NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: TBD, 2023

Region: Mooresville Regional Office
County: Iredell
NC Facility ID: 4900314
Inspector's Name: Robert Papuga
Date of Last Inspection: 09/23/2022
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Dura-Supreme, LLC - Statesville

Facility Address:
Dura-Supreme, LLC - Statesville
607 Meacham Road
Statesville, NC 28677

SIC: 2511 / Wood Household Furniture
NAICS: 337122 / Nonupholstered Wood Household Furniture Manufacturing

Facility Classification: Before: Permit Exempt **After:** Title V
Fee Classification: Before: N/A **After:** Title V

Permit Applicability (this application only)

SIP: NCAC 15A 02D .0512, .0521, .0524, .0535, .1806 and 02Q .0207, .0304, .0504 and 02Q .0317 for 02D .0530
NSPS: 40 CFR Part 60 Subpart IIII
NESHAP: 40 CFR Part 63 Subpart JJ and ZZZZ
PSD: NA
PSD Avoidance: (for VOC)
NC Toxics: NA
112(r): NA
Other: NA

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Rich Dixon General Manager (320) 543-3872 607 Meacham Road Statesville, NC 28677	Rich Dixon General Manager (320) 543-3872 607 Meacham Road Statesville, NC 28677	Josh Boltz Process Improvement Engineer (320) 543-3872 607 Meacham Road Statesville, NC 28677

Application Data

Application Number: 4900314.23A
Date Received: 05/12/2023
Application Type: New Permit
Application Schedule: State

Existing Permit Data
Existing Permit Number: N/A
Existing Permit Issue Date: N/A
Existing Permit Expiration Date: N/A

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2013	---	---	0.4100	---	0.0200	0.0879	--- [---]

Review Engineer: Richard Simpson

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

Comments / Recommendations:
Issue: 10787/R00
Permit Issue Date: TBD, 2023
Permit Expiration Date: TBD, 2031

I. Introduction

The purpose of this application is for Dura-Supreme, LLC - Statesville (Dura-Supreme) to obtain an initial construction and operation permit for a greenfield facility located in Statesville, Iredell County. The facility receives unfinished pre-cut wood products and produces fine cabinets. They have a cutting area where the pieces are made and processed through painting/coating areas where the pieces travel throughout the facility in series of spray booths and ovens.

As discussed in this application review, the facility's potential to emit (PTE) for Volatile Organic Compounds (VOCs) exceeds the major source threshold under the Clean Air Act (CAA)'s Title V operating program. The facility has been deemed a Title V facility. Pursuant to NC's Title V Procedures in 15A NCAC 02Q .0504(a) and (b), the facility has requested to obtain a construction and operation permit in accordance with 02Q .0300, before it is required to obtain a Title V permit. Therefore, the submitted application will be processed under the 02Q .0300 program at this time. Per 02Q .0504(c), the facility will be required to submit another application per Title V procedures (02Q .0500) after obtaining an initial permit, but, within 12 months of commencement of operations. The permit (if granted) will specify this Title V application submittal requirement.

The owner of the facility is registered as a limited liability company with NC Secretary of State office under the name of "Dura-Supreme". Thus, the application Form A correctly includes the site name as Dura-Supreme, LLC – Statesville.

II. History/Background/Application Chronology

May12, 2023 - Received greenfield permit application 4900314.23A.

May 19, 2023 – Receipt of permit letter was written to the facility. The application did contain all the required elements and has been accepted for processing. The required fee of $11,452.00 was also received by ePayment.

May 24, 2023 –The facility existing site is in an Environmental Justice (EJ) area. Thus, the Environmental Justice team was notified.

May 31, 2023 - Mooresville Regional Office compliance supervisor, Denise Hayes, and permit engineer, Jennifer Manning, provided comments from the facility's application and draft permit.

June 8-12, 2023 – The facility emailed questions about the processing of the application. The permit section confirmed the processing information sent at that time was complete.

August 8 - 9, 2023 – DAQ requested the facility to answer the PFAS screening questions. The facility submitted their answers confirming there are no known PFAS used.

August 10 – 16, 2023 – The facility, Mooresville Regional Office, and Stationary Compliance Section were requested by the Permitting Section to comment on the permit and permit review. Comments were received and included in both documents.

August 15-30, 2023 – Even though the facility is subject to MACT JJ, DAQ requested the facility to demonstrate that they do not emit toxic air pollutants (TAP) that presents an unacceptable risk to human health based on the acceptable ambient levels in 15A NCAC 02D .1104. The facility submitted an addendum to the permit with updated calculations and modeling results from TAPs.

September 5-18, 2023 – Permit engineer requested clarification on modeled TAP calculations about transfer efficiency of process and other variables. The facility determined there was an error in the latest calculations and the facility will have to be remodeled for TAPs.

September 22-29, 2023 – The facility requested an estimated updated timeline to receive the permit and what type of construction they could start before their permit was issued. DAQ responded to their estimated timeline and discussed what could or could not be performed at the facility before permit issuance.

September 27- 29, 2023 – DAQ requested the facility to send a complete addendum to the application. DAQ modeling expert requested the facility to confirm modeling input data and calculations. The modeling was approved by DAQ's supervisor from the Air Quality Analysis Branch (AQAB).

September 28, 2023 – The Emissions Source Module was approved.

September 28 – October 4, 2023 – The permit section and Mooresville Regional Office were requested to comment on monitoring and recorded keeping requirements per NCAC 15A 02D .1100 for TAPs. Comments were received and included in both documents.

October 5 - 11 2023 – The facility, Mooresville Regional Office, and Stationary Compliance Section were requested by the Permitting Section to comment on the second draft permit and permit review. Comments were received and included in both documents.

