59**	**0.27**	**5.05**	**0.49**	**0.71**	**81.55**	**7.80**	**0.02**

Hubbell Lenoir City, Inc.
Rocky Mount, North Carolina
Controlled Potential Emission Summary
Facility Wide (tons/year)

Process	Emission Unit ID	4,4'-MDI	Xylene	Hexamethylene Diisocyanate	Methyl Isobutyl Ketone	Methanol	Methyl Methacrylate	Total HAPs	Total TAPs
Spray Foaming/Painting Booth	ES-01	0.33	0.10	7.96E-04	0.06			0.53	0.16
Comcore Area	I-02							1.02	1.00
Aluminum Plasma Cutting	I-03								
Light Resin Transfer Molding	I-04							1.02	1.00
Aggregate Truck Unloading	I-05								
Aggregate Transfer/Conveying	I-06								
Resin Storage Tanks	I-07							0.10	0.10
Batch Mixing and Casting	ES-08							40.27	28.18
Engraver	I-09								
Fiberglass Chop Spray Operation	ES-10					0.34		39.38	37.43
Gel Coat Operation	ES-11						0.81	13.35	12.54
Spray Foaming Operation	I-12	0.03						0.03	
Trimming	ES-13								
Aggregate Blending	I-14								
SMC Compression Molding	ES-15							1.58	1.58
	Total =	**0.35**	**0.10**	**7.96E-04**	**0.06**	**0.34**	**0.81**	**97.28**	**81.98**

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Spray Foaming Booth (ES-01)

Emission Unit ID	Process	Material Used	Pollutant [1]	Weight Percent [1]	Maximum Capacity [2]	Number of Units	Emission Factor [3]	Potential HAP Emissions	
					lbs/year		lbs MDI/lbs foam used	lbs/hour	tons/year
ES-01	Spray Foaming Operation (same booth as spray paint operations)	Autofroth 9300A Isocyanate	4,4'-MDI (CAS No. 101-68-8)	50	260,400	1	0.005	0.07	0.33
		Autofroth 92-B-0707	None						

Notes:

(1) Information obtained from Safety Data Sheets

(2) As provided in a 11/8/18 email from Mr. Eric Tidquist (EnSafe) to Ms. Dena Pittman (NC DEQ), maximum anticipated usage rate per facility personnel (26,040 lbs/year) times a safety factor of 10.

(3) Based on an MDI emissions estimating tool developed by the American Chemistry Council, provided by Mr. Eric Tidquist (EnSafe) to Ms. Dena Pittman (NC DEQ) via email on 11/8/18.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Spray Painting Booth (ES-01)

Assumptions:

1. PTE is based on a spray gun capacity x 4% process limitation since painting can only occur 4% of the time due to inherent process bottlenecks.

2.

Maximum Paint Usage Rate (gallons/hour) [(1)]=	2
Potential Hours of Operation =	350
Paint Gun Efficiency % (estimated, industry average for HVLP) =	75%
Overspray % (estimated) =	25%
Filter Efficiency % (estimated) =	95%

3.

Paint Characteristics [(2)]				
Paint Name	**ACROLON Ultra HP Polyurethane Mix [(3)]**	**ACROLON Ultra HP Polyurethane (Part A) Ultradeep Base**	**ACROLON Ultra HP Polyurethane (Part B) Hardener**	**Reducer No. 15**
Density (lbs/gal)	9.51	9.76	9.17	6.92
VOC Content (lbs/gal)	3.62			6.92
Solids Content (lbs/gal)	5.25			0.00
HAP/TAP Constituents and CAS Number	**lb/gal**	**lb/gal**	**lb/gal**	**lb/gal**
Xylene (1330-20-7)	0.30	0.20	0.00	3.05
Ethylbenzene (100-41-4)	0.13	0.14	0.00	0.54
Hexamethylene Diisocyanate (822-06-0)	0.002	0.00	0.01	0.00
Methyl Isobutyl Ketone (108-10-1)	0.16	0.00	0.00	3.33

Emission Summary		
Pollutant	**Potential Emissions**	
	lb/hr	**tpy**
VOC	7.25	1.27
PM/PM10	0.13	0.02
Xylene (1330-20-7) - HAP/TAP	0.60	0.10
Ethylbenzene (100-41-4) - HAP	0.26	0.05
Hexamethylene Diisocyanate (822-06-0) - HAP	0.005	0.001
Methyl Isobutyl Ketone (108-10-1) - HAP/TAP	0.32	0.06
Total HAPS	1.18	0.21
Total TAPS	0.91	0.16

Notes:

(1) Maximum paint usage rate based on actual estimated usage rate provided by facility personnel on 7/3/2018 (1 gallon/hour), multipled by a safety factor of 2

(2) Information obtained from Safety Data Sheets

(3) Parts A and B are mixed in a 4:1 ratio by volume. The Part A/B mix and Reducer No. 15 (a thinner) are also mixed in a 4:1 ratio by volume. Solids and VOC information for mixture of Parts A and B come from the manufacturer data sheet.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Batch Mixing and Casting (ES-08)

Assumptions:

Product	Maximum Capacity (lb/hr)	Raw Material Usage Rate (lb/hr)[1]												
		Aggregate	BENOX L-40LV	NOROX CHP	Duroct Cobalt 12%	SIL07DA-1069UA Polymer Concrete Resin	Dimethylaniline	N,N-Dimethyl-p-toluidine	Fiberglass	Gray Colorant	768-6872 Unsat Poly Resin	CADOX D-50 VR	Chemlease 258R	Polynt A 3462 AQ 1 UPR
Boxes	4,022	3,378	-	4	1	-	1	-	28	4	596	4	1	4
Covers - Cover Resin[2]	2,687	2,252	16	-	-	397	-	1	19	2	-	-	-	-
Covers - Box Resin[2]	2,678	2,252	-	6	1	-	1	-	19	2	397	-	-	-

Product	Raw Material Usage Rate (lb/yr)[1]												
	Aggregate	BENOX L-40LV	NOROX CHP	Duroct Cobalt 12%	SIL07DA-1069UA Polymer Concrete Resin	Dimethylaniline	N,N-Dimethyl-p-toluidine	Fiberglass	Gray Colorant	768-6872 Unsat Poly Resin	CADOX D-50 VR	Chemlease 258R	Polynt A 3462 AQ 1 UPR
Boxes	21,080,000	-	27,900	7,440	-	7,440	-	173,724	22,320	3,720,000	27,900	4,239	26,412
Covers - Cover Resin[2]	14,053,333	99,200	-	-	2,480,000	-	4,960	115,816	14,880	-	-	-	-
Covers - Box Resin[2]	14,053,333	-	37,200	4,960	-	4,960	-	115,816	14,880	2,480,000	-	-	-

Material Name	Material Characteristics[3]												
	Aggregate	BENOX L-40LV	NOROX CHP	Duroct Cobalt 12%	SIL07DA-1069UA Polymer Concrete Resin	Dimethylaniline	N,N-Dimethyl-p-toluidine	Fiberglass	Gray Colorant	768-6872 Unsat Poly Resin	CADOX D-50 VR	Chemlease 258R	Polynt A 3462 AQ 1 UPR
VOC Content (%)	0.0%	0.0%	11.5%	25.0%	0.9%	100.0%	100.0%	0.0%	1.0%	0.9%	2.0%	91.3%	3.0%
Solids Content (%)[4]	100.0%	100.0%	88.5%	75.0%	55.7%	0.0%	0.0%	100.0%	99.0%	54.2%	98.0%	8.8%	50.0%
HAP Constituents	**%**												
Methyl Ethyl Ketone (CAS No. 78-93-3)	-	-	-	-	-	-	-	-	-	-	-	-	2.0%
Cumene (CAS No. 98-82-8)	-	-	15.5%	-	-	-	-	-	-	-	-	-	-
Acetophenone (CAS No. 98-86-2)	-	-	1.5%	-	-	-	-	-	-	-	-	-	-
Ethylbenzene (CAS No. 100-41-4)	-	-	-	-	-	-	-	-	-	1.0%	-	-	-
Styrene (CAS No. 100-42-5)	-	-	-	-	44.3%	-	-	-	-	44.8%	-	-	50.0%
N,N-Dimethylaniline (CAS No. 121-69-7)	-	-	-	-	-	100.0%	-	-	-	-	-	-	-
Cobalt Compounds	-	-	-	75.0%	-	-	-	-	-	-	-	-	1.0%
Styrene Emission Factor	**lb/lb material**												
Styrene Emission Factor[5]	-	-	-	-	0.009	-	-	-	-	0.009	-	-	0.010
Ethylbenzene Emission Factor[6]	-	-	-	-	-	-	-	-	-	0.0002	-	-	-