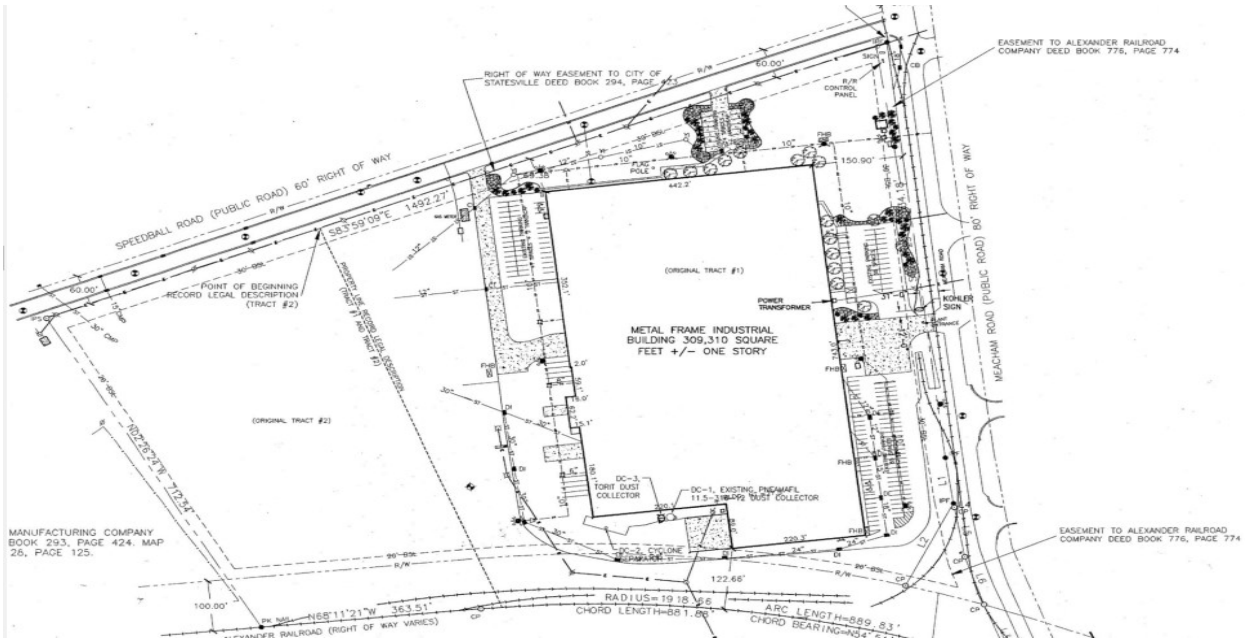
TBD, 2023 – Draft permit and permit review forwarded to public notice.

TBD, 2023 - Public comment period ends. Comments received are discussed in Section TBD of this review.

TBD, 2023 - Permit issued.

III. Facility Description

The facility will be located at 607 Meacham Road, Statesville, North Carolina. Dura Supreme, Inc. currently operates woodworking operations associated with wood kitchen cabinet manufacturing at the site. The current operations do not require an air permit under ISA NCAC 02Q.0101 because the activities are classified as exempt with actual total facility emissions of applicable criteria, hazardous and toxic air pollutants each less than five tons per year and actual total aggregate emissions less than ten tons per year. Dura Supreme, Inc. is proposing to add surface coating operations to the wood kitchen cabinet manufacturing process to supplement the current exempt operations. DAQ has classified this activity, with respect to the Standard Industrial Classification System, under the Code 2511 "Wood Household Furniture", and for the North American Industry Classification System (NAICS), under the Code 337122 "Nonupholstered Wood Household Furniture Manufacturing".



IV. Compliance Status

The facility was called Statesville RTA MFG, LLC and became permit exempt on March 5, 2020. The exemption from permitting requirement is based upon the facility's statement that it has been and will be operated under the threshold levels as outlined in the Regulation NCAC 02Q .0102(d).

On September 29, 2022, Mooresville Regional Office conducted a compliance assurance visit at the facility. Based on the inspector's observation, "this facility appeared to be in compliance with the air quality rules (02D .0512-paiticulates from wood products finishing plants, 02D .0521-visible emissions, 02D .0535-excess emissions, 02D .0540-fugitive dust emissions, 02D .0611-bagfilter requirements and 02D .1806-control and prohibition of odorous emissions) at the time of this compliance assurance visit." There have been no violations in the past five years.

V. Existing and Proposed Facility Production/Estimated Emissions/Process Flow Diagram

Dura Supreme, Inc. owns and operates a wood furniture manufacturing facility located in Statesville, Iredell County, North Carolina. The facility was previously a furniture manufacturing facility owned by Statesville RTA MFG, LLC, which operated under "Small Class" Air Permit No. 10045R02. The RTA permit has been terminated and Dura Supreme now leases the building that houses the furniture manufacturing facility. The facility is a warehouse structure of approximately 300,000 square feet that consists of an enclosed woodworking production area, receiving and shipping warehouse areas, production offices and two externally located dust collector systems each with a maximum capacity of approximately 50,000 cubic feet per minute (cfm).

The primary product produced is wood kitchen cabinets. Current woodworking operations are exempt from air permitting requirements under ISA NCAC 02Q.0102(d) because actual total facility emissions of applicable criteria, hazardous, and toxic air pollutants are each less than five tons per year and the actual total aggregate emissions are less than ten tons per year. This construction permit application is for the installation of surface coating activities and associated natural gas-fired air makeup units. After installation of the proposed surface coating activities, emissions of a number of listed pollutants will exceed their associated permit exemption thresholds. Therefore, a construction permit is necessary.

Description of Activities

Cabinet production will consist of various woodworking, gluing and assembly operations to support the manufacturer of both framed and frameless wood kitchen cabinets and cabinet components. Woodworking operations will result in emissions of particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns and less (PM10) and particulate matter with an aerodynamic diameter of 2.5 microns and less (PM2.5). All woodworking operations are controlled with an active exhaust/collection system that is vented to two externally mounted baghouse dust collectors. For building climate control efficiency purposes, the baghouses will vent indoors to the facility approximately 3 months of the year depending on outdoor ambient temperatures.

Surface coating operations will consist of several coating booths where spray application of various coatings will be applied to the wood cabinet components. A variety of coating products will be used based on customer orders and specifications. Surface coating activities will result in the emissions of PM/PM10/PM2.5 as well as volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). The coating booths will utilize panel filters to control particulate emissions from the spraying operations. The facility is proposing an avoidance condition under 15A NCAC 02Q.0317 to limit total VOC emissions to 249 tons per year to avoid classification as a major source under Prevention of Significant Deterioration rules. Final cabinet assembly and gluing will be performed with very low VOC and water-based glues.

Woodworking Production:

A variety of equipment such as sawing, milling, molding, planing, routing, and sanding will be used in the manufacturing process. The individual pieces of equipment are connected to a common dust collection system that pneumatically captures and transports sawdust from the woodworking operations to two

existing, externally located baghouse dust collector systems. Sawdust that is captured by the dust collectors is transferred to semi-trailer storage via a closed loop transfer system that is not vented to the atmosphere. The closed loop transfer system utilizes pneumatic transfer in conjunction with a product recovery cyclone to transport captured sawdust from the dust collector where it is deposited in the semi-trailer. Clean air is then recirculated back into the dust collector bin.

Based on an analysis of cabinet manufacturing operations that incorporates initial wood quality, cabinet types, and cabinet dimensions, the average amount of wood used per cabinet and the amount of waste material generated per cabinet was determined. For framed cabinet production, doors and solid wood components require 33 board feet (bd-ft) per cabinet. The typical wood yield associated with solid wood component production is 55 percent. Therefore, the amount of wood waste due to cut out of substandard material, end cuts and trimming is 15 bd-ft per cabinet.