Pollutant	Potential Emission Summary							
	Boxes		Covers - Cover Resin[2]		Covers - Box Resin[2]		Boxes + Worst Case Covers[2]	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
VOC	8.34	26.02	4.34	13.54	5.35	16.68	13.68	42.70
PM/PM_{10}[7]	0.01	0.02	0.004	0.01	0.004	0.01	0.01	0.03
Methyl Ethyl Ketone (CAS No. 78-93-3) - TAP	0.08	0.26	0.00	0.00	0.00	0.00	0.08	0.26
Cumene (CAS No. 98-82-8) - HAP	0.69	2.16	0.00	0.00	0.92	2.88	1.62	5.05
Acetophenone (CAS No. 98-86-2) - HAP	0.07	0.21	0.00	0.00	0.09	0.28	0.16	0.49
Ethylbenzene (CAS No. 100-41-4) - HAP	0.12	0.37	0.00	0.00	0.08	0.25	0.20	0.62
Styrene (CAS No. 100-42-5) - HAP/TAP	5.39	16.81	3.52	10.99	3.56	11.12	8.95	27.92
N,N-Dimethylaniline (CAS No. 121-69-7) - HAP	1.19	3.72	0.00	0.00	0.79	2.48	1.99	6.20
Cobalt Compounds[7] - HAP	1.55E-06	4.82E-06	0.00E+00	0.00E+00	9.84E-07	3.07E-06	2.53E-06	7.89E-06
Total HAPs	7.46	23.27	3.52	10.99	5.45	17.01	12.91	40.27
Total TAPs	5.47	17.07	3.52	10.99	3.56	11.12	9.03	28.18

Notes:

(1) Provided by Mr. Steve Forsten on 7/21/2020, predicated on a maximum resin usage of 6,200,000 pounds per year

(2) Covers can be produced using either a cover resin or a box resin. Potential emission calculations assume the worst case resin for each pollutant.

(3) Information obtained from Safety Data Sheets

(4) Conservatively assumed all non-volatile constituents are solids

(5) Calculated using the polymer (marble) casting equation per the South Coast Air Quality Management District Guidelines for Calculating Emissions from Polyester Resin Operations (December 2019):
EF = 0.02 * S

(6) Like styrene, assumes 98% of ethylbenzene is trapped in the product and 2% is emitted

(7) Calculated using the aggregate transfer PM_{10} emission factor from AP-42 Table 11.12-2

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Fiberglass Chop Spray Operation (ES-10)

Assumptions:

Maximum Annual Hours of Operation =	8,760
Overspray % (estimated) =	5%
Large Particles that Fall to Ground Before Reaching Filter % (estimated) =	80%
Filter Efficiency % (estimated) =	90%

Raw Material Usage Rate (lb/hr)[1]									
	Total Process Capacity	**Resin (AOC A839-PNC-11 or INEOS Aropol CF 65340-11)**	**Aggregate**	**Duroct Cobalt 12%**	**Dimethylaniline**	**Fiberglass**	**Gray Colorant**	**CADOX D-50 VR**	**Chemlease PMR-90 EZ**
Hourly	515	243	243	0.4	0.4	27	0.4	0.4	0.2
Annual	4,512,359	2,131,589	2,131,589	3,197	3,197	234,808	3,197	3,197	1,582

Material Characteristics[2]								
Material Name	**Resin (AOC A839-PNC-11 or INEOS Aropol CF 65340-11)**	**Aggregate**	**Duroct Cobalt 12%**	**Dimethylaniline**	**Fiberglass**	**Gray Colorant**	**CADOX D-50 VR**	**Chemlease PMR-90 EZ**
VOC Content (%)	32.8%	0.0%	25.0%	100.0%	0.0%	1.0%	2.0%	99.1%
Solids Content (%)[3]	68.7%	100.0%	75.0%	0.0%	100.0%	99.0%	98.0%	0.9%
HAP Constituents	**%**							
Styrene (CAS No. 100-42-5)	32.8%	-	-	-	-	-	-	-
Methanol (CAS No. 67-56-1)	0.3%	-	-	-	-	-	-	-
N,N-Dimethylaniline (CAS No. 121-69-7)	-	-	-	100.0%	-	-	-	-
Cobalt Compounds	1.0%	-	75.0%	-	-	-	-	-
Emission Factors	**lb/lb material**							
Styrene Emission Factor[4]	0.0351	-	-	-	-	-	-	-
Methanol Emission Factor[5]	0.0003	-	-	-	-	-	-	-
VOC Emission Factor[5]	0.0351	-	-	-	-	-	-	-

Emission Summary				
Pollutant	**Potential Uncontrolled Emissions**		**Potential Controlled Emissions**	
	lb/hr	**tpy**	**lb/hr**	**tpy**
VOC	9.19	40.26	9.19	40.26
PM/PM_{10}	4.38	19.20	0.44	1.92
Styrene - HAP/TAP	8.55	37.43	8.55	37.43
Methanol - HAP	0.08	0.34	0.08	0.34
N,N-Dimethylaniline - HAP	0.36	1.60	0.36	1.60
Cobalt Compounds - HAP	0.03	0.12	0.003	0.01
Total HAPs	9.02	39.49	8.99	39.38
Total TAPs	8.55	37.43	8.55	37.43

Notes:
(1) Provided by Mr. Steve Forsten on 1/20/2021
(2) Information obtained from Safety Data Sheets
(3) Conservatively assumed all non-volatile constituents are solids
(4) Calculated using the nonatomized mechanical resin application equation per 40 CFR 63 Subpart WWWW Table 1:
EF = 0.107 * S (for styrene content less than 33%)
(5) Uses 40 CFR 63 Subpart WWWW equations, substituting VOC and methanol content for styrene content, to account for VOCs and methanol that are retained in the final product.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Gel Coat Operation (ES-11)

Assumptions:

Anticipated Maximum Resin Usage Rate (lb/hr)[1] =	20
Maximum Annual Hours of Operation =	8,760
Resin Overspray % (estimated) =	5%
Filter Efficiency % (estimated) =	90%

Material Characteristics[2]							
Material Name	**Resins**						
	All Other Pigmented Gel Coating						**Clear Production Gel Coat**
	Interplastic G-609-NML MUNSELL GREEN GEL COAT	**Interplastic G-609-NSML MUNSELL GREEN NPG SURFACE COAT**	**Interplastic G-617-NML WILLOW GREEN NPG GEL COAT**	**Interplastic G-617-NSML WILLOW GREEN NPG SURFACE COAT**	**Interplastic N-1092-NMM BEIGE NPG GEL COAT**	**AOC A839-PVC-14**	**Interplastic CLEAR GEL COAT**
Density (lb/gal)	10.68	10.84	11.01	10.84	10.84	9.17	9.17
VOC Content (%)	34.0%	33.4%	32.9%	32.3%	33.4%	32.0%	43.0%
Solids Content (%)[3]	66.0%	66.6%	67.1%	67.7%	66.6%	68.0%	57.0%
HAP Constituents	**%**						
Styrene (CAS No. 100-42-5)	29.0%	30.0%	28.0%	29.0%	29.0%	32.0%	43.0%
Methyl Methacrylate (80-62-6)	5.0%	3.0%	5.0%	3.0%	5.0%	0.0%	0.0%
Cobalt Compounds	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%
Emission Factors	**lb/lb material**						
Styrene Emission Factor[4]	0.0802	0.0847	0.0757	0.0802	0.0802	0.0937	0.1433
VOC Emission Factor[5]	0.1027	0.1000	0.0977	0.0950	0.1000	0.0937	0.1433
Methyl Methacrylate Emission Factor[5]	0.0093	0.0056	0.0093	0.0056	0.0093	0.0000	0.0000