Both framed and frameless cabinet production utilizes pre-finished sheet stock that is comprised of various plywood and particleboard materials. On average 1.6 pieces of sheet stock (4 ft by 8 ft pieces) is used per cabinet. The distribution of sheet stock thickness is 47 percent 1/2-inch thick, 43 percent 3/4-inch thick and 10 percent 1/4-inch thick. Based on this distribution the average sheet stock usage per cabinet is 30 bd-ft. The typical wood yield from sheet stock component production is 70 percent. Therefore, the amount of wood waste due to end cuts and trimming is 9 board feet per cabinet.

A wide variety of woodworking equipment is used to produce a single cabinet. Much of the equipment is used for specialty cuts and is set up to perform one or more unique operations. Therefore, even though there are numerous pieces of equipment, the overall utilization of each piece of equipment is low. Based on the cabinet component production flow, overall production can be limited to a few specific bottlenecks.

Framed cabinet production is limited by the Bacci door/drawer sizing machine. There is a single door/drawer sizing machine that can accommodate 56 components per hour. Overall, the cabinets required 2.75 components per cabinet, which result in a maximum capacity of 489 cabinets per day assuming 24-hour operations. Frameless cabinet production is limited by the frameless builder press machine (case clamp). Assuming 24-hour operations, the case clamp has a maximum capacity of 350 cabinets per day.

The following table summarizes the material usage for the cabinet manufacturing type.

Table 1 – Cabinet Production and Material

Cabinet Type	Cabinets Per Day	Total Material Per Cabinet[A]	Waste Per Cabinet[B]	Total Material Per Year[C]	Total Waste Per Year[C]
Framed	489	63 bd-ft	24 bd-ft	11,244,555 bd-ft	4,283,640 bd-ft
Frameless	350	30 bd-ft	9 bd-ft	3,832,500 bd-ft	1,149,750 bd-ft

[A] Framed cabinet material equals solid wood plus sheet stock. Frameless cabinet material only use sheet stock.

[B] Waste per cabinet is based on 70 percent yield of sheet stock and 55 percent yield of solid wood. Note that this corresponds to a percent waste associated with framed cabinets of 38 percent.

[C] Maximum potential production assumed to be 24 hours per day 365 days per year.

The majority of total wood waste is comprised of large pieces of scrap produced from substandard wood cut outs, end cuts, and trimming. This wood is passed through a closed loop chipper for transfer to and storage in the semitrailers. Remaining wood waste is in the form of sawdust produced from woodworking equipment operation. The sawdust from woodworking operations is collected from individual pieces of woodworking equipment and pneumatically transferred to the two dust collectors. Based on mass balance measurement, the amount of sawdust generated is typically only a few percent of the total amount of waste by mass. However, to provide a worst-case estimate for potential emission estimate purposes, it is assumed that the sawdust due to woodworking equipment operation is 10 percent of the overall waste.

In order to calculate potential and actual emissions from the woodworking operations, the North Carolina Department of Environmental Quality (NCDEQ) emissions estimate spreadsheet for woodworking

operations was used (https://www.deq.nc.gov/about/divisions/air-quality/air-qualitypermitting/emission-estimation-spreadsheets, accessed March 2023). Because framed cabinet production results in the highest amount of waste and greatest production levels, potential to emit calculations are based on framed cabinet production. The following calculation assumptions were used in conjunction with the NCDEQ calculation spreadsheet:

- Density of wood (mixed): 3.5 lb/bd-ft
- Control device efficiency (defaults for baghouse): PM_{10} 99.5%, $PM_{2.5}$ 99%
- Wood waste distribution based on anticipated facility equipment usage mix:
  - Planing 1.3%
  - Shaving/Chipping 37.9%
  - Fine Sawing 16.7%
  - Milling 2.51%
  - Molding 6.49%
  - Sanding 35.1%

ES10
Potential Emissions
NCDENR Woodworking Emissions Calculator Revision C July 2007

Pollutant	Before Control		After Control	
	lb/hr	tons/yr	lb/hr	tons/yr
PM	14.37	62.95	0.07	0.31
PM_{10}	14.37	62.95	0.07	0.31
$PM_{2.5}$	5.32	23.29	0.05	0.23

Description	Asset#	Control	CFM	Type
CNC Router	100001	1	6284	Shaving/Chipping
CNC Router	100002	1	6284	Shaving/Chipping
Shaper	100003	1	614	Shaving/Chipping
Shaper	100004	1	614	Shaving/Chipping
CNC Panel Saw - Rear Load	100005	1	2455	Fine Sawing
CNC Bore/Dowel	100006	1	614	Shaving/Chipping
Toe Notch	100007	1	884	Fine Sawing
Toe Notch	100008	1	884	Fine Sawing
Veneer Sander	100009	1	3535	Sanding
Toe Notch	100010	1	884	Fine Sawing
CNC Router	100011	1	2455	Shaving/Chipping
Grinder	100012	1	2455	Milling
CNC Panel Saw - Front Load	100013	1	2455	Fine Sawing
Edgebander	100014	1	2455	Shaving/Chipping
CNC Molder	100015	2	6284	Molding
S90	100016	2	614	Fine Sawing
Upcut with DRO Stop	100017	2	614	Shaving/Chipping
PMK Coping	100018	2	1203	Shaving/Chipping
Profile Shaper	100019	2	614	Shaving/Chipping
Table Saw	100020	2	614	Fine Sawing
Table Saw	100021	2	614	Fine Sawing
Profile Shaper	100022	2	614	Shaving/Chipping
Pocket Bore	100029	2	614	Shaving/Chipping
Pocket Bore	100030	2	614	Shaving/Chipping
Mull Drill	100031	2	614	Shaving/Chipping
Upcut with DRO Stop	100032	2	614	Fine Sawing
Edgesander	100033	2	614	Sanding
Edgesander	100034	2	614	Sanding
Table Router	100035	2	614	Shaving/Chipping
Bacci Door Master	100036	2	4811	Shaving/Chipping
Hinge Drill	100038	2	393	Shaving/Chipping
Back Sander	100040	1	4811	Sanding
Calibration Sander	100041	2	6284	Sanding
3 head Orbital	100042	2	6284	Sanding
Brush Machine	100043	2	4811	Sanding
Miter box	100044	1	393	Fine Sawing

Jointer	100046	1	393	Planing
Planer	100047	1	884	Planing
Miter box	100048	1	393	Fine Sawing
Shaper	100049	1	614	Shaving/Chipping
Shaper	100050	1	614	Shaving/Chipping
Shaper	100051	1	614	Shaving/Chipping
Table Saw w/ feeder	100052	2	614	Fine Sawing
Brush Machine - Venjakob	100054	1	2970	Sanding
Sanding Table - Venjakob		1	1571	Sanding
Panel Cleaner - Venjakob		1	2455	Sanding
Dodds CNC Dovetailer	100055	1	884	Shaving/Chipping
Mereen Johnson Dovetailer	100056	1	884	Shaving/Chipping
CNC Router	100059	1	2455	Shaving/Chipping
CNC Rip Saw	100060	2	3535	Fine Sawing
Drawer Notcher	100062	1	614	Shaving/Chipping
Drawers Table Saw	100065	1	614	Fine Sawing
Drawers Saw	100072	1	614	Fine Sawing

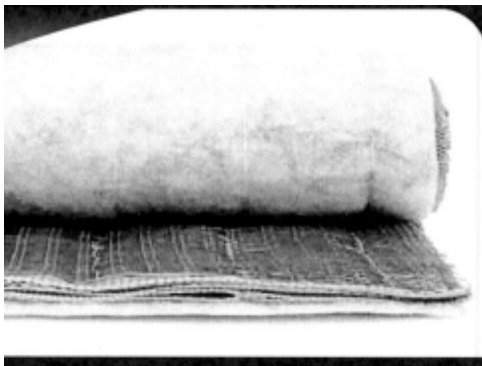
Surface Coating

Surface coating production activities will consist of nine (9) paint booths as listed in the following table.

Table 2 – Surface Coating Booths

Emission Unit I.D.	Stack I.D.	Control I.D.	Description	Application Rate
ES1	EP1	CD1	Tow Line Toner	52.6 oz/min
ES2	EP2	CD2	Tow Line Stain	26.3 oz/min
ES3	EP3	CD3	Tow Line Sealer	16.2 oz/min
ES4	EP4	CD4	Tow Line Mist	26.3 oz/min
ES5	EP5	CD5	Tow Line Topcoat	16.2 oz/min
ES6	EP6	CD6	Venjakob Auto Spray	56.4 oz/min
ES7	EP7	CD7	Lab Booth	16.2 oz/min
ES8	EP8	CD8	Specials Remake 1	32.4 oz/min
ES9	EP9	CD9	Specials Remake 2	32.4 oz/min

Paint booths ES-l through ES-5 make up the tow line. The tow line is a sequential processing line that allows employees to hand-apply various basecoats, intermediate coats and topcoats to cabinet components as applicable. The majority of coatings in the tow line are applied using high volume low pressure (HVLP) spray technology; however, hand wiping application is utilized for some stains. Paint booth ES-6 is an automated fully enclosed spray machine. The lab booth, ES-7, is utilized for color research and testing. Specials remake booths ES-8 and ES-9 are intermittently utilized for correction of production damage and remanufacturing as necessary. All coating booths will be equipped with dry filters to control particulate matter emissions with a conservative efficiency at 95%.



OVERVIEW: The finest efficiencies possible can be achieved with this series of Paint Arrestors. This performance is achieved through the use of a high-density polyester backing which is structurally very strong. Due to the high efficiency, only one roll or pad layer is necessary.

PAINT ARRESTOR IDENTIFICATION

PA Model: 3300 Series Spra-Gard High Efficiency RP Paint Arrestor

Filter Description: 5 Layers of honeycomb paper and heavy poly backing (20"x20")

Number of pads in series: 1

TEST INFORMATION

Paint Description: High Solids Baking Enamel (S.W. #1 Permaclad 2400, red)

Paint Spray Method: Conventional Air Gun at 40 PSI

Spray Feed Rate: 142 grains/min. 135 cc./min.

Air Velocity: 150 FPM

TEST RESULTS

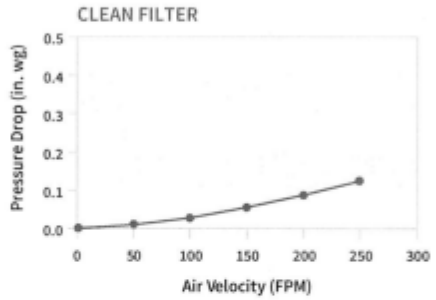
Initial Pressure Drop of Clean Test Filter: 0.05 in. wg

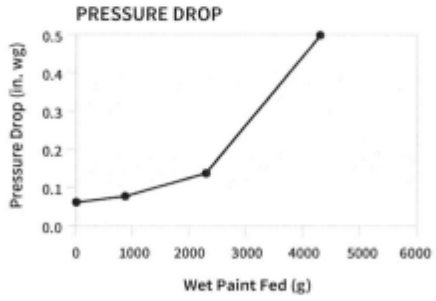
Final Pressure Drop of Loaded Test Filter: 0.50 in. wg

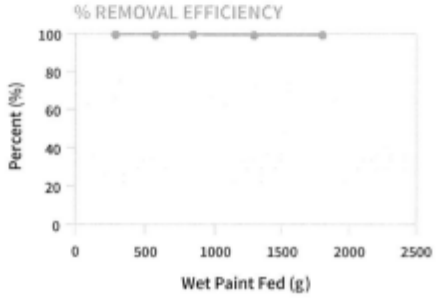
Paint Holding Capacity of Test Filter: 2580 grams = 5.7 lb.

Average Removal Efficiency of Test Filter: 99.92%

TEST SUMMARY







Potential emission calculations were performed assuming a wide variety of various coating types. For each coating booth type, the list of potential coatings was evaluated to determine a hybrid mixture for calculation purposes. Out of all coatings that could be used, the maximum VOC content, maximum solid content, and maximum individual HAP component content were combined and assumed to be sprayed 100 percent of the time. In this way the maximum hourly emission rate would not be limited to any specific coating type.