Emission Summary				
Pollutant	**Potential Uncontrolled Emissions**		**Potential Controlled Emissions**	
	lb/hr	**tpy**	**lb/hr**	**tpy**
VOC	2.86	12.54	2.86	12.54
PM/PM_{10}	0.68	2.98	0.07	0.30
Styrene - HAP/TAP	2.86	12.54	2.86	12.54
Methyl Methacrylate - HAP	0.18	0.81	0.18	0.81
Cobalt Compounds - HAP	0.01	0.04	0.001	0.004
Total HAPs	3.06	13.39	3.05	13.35
Total TAPs	2.86	12.54	2.86	12.54

Notes:

(1) Provided by Mr. Steve Forsten on 1/20/2021

(2) Information obtained from Safety Data Sheets

(3) Conservatively assumed all non-volatile constituents are solids

(4) Calculated using the nonatomized spray gel coat application equation per 40 CFR 63 Subpart WWWW Table 1:
EF = 0.185 * S (for styrene content less than 19%)
EF = 0.4506 * S - 0.0505 (for styrene content greater than 19%)

(5) Uses 40 CFR 63 Subpart WWWW equations, substituting VOC and methyl methacrylate content for styrene content, to account for VOCs and methyl methacrylate that are retained in the final product.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions – Trimming (ES-13)

Assumptions:

Anticipated Maximum Chop Spray Resin Usage Rate (lb/hr)[(1)] =	243
Chop Spray Resin Usage per Part (lb/part)[(1)] =	59
Anticipated Maximum Part Throughput (parts/hr) =	4.2
Maximum Part Thickness (in)[(1)] =	0.25
Maximum Cut Length (in)[(1)] =	304
Blade Kerf (in)[(1)] =	0.125
Maximum Dust Generated per Part (in^3/part) =	9.5
Density (lb/in^3)[(1)] =	0.06
Maximum Dust Generated per Part (lb/part) =	0.6
Anticipated Maximum Dust Generation Rate (lb/hr) =	2.4
Maximum Annual Hours of Operation =	8,760
Anticipated Maximum Dust Generation Rate (lb/yr) =	20,741
Downdraft Table Capture Efficiency (estimated) =	80%
Downdraft Table Filter Control Efficiency[(2)] =	99.7%
Room Ventilation Baghouse Filter Control Efficiency (estimated) =	99.9%

Emission Summary				
Pollutant	**Potential Uncontrolled**		**Potential Controlled**	
	lb/hr	**tpy**	**lb/hr**	**tpy**
PM/PM_{10}	2.37	10.37	0.01	0.03

Notes:
(1) Provided by Mr. Steve Forsten on 1/20/2021, 2/11/2021, and 2/16/2021
(2) Per downdraft table manufacturer documentation (see Appendix E)

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - SMC Compression Molding (ES-15)

Assumptions:

Anticipated Maximum SMC Usage Rate (lb/yr)[1]=	700,000
Maximum Annual Hours of Operation[2] =	6,240

Material Characteristics[3]	
Material Name	**LyondellBasell PREMI-GLAS 1288**
VOC Content (%)	31%
HAP Constituents	**%**
Styrene (CAS No. 100-42-5)	30%
Emission Factors	**lb/lb material**
Styrene Emission Factor[4]	0.0045
VOC Emission Factor[5]	0.0047