Source ID No.:		ES1	Tow Line Toner		Source ID No.:		ES2	Tow Line Stain		Source ID No.:		ES3	Tow Line Sealer	
Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy	Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy	Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy
NOx	10102-43-9	-	-	-	NOx	10102-43-9	-	-	-	NOx	10102-43-9	-	-	-
CO	630-08-0	-	-	-	CO	630-08-0	-	-	-	CO	630-08-0	-	-	-
PM	-	3.98	348.83	17.44	PM	-	2.18	191.17	9.56	PM	-	1.1	95.96	4.8
PM10	-	3.98	348.83	17.44	PM10	-	2.18	191.17	9.56	PM10	-	1.1	95.96	4.8
PM2.5	-	3.3	289.46	14.47	PM2.5	-	1.81	158.64	7.93	PM2.5	-	0.91	79.63	3.98
VOC	-	198.24	868.27	868.27	VOC	-	99.12	434.14	434.14	VOC	-	61.05	267.42	267.42
SO2	7446-09-5	-	-	-	SO2	7446-09-5	-	-	-	SO2	7446-09-5	-	-	-
CO2	-	-	-	-	CO2	-	-	-	-	CO2	-	-	-	-
CH4	74-82-8	-	-	-	CH4	74-82-8	-	-	-	CH4	74-82-8	-	-	-
N2O	-	-	-	-	N2O	-	-	-	-	N2O	-	-	-	-
CO2e	-	-	-	-	CO2e	-	-	-	-	CO2e	-	-	-	-
Acetaldehyde	75-07-0	-	-	-	Acetaldehyde	75-07-0	-	-	-	Acetaldehyde	75-07-0	-	-	-
Acrolein	107-02-8	-	-	-	Acrolein	107-02-8	-	-	-	Acrolein	107-02-8	-	-	-
Arsenic	-	-	-	-	Arsenic	-	-	-	-	Arsenic	-	-	-	-
Benzene	71-43-2	-	-	-	Benzene	71-43-2	-	-	-	Benzene	71-43-2	-	-	-
Benzo(a)pyrene	50-32-8	-	-	-	Benzo(a)pyrene	50-32-8	-	-	-	Benzo(a)pyrene	50-32-8	-	-	-
Beryllium	-				Beryllium	-	-	-	-	Beryllium	-	-	-	-
1,3-Butadiene	106-99-0				1,3-Butadiene	106-99-0	-	-	-	1,3-Butadiene	106-99-0	-	-	-
Cadmium	-				Cadmium	-	-	-	-	Cadmium	-	-	-	-
Chromic Acid (VI)	-				Chromic Acid (VI)	-	-	-	-	Chromic Acid (VI)	-	-	-	-
Cobalt	7440-48-4	1.06E+00	4.65E+00	NA	Cobalt	7440-48-4	5.31E-01	2.32E+00	NA	Cobalt	7440-48-4	3.27E-01	1.43E+00	NA
O-Cresol	95-48-7	-	-	-	O-Cresol	95-48-7	-	-	-	O-Cresol	95-48-7	-	-	-
Ethyl Benzene	100-41-4	1.97E+00	8.63E+00	NA	Ethyl Benzene	100-41-4	1.06E+00	4.63E+00	NA	Ethyl Benzene	100-41-4	6.07E-01	2.66E+00	NA
Formaldehyde	50-00-0	4.64E-01	2.03E+00	NA	Formaldehyde	50-00-0	9.86E-02	4.32E-01	NA	Formaldehyde	50-00-0	6.07E-02	2.66E-01	NA
Glycol Ethers	112-34-5	6.52E-01	2.85E+00	NA	Glycol Ethers	112-34-5	3.26E-01	1.43E+00	NA	Glycol Ethers	112-34-5	3.18E-01	1.39E+00	NA
Hexane	110-54-3	-	-	-	Hexane	110-54-3	-	-	-	Hexane	110-54-3	-	-	-
Lead	-	-	-	-	Lead	-	-	-	-	Lead	-	-	-	-
Manganese	7439-96-5	1.67E-01	5.85E+01	NA	Manganese	7439-96-5	8.35E-02	2.93E+01	NA	Manganese	7439-96-5	5.14E-02	1.80E+01	NA
Mercury	-	-	-	-	Mercury	-	-	-	-	Mercury	-	-	-	-
Methyl Alcohol	67-56-1	9.32E-01	4.08E+00	NA	Methyl Alcohol	67-56-1	4.66E-01	2.04E+00	NA	Methyl Alcohol	67-56-1	2.87E-01	1.26E+00	NA
Methyl Isobutyl Ketone	108-10-1	6.95E-01	3.04E+00	NA	Methyl Isobutyl Ketone	108-10-1	3.48E-01	1.52E+00	NA	Methyl Isobutyl Ketone	108-10-1	2.14E-01	9.38E-01	NA
Naphthalene	91-20-3	1.96E+00	8.57E+00	NA	Naphthalene	91-20-3	-	-	NA	Naphthalene	91-20-3	-	-	NA
Nickel	-	-	-	-	Nickel	-	-	-	-	Nickel	-	-	-	-
Selenium	7782-49-2	-	-	-	Selenium	7782-49-2	-	-	-	Selenium	7782-49-2	-	-	-
Toluene	108-88-3	1.42E+01	6.24E+01	NA	Toluene	108-88-3	7.12E+00	3.12E+01	NA	Toluene	108-88-3	4.39E+00	1.92E+01	NA
Xylene	1330-20-7	1.17E+01	5.14E+01	NA	Xylene	1330-20-7	5.86E+00	2.57E+01	NA	Xylene	1330-20-7	3.61E+00	1.58E+01	NA

Source ID No.:		ES4	Tow Line Mist		Source ID No.:		ES5	Tow Line Topcoat		Source ID No.:		ES6	Venjakob Autospray	
Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy	Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy	Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy
NOx	10102-43-9	-	-	-	NOx	10102-43-9	-	-	-	NOx	10102-43-9	-	-	-
CO	630-08-0	-	-	-	CO	630-08-0	-	-	-	CO	630-08-0	-	-	-
PM	-	1.78	155.79	7.79	PM	-	1.1	95.96	4.8	PM	-	4.39	384.66	19.23
PM10	-	1.78	155.79	7.79	PM10	-	1.1	95.96	4.8	PM10	-	4.39	384.66	19.23
PM2.5	-	1.48	129.27	6.46	PM2.5	-	0.91	79.63	3.98	PM2.5	-	3.64	319.19	15.96
VOC	-	99.12	434.14	434.14	VOC	-	61.05	267.42	267.42	VOC	-	243.73	1,067.55	1,067.55
SO2	7446-09-5	-	-	-	SO2	7446-09-5	-	-	-	SO2	7446-09-5	-	-	-
CO2	-	-	-	-	CO2	-	-	-	-	CO2	-	-	-	-
CH4	74-82-8	-	-	-	CH4	74-82-8	-	-	-	CH4	74-82-8	-	-	-
N2O	-	-	-	-	N2O	-	-	-	-	N2O	-	-	-	-
CO2e	-	-	-	-	CO2e	-	-	-	-	CO2e	-	-	-	-
Acetaldehyde	75-07-0	-	-	-	Acetaldehyde	75-07-0	-	-	-	Acetaldehyde	75-07-0	-	-	-
Acrolein	107-02-8	-	-	-	Acrolein	107-02-8	-	-	-	Acrolein	107-02-8	-	-	-
Arsenic	-	-	-	-	Arsenic	-	-	-	-	Arsenic	-	-	-	-
Benzene	71-43-2	-	-	-	Benzene	71-43-2	-	-	-	Benzene	71-43-2	-	-	-
Benzo(a)pyrene	50-32-8	-	-	-	Benzo(a)pyrene	50-32-8	-	-	-	Benzo(a)pyrene	50-32-8	-	-	-
Beryllium	-	-	-	-	Beryllium	-	-	-	-	Beryllium	-	-	-	-
1,3-Butadiene	106-99-0	-	-	-	1,3-Butadiene	106-99-0	-	-	-	1,3-Butadiene	106-99-0	-	-	-
Cadmium	-	-	-	-	Cadmium	-	-	-	-	Cadmium	-	-	-	-
Chromic Acid (VI)	-	-	-	-	Chromic Acid (VI)	-	-	-	-	Chromic Acid (VI)	-	-	-	-
Cobalt	7440-48-4	5.31E-01	2.32E+00	NA	Cobalt	7440-48-4	3.27E-01	1.43E+00	NA	Cobalt	7440-48-4	1.14E+00	4.98E+00	NA
O-Cresol	95-48-7	1.13E-01	4.93E-01	-	O-Cresol	95-48-7	-	-	-	O-Cresol	95-48-7	-	-	-
Ethyl Benzene	100-41-4	2.85E-01	1.25E+00	NA	Ethyl Benzene	100-41-4	6.43E-01	2.82E+00	NA	Ethyl Benzene	100-41-4	2.24E+00	9.81E+00	NA
Formaldehyde	50-00-0	-	-	NA	Formaldehyde	50-00-0	1.51E-01	6.60E-01	NA	Formaldehyde	50-00-0	5.25E-01	2.30E+00	NA
Glycol Ethers	112-34-5	3.26E-01	1.43E+00	NA	Glycol Ethers	112-34-5	3.68E-01	1.61E+00	NA	Glycol Ethers	112-34-5	6.99E-01	3.06E+00	NA
Hexane	110-54-3	-	-	-	Hexane	110-54-3	-	-	-	Hexane	110-54-3	-	-	-
Lead	-	-	-	-	Lead	-	-	-	-	Lead	-	-	-	-
Manganese	7439-96-5	8.35E-02	2.93E+01	NA	Manganese	7439-96-5	5.14E-02	1.80E+01	NA	Manganese	7439-96-5	1.79E-01	6.28E+01	NA
Mercury	-	-	-	-	Mercury	-	-	-	-	Mercury	-	-	-	-
Methyl Alcohol	67-56-1	2.59E+00	1.13E+01	NA	Methyl Alcohol	67-56-1	2.87E-01	1.26E+00	NA	Methyl Alcohol	67-56-1	5.63E+00	2.46E+01	NA
Methyl Isobutyl Ketone	108-10-1	2.18E+00	9.57E+00	NA	Methyl Isobutyl Ketone	108-10-1	2.14E-01	9.38E-01	NA	Methyl Isobutyl Ketone	108-10-1	1.67E+00	7.32E+00	NA
Naphthalene	91-20-3	-	-	NA	Naphthalene	91-20-3	-	-	NA	Naphthalene	91-20-3	-	-	NA
Nickel	-	-	-	-	Nickel	-	-	-	-	Nickel	-	-	-	-
Selenium	7782-49-2	-	-	-	Selenium	7782-49-2	-	-	-	Selenium	7782-49-2	-	-	-
Toluene	108-88-3	3.21E+01	1.41E+02	NA	Toluene	108-88-3	4.51E+00	1.98E+01	NA	Toluene	108-88-3	1.53E+01	6.69E+01	NA
Xylene	1330-20-7	1.58E+00	6.93E+00	NA	Xylene	1330-20-7	3.61E+00	1.58E+01	NA	Xylene	1330-20-7	1.26E+01	5.51E+01	NA