Emission Summary		
Pollutant	**Potential Emissions**	
	lb/hr	**tpy**
VOC	0.52	1.63
Styrene - HAP/TAP	0.50	1.58

Notes:

(1) Projected usage provided by Mr. Cauley Price on 10/25/2021, rounded up to the nearest 100,000 lb

(2) Based on a maximum operating schedule of 24 hr/day, 5 day/wk, 52 wk/yr

(3) Information obtained from Safety Data Sheet

(4) Calculated using the American Composites Manufacturers Association (ACMA) UEF Emission Factors for Open Molding and Other Composite Processes:

EF = 0.015 * styrene content

(5) Uses ACMA UEF emission factor equation, substituting VOC content for styrene content, to account for VOCs that are retained in the final product.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Comcore Area (I-02)

Assumptions:

1.

Potential Resin Mix Usage Rate (lb/year) [1] =	455,000
Potential Chemlease PMR-90 Usage Rate (lb/week) [2] =	7
Potential Hours of Operation [3] =	4,160
Emission Factor [4] =	1%

2.

Material Characteristics [5]					
Material Name	**Resin Mix [6]**	**768-6872 UNSAT POLY RESIN**	**8A GUNSMOKE**	**CADOX D-50 VR**	**Chemlease PMR-90 EZ**
VOC Content	45.26%	45.82%	2.22%	55%	100%
HAP/TAP Constituents and CAS Number					
Styrene (100-42-5)	43.70%	44.82%	0%	0%	0%
Ethylbenzene (100-41-4)	0.98%	1%	0%	0%	0%
Methyl Ethyl Ketone (78-93-3)	0.05%	0%	0%	5%	0%

Emission Summary		
Pollutant	**Potential Emissions**	
	lb/hr	**tpy**
VOC	0.50	1.03
Styrene (100-42-5) - HAP/TAP	0.48	0.99
Ethylbenzene (100-41-4) - HAP	0.01	0.02
Methyl Ethyl Ketone (78-93-3) - TAP	0.001	0.001
Total HAPS	0.49	1.02
Total TAPS	0.48	1.00

Notes:

(1) The potential resin mix usage rate is based on a projection of maximum resin usage at the facility in the future, provided by facility personnel via email on 5/25/2018. Note that the Comcore Area process and the Light Resin Transfer Molding process use the same resin to make the same product. In order to ensure that the facility can use either the Comcore Area process, the Light Resin Transfer Molding process, or any combination of the two, we are conservatively assuming that the projected maximum resin usage for the whole facility is used in each of the two processes individually.

(2) The potential Chemlease PMR-90 usage rate is based on a projection of maximum usage at the facility in the future, provided by facility personnel via phone on 6/20/2018.

(3) Based on a maximum operating schedule of 16 hours per day, 5 days per week, 52 weeks per year.

(4) The emission factor for the Comcore Area is based on emissions data collected for a similar operation at the Lenoir City facility. It is estimated that 1% of applied materials evaporate during casting.

(5) Information obtained from Safety Data Sheets. Any component containing carbon listed on the Safety Data Sheet is conservatively assumed to be a VOC.

(6) Resin mix consists of 97.5% 768-6872 UNSAT POLY RESIN, 1.5% 8A GUNSMOKE, and 1% CADOX D-50 VR

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Aluminum Plasma Cutting (I-03)

Pollutant	Dry Cutting Metal Fume (grams/minute) (1)	Uncontrolled Emissions (tons/year) (2)	Controlled Emissions (tons/year) (3)
Particulate Matter	2.6	1.51	1.51E-04

Notes:

(1) No emission factors for aluminum plasma cutting were found; therefore, the following guidance was used for stainless steel, at 35 mm thick (1.2 inches). "Emission Estimation Technique Manual for Structural & Fabricated Metal Product Manufacture" (National Pollutant Inventory) (Table 4)

(2) Emissions (tons/year) = Emission rate (g/min) x 60 min/hr x 8,760 hr/yr x lb/454 g x lb/2000 tons

(3) Plasma cutting is controlled by a baghouse with 99.99% efficiency, per baghouse manufacturer (see Appendix E).