Source ID No.:		ES7	Lab Booth		Source ID No.:		ES8	Specials Remake 1		Source ID No.:		ES9	Specials Remake 2	
Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy	Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy	Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy
NOx	10102-43-9	-	-	-	**NOx**	10102-43-9	-	-	-	**NOx**	10102-43-9	-	-	-
CO	630-08-0	-	-	-	**CO**	630-08-0	-	-	-	**CO**	630-08-0	-	-	-
PM	-	0.61	53.72	2.69	**PM**	-	1.23	107.44	5.37	**PM**	-	1.23	107.44	5.37
PM10	-	0.61	53.72	2.69	**PM10**	-	1.23	107.44	5.37	**PM10**	-	1.23	107.44	5.37
PM2.5	-	0.51	44.57	2.23	**PM2.5**	-	1.02	89.15	4.46	**PM2.5**	-	1.02	89.15	4.46
VOC	-	28.44	124.56	124.56	**VOC**	-	56.88	249.12	249.12	**VOC**	-	56.88	249.12	249.12
SO2	7446-09-5	-	-	-	**SO2**	7446-09-5	-	-	-	**SO2**	7446-09-5	-	-	-
CO2	-	-	-	-	**CO2**	-	-	-	-	**CO2**	-	-	-	-
CH4	74-82-8	-	-	-	**CH4**	74-82-8	-	-	-	**CH4**	74-82-8	-	-	-
N2O	-	-	-	-	**N2O**	-	-	-	-	**N2O**	-	-	-	-
CO2e	-	-	-	-	**CO2e**	-	-	-	-	**CO2e**	-	-	-	-
Acetaldehyde	75-07-0	-	-	-	**Acetaldehyde**	75-07-0	-	-	-	**Acetaldehyde**	75-07-0	-	-	-
Acrolein	107-02-8	-	-	-	**Acrolein**	107-02-8	-	-	-	**Acrolein**	107-02-8	-	-	-
Arsenic	-	-	-	-	**Arsenic**	-	-	-	-	**Arsenic**	-	-	-	-
Benzene	71-43-2	-	-	-	**Benzene**	71-43-2	-	-	-	**Benzene**	71-43-2	-	-	-
Benzo(a)pyrene	50-32-8	-	-	-	**Benzo(a)pyrene**	50-32-8	-	-	-	**Benzo(a)pyrene**	50-32-8	-	-	-
Beryllium	-	-	-	-	**Beryllium**	-	-	-	-	**Beryllium**	-	-	-	-
1,3-Butadiene	106-99-0	-	-	-	**1,3-Butadiene**	106-99-0	-	-	-	**1,3-Butadiene**	106-99-0	-	-	-
Cadmium	-	-	-	-	**Cadmium**	-	-	-	-	**Cadmium**	-	-	-	-
Chromic Acid (VI)	-	-	-	-	**Chromic Acid (VI)**	-	-	-	-	**Chromic Acid (VI)**	-	-	-	-
Cobalt	7440-48-4	1.63E-01	7.16E-01	NA	**Cobalt**	7440-48-4	3.27E-01	1.43E+00	NA	**Cobalt**	7440-48-4	3.27E-01	1.43E+00	NA
O-Cresol	95-48-7	-	-	-	**O-Cresol**	95-48-7	-	-	-	**O-Cresol**	95-48-7	-	-	-
Ethyl Benzene	100-41-4	3.22E-01	1.41E+00	NA	**Ethyl Benzene**	100-41-4	6.43E-01	2.82E+00	NA	**Ethyl Benzene**	100-41-4	6.43E-01	2.82E+00	NA
Formaldehyde	50-00-0	7.53E-02	3.30E-01	NA	**Formaldehyde**	50-00-0	1.51E-01	6.60E-01	NA	**Formaldehyde**	50-00-0	1.51E-01	6.60E-01	NA
Glycol Ethers	112-34-5	1.00E-01	4.39E-01	NA	**Glycol Ethers**	112-34-5	2.01E-01	8.79E-01	NA	**Glycol Ethers**	112-34-5	2.01E-01	8.79E-01	NA
Hexane	110-54-3	-	-	-	**Hexane**	110-54-3	-	-	-	**Hexane**	110-54-3	-	-	-
Lead	-	-	-	-	**Lead**	-	-	-	-	**Lead**	-	-	-	-
Manganese	7439-96-5	2.57E-02	9.01E+00	NA	**Manganese**	7439-96-5	5.14E-02	1.80E+01	NA	**Manganese**	7439-96-5	5.14E-02	1.80E+01	NA
Mercury	-	-	-	-	**Mercury**	-	-	-	-	**Mercury**	-	-	-	-
Methyl Alcohol	67-56-1	7.97E-01	3.49E+00	NA	**Methyl Alcohol**	67-56-1	1.59E+00	6.98E+00	NA	**Methyl Alcohol**	67-56-1	1.59E+00	6.98E+00	NA
Methyl Isobutyl Ketone	108-10-1	1.46E-01	6.40E-01	NA	**Methyl Isobutyl Ketone**	108-10-1	2.92E-01	1.28E+00	NA	**Methyl Isobutyl Ketone**	108-10-1	2.92E-01	1.28E+00	NA
Naphthalene	91-20-3	-	-	NA	**Naphthalene**	91-20-3	-	-	NA	**Naphthalene**	91-20-3	-	-	NA
Nickel	-	-	-	-	**Nickel**	-	-	-	-	**Nickel**	-	-	-	-
Selenium	7782-49-2	-	-	-	**Selenium**	7782-49-2	-	-	-	**Selenium**	7782-49-2	-	-	-
Toluene	108-88-3	2.19E+00	9.61E+00	NA	**Toluene**	108-88-3	4.39E+00	1.92E+01	NA	**Toluene**	108-88-3	4.39E+00	1.92E+01	NA
Xylene	1330-20-7	1.81E+00	7.91E+00	NA	**Xylene**	1330-20-7	3.61E+00	1.58E+01	NA	**Xylene**	1330-20-7	3.61E+00	1.58E+01	NA

Process Ovens and Make-Up Air

Product curing will primarily be accomplished by electric infrared ovens. However, the following natural gas-fired equipment will be used in support of the operations.

Natural Gas-Fired Process Equipment

Emission Unit I.D.	Description	Capacity
IES1	Make Up Air Unit 1	5.0 million Btu per hour
IES2	Make Up Air Unit 2	5.0 million Btu per hour
IES3	Venjakob HVIR Oven	0.51 million Btu per hour
IES4	Miscellaneous Space Heaters	4 million Btu per hour

The natural gas-fired equipment are insignificant activities and have been included in the overall potential to emit calculations.

Source ID No.:		IES1	Makeup Air System	
Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy
NOx	10102-43-9	0.49	2.15	2.15
CO	630-08-0	0.41	1.8	1.8
PM	-	0.0	0.01	0.01
PM10	-	0.0	0.01	0.01
PM2.5	-	0.0	0.01	0.01
VOC	-	0.03	0.12	0.12
SO2	7446-09-5	0.0	0.01	0.01
CO2	-	588.24	2,576.47	2,576.47
CH4	74-82-8	0.01	0.05	0.05
N2O	-	0.01	0.05	0.05
CO2e	-	591.73	2,591.78	2,591.78
Acetaldehyde	75-07-0	7.45E-08	3.26E-07	3.26E-07
Acrolein	107-02-8	8.82E-08	3.86E-07	3.86E-07
Ammonia (non-HAP)	7664-41-7	1.57E-02	6.87E-02	6.87E-02
Arsenic	-	-	-	-
Benzene	71-43-2	1.03E-05	4.51E-05	4.51E-05
Benzo(a)pyrene	50-32-8	5.88E-09	2.58E-08	2.58E-08
Beryillium	-	-	-	-
1,3-Butadiene	106-99-0	-	-	-
Cadmium	-	-	-	-
Chromic Acid (VI)	-	-	-	-
Cobalt	7440-48-4	4.12E-07	1.80E-06	1.80E-06
O-Cresol	95-48-7	-	-	-
Ethyl Benzene	100-41-4	-	-	-
Formaldehyde	50-00-0	3.68E-04	1.61E-03	1.61E-03
Glycol Ethers	112-34-5	-	-	-
Hexane	110-54-3	8.82E-03	3.86E-02	3.86E-02
Lead	-	2.45E-06	1.07E-05	1.07E-05
Manganese	7439-96-5	-	-	-
Mercury	-	-	-	-
Methyl Alcohol	67-56-1	-	-	-
Methyl Isobutyl Ketone	108-10-1	-	-	-
Naphthalene	91-20-3	2.99E-06	1.31E-05	1.31E-05
Nickel	-	-	-	-
Selenium	7782-49-2	1.18E-07	5.15E-07	5.15E-07
Toluene	108-88-3	1.67E-05	7.30E-05	7.30E-05
Xylene	1330-20-7	-	-	-