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Light Resin Transfer Molding Process (I-04)

Assumptions:

1.

Potential Resin Mix Usage Rate (lb/year) [1] =	455,000
Potential Chemlease PMR-90 Usage Rate (lb/week) [2] =	7
Potential Hours of Operation [3] =	4,160
Emission Factor [4] =	1%

2.

Material Characteristics [5]					
Paint Name	**Resin Mix [6]**	**768-6872 UNSAT POLY RESIN**	**8A GUNSMOKE**	**CADOX D-50 VR**	**Chemlease PMR-90 EZ**
VOC Content	45.26%	45.82%	2.22%	55%	100%
HAP/TAP Constituents and CAS Number					
Styrene (100-42-5)	43.70%	44.82%	0%	0%	0%
Ethylbenzene (100-41-4)	0.98%	1%	0%	0%	0%
Methyl Ethyl Ketone (78-93-3)	0.05%	0%	0%	5%	0%

Emission Summary		
Pollutant	**Potential Emissions**	
	lb/hr	**tpy**
VOC	0.50	1.03
Styrene (100-42-5) - HAP/TAP	0.48	0.99
Ethylbenzene (100-41-4) - HAP	0.01	0.02
Methyl Ethyl Ketone (78-93-3) - TAP	0.001	0.001
Total HAPS	0.49	1.02
Total TAPS	0.48	1.00

Notes:

(1) The potential resin mix usage rate is based on a projection of maximum resin usage at the facility in the future, provided by facility personnel via email on 5/25/2018. Note that the Comcore Area process and the Light Resin Transfer Molding process use the same resin to make the same product. In order to ensure that the facility can use either the Comcore Area process, the Light Resin Transfer Molding process, or any combination of the two, we are conservatively assuming that the projected maximum resin usage for the whole facility is used in each of the two processes individually.

(2) The potential Chemlease PMR-90 usage rate is based on a projection of maximum usage at the facility in the future, provided by facility personnel via phone on 6/20/2018.

(3) Based on a maximum operating schedule of 16 hours per day, 5 days per week, 52 weeks per year.

(4) The emission factor for the Light Resin Transfer Molding (LRTM) process is based on data collected for an operation at the Lenoir City facility. The Lenoir City process is similar to the Comcore Area process to be implemented at the Rocky Mount facility. The LRTM process is more "closed" than the Comcore Area process, and is expected to generate less emissions, so the 1% emission factor assumption is believed to be conservative. For the Comcore Area, it is estimated that 1% of applied materials evaporate during casting. Also, please note that Magnum Venus Products (the LRTM equipment supplier) indicated that the LRTM process is virtually emissions-free, per a converation with Ricky Young on 6/22/2018.

(5) Information obtained from Safety Data Sheets. Any component containing carbon listed on the Safety Data Sheet is conservatively assumed to be a VOC.

(6) Resin mix consists of 97.5% 768-6872 UNSAT POLY RESIN, 1.5% 8A GUNSMOKE, and 1% CADOX D-50 VR

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions – Aggregate Truck Unloading (I-05)

Assumptions:

Maximum Hours of Operation =	8,760
Maximum Unloading Rate (tons/hr)[(1)] =	25
Aggregate Transfer PM_{10} Emission Factor (lb/ton)[(2)] =	0.0033
Bin Vent Control Efficiency[(3)] =	90%

Emission Summary				
Source Description	**Potential Uncontrolled PM_{10}**		**Potential Controlled PM_{10}**	
	lb/hr	**tpy**	**lb/hr**	**tpy**
Silo 1 - 1/8 Rock	0.08	0.36	0.01	0.04
Silo 2 - 1/8 Rock	0.08	0.36	0.01	0.04
Silo 3 - Calcium Carbonate Sand	0.08	0.36	0.01	0.04
Silo 4 - Calcium Carbonate Sand	0.08	0.36	0.01	0.04
Total	**0.33**	**1.45**	**0.03**	**0.14**

Notes:

(1) Provided by facility personnel on 5/22/20

(2) From AP-42 Table 11.12-2

(3) Assumed. Bin vent filter manufacturer technical information not yet available.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions – Aggregate Transfer/Conveying (I-06)

Assumptions:

Maximum Hours of Operation =	8,760
Maximum Aggregate Throughput (tons/hr)[1] =	2.8
Aggregate Transfer PM_{10} Emission Factor (lb/ton)[2] =	0.0033
Number of Transfer Points[3] =	3

Emission Summary		
Source Description	**Potential PM_{10} Emissions**	
	lb/hr	**tpy**
Aggregate Transfer/Conveying	0.03	0.12

Notes:

(1) See emission calculations for batch mixing and casting (ES-08)

(2) From AP-42 Table 11.12-2

(3) Provided by facility personnel on 6/23/20

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions – Resin Storage Tanks (I-07)

Working/Breathing Losses Per Resin Tank:

	Styrene
Hourly Emissions (lb/hr)[1]	0.01
Annual Emissions (tpy)[2]	0.03

Total Emissions for Three Resin Tanks:

	Styrene
Hourly Emissions (lb/hr)	0.02
Annual Emissions (tpy)	0.10

Notes:

1 - Assumes 8,760 hours per year of operation

2 - Calculated using TANKS 4.0.9d software, conservatively assuming the resin is 100% styrene and the annual throughput is 325,000 gallons per year per tank

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions – Engraver (I-09)

Assumptions:

Maximum Hours of Operation =	8,760
Maximum Process Rate (covers/year)[1] =	27,000
Maximum Material Removal Rate (lb/cover)[2] =	0.0056
Dust Collector Capture Efficiency[2] =	80%
Dust Collector Control Efficiency[3] =	90%

Emission Summary				
Pollutant	**Potential Uncontrolled Emissions**		**Potential Controlled Emissions**	
	lb/hr	**tpy**	**lb/hr**	**tpy**
PM/PM_{10}	0.02	0.08	0.005	0.02

Notes:

(1) Based on projected throughput provided by facility personnel on 10/26/20, plus a 50% safety factor

(2) Estimates provided by facility personnel on 10/26/20

(3) Assumed. Control efficiency information not provided in manufacturer documentation.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions - Spray Foaming Operation (I-12)

Emission Unit ID	Process	Material Used	Pollutant [1]	Weight Percent [1]	Maximum Capacity [2]	Number of Units	Emission Factor [3]	Potential HAP Emissions	
					lbs/year		lbs MDI/lbs foam used	lbs/hour	tons/year
I-12	Spray Foaming Operation	Autofroth 9300A Isocyanate	4,4'-MDI (CAS No. 101-68-8)	50	20,000	1	0.005	0.01	0.03
		Autofroth 92-B-0707	None						

Notes:
(1) Information obtained from Safety Data Sheets
(2) Provided by Mr. Steve Forsten on 2/11/2021
(3) Based on an MDI emissions estimating tool developed by the American Chemistry Council, provided by Mr. Eric Tidquist (EnSafe) to Ms. Dena Pittman (NC DEQ) via email on 11/8/18.

Hubbell Lenoir City, Inc. - Rocky Mount, North Carolina
Potential Emissions – Aggregate Blending (I-14)

Assumptions:

Maximum Hours of Operation =	8,760
Maximum Aggregate Throughput (tons/hr)[(1)] =	0.122
Aggregate Transfer PM_{10} Emission Factor (lb/ton)[(2)] =	0.0033
Number of Transfer Points[(3)] =	1

Emission Summary		
Source Description	**Potential PM_{10} Emissions**	
	lb/hr	**tpy**
Aggregate Transfer/Conveying	4.01E-04	1.76E-03

Notes:

(1) See emission calculations for fiberglass chop spray operation (ES-10)

(2) From AP-42 Table 11.12-2

(3) Provided by facility personnel on 2/11/21