Source ID No.:		IES2	Makeup Air System	
Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy
NOx	10102-43-9	0.49	2.15	2.15
CO	630-08-0	0.41	1.8	1.8
PM	-	0.04	0.16	0.16
PM10	-	0.04	0.16	0.16
PM2.5	-	0.04	0.16	0.16
VOC	-	0.05	0.24	0.24
SO2	7446-09-5	0.0	0.01	0.01
CO2	-	588.24	2,576.47	2,576.47
CH4	74-82-8	0.01	0.05	0.05
N2O	-	0.01	0.05	0.05
CO2e	-	591.73	2,591.78	2,591.78
Acetaldehyde	75-07-0	7.45E-08	3.26E-07	3.26E-07
Acrolein	107-02-8	8.82E-08	3.86E-07	3.86E-07
Ammonia (non-HAP)	7664-41-7	1.57E-02	6.87E-02	6.87E-02
Arsenic	-	-	-	-
Benzene	71-43-2	1.03E-05	4.51E-05	4.51E-05
Benzo(a)pyrene	50-32-8	5.88E-09	2.58E-08	2.58E-08
Beryillium	-	-	-	-
1,3-Butadiene	106-99-0	-	-	-
Cadmium	-	-	-	-
Chromic Acid (VI)	-	-	-	-
Cobalt	7440-48-4	4.12E-07	1.80E-06	1.80E-06
O-Cresol	95-48-7	-	-	-
Ethyl Benzene	100-41-4	-	-	-
Formaldehyde	50-00-0	3.68E-04	1.61E-03	1.61E-03
Glycol Ethers	112-34-5	-	-	-
Hexane	110-54-3	8.82E-03	3.86E-02	3.86E-02
Lead	-	2.45E-06	1.07E-05	1.07E-05
Manganese	7439-96-5	-	-	-
Mercury	-	-	-	-
Methyl Alcohol	67-56-1	-	-	-
Methyl Isobutyl Ketone	108-10-1	-	-	-
Naphthalene	91-20-3	2.99E-06	1.31E-05	1.31E-05
Nickel	-	-	-	-
Selenium	7782-49-2	1.18E-07	5.15E-07	5.15E-07
Toluene	108-88-3	1.67E-05	7.30E-05	7.30E-05
Xylene	1330-20-7	-	-	-

IES3 Venjakob HVIR Oven

Hours	Maximum Heat Input MMBtu/hr	Natural Gas Heat Content (Btu/scf)
8,760	0.51	1,020

Criteria Air Pollutants	CAS#	Emission Factor Natural Gas (lb/MMBtu)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Nitrogen Oxides (NO_x)[a]	10102-43-9	9.80E-02	0.050	0.22	0.22
Carbon Monoxide (CO)[a]	630-08-0	8.24E-02	0.042	0.18	0.18
Particulate Matter (PM)[a]	-	7.45E-03	0.004	0.02	0.02
Particulate Matter < 10 Microns (PM_{10})[a]	-	7.45E-03	0.004	0.02	0.02
Particulate Matter < 2.5 Microns ($PM_{2.5}$)[a]	-	7.45E-03	0.004	0.02	0.02
Volatile Organic Compounds (VOC)[a]	-	1.08E-02	0.005	0.02	0.02
Sulfur Dioxide (SO_2)[a]	7446-09-5	5.88E-04	0.000	0.00	0.00
Carbon Dioxide (CO_2)[b]	124-38-9	1.18E+02	59.4	260	260
Nitrous Oxide (N_2O)[b]	10024-97-2	2.16E-03	0.001	0.00	0.00
Methane (CH_4)[b]	74-82-8	2.25E-03	0.001	0.00	0.00
Carbon Dioxide Equivalent (CO_2e)[c]	-	1.18E+02	59.8	262	262

Hazardous Air Pollutants (HAPS)	CAS#	Emission Factor Natural Gas (lb/MMBtu)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Acetaldehyde[a]	75-07-0	1.49E-08	7.53E-09	3.30E-08	3.30E-08
Acrolein[a]	107-02-8	1.76E-08	8.91E-09	3.90E-08	3.90E-08
Lead[a]	NA	4.90E-07	2.48E-07	1.08E-06	1.08E-06
Benzene[a]	71-43-2	2.06E-06	1.04E-06	4.55E-06	4.55E-06
Benzo(a)pyrene[a]	50-32-8	1.18E-09	5.94E-10	2.60E-09	2.60E-09
Formaldehyde[a]	50-00-0	7.35E-05	3.71E-05	1.63E-04	1.63E-04
Hexane[a]	110-54-3	1.76E-03	8.91E-04	3.90E-03	3.90E-03
Naphthalene[a]	91-20-3	5.98E-07	3.02E-07	1.32E-06	1.32E-06
Toluene[a]	108-88-3	3.33E-06	1.68E-06	7.37E-06	7.37E-06
Cobalt[a]	7440-48-4	8.24E-08	4.16E-08	1.82E-07	1.82E-07
Selenium[a]	7782-49-2	2.35E-08	1.19E-08	5.20E-08	5.20E-08
			Total HAPs =	**4.08E-03**	**4.08E-03**

Toxic Air Pollutants (TAPS)	CAS#	Emission Factor Natural Gas (lb/MMBtu)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Acetaldehyde[a]	75-07-0	1.49E-08	7.53E-09	3.30E-08	3.30E-08
Acrolein[a]	107-02-8	1.76E-08	8.91E-09	3.90E-08	3.90E-08
Ammonia[a]	7664-41-7	3.14E-03	1.58E-03	6.94E-03	6.94E-03
Benzene[a]	71-43-2	2.06E-06	1.04E-06	4.55E-06	4.55E-06
Benzo(a)pyrene[a]	50-32-8	1.18E-09	5.94E-10	2.60E-09	2.60E-09
Formaldehyde[a]	50-00-0	7.35E-05	3.71E-05	1.63E-04	1.63E-04
Hexane[a]	110-54-3	1.76E-03	8.91E-04	3.90E-03	3.90E-03
Toluene[a]	108-88-3	3.33E-06	1.68E-06	7.37E-06	7.37E-06

Notes:

IES4 Misc. Heating

Hours	Maximum Heat Input MMBtu/hr	Natural Gas Heat Content (Btu/scf)
8,760	4.00	1,020

Criteria Air Pollutants	CAS#	Emission Factor Natural Gas (lb/MMBtu)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Nitrogen Oxides (NO_x)[a]	10102-43-9	9.80E-02	0.392	1.72	1.72
Carbon Monoxide (CO)[a]	630-08-0	8.24E-02	0.329	1.44	1.44
Particulate Matter (PM)[a]	-	7.45E-03	0.030	0.13	0.13
Particulate Matter < 10 Microns (PM_{10})[a]	-	7.45E-03	0.030	0.13	0.13
Particulate Matter < 2.5 Microns ($PM_{2.5}$)[a]	-	7.45E-03	0.030	0.13	0.13
Volatile Organic Compounds (VOC)[a]	-	1.08E-02	0.043	0.19	0.19
Sulfur Dioxide (SO_2)[a]	7446-09-5	5.88E-04	0.002	0.01	0.01
Carbon Dioxide (CO_2)[b]	124-38-9	1.18E+02	470.6	2,061	2,061
Nitrous Oxide (N_2O)[b]	10024-97-2	2.16E-03	0.009	0.04	0.04
Methane (CH_4)[b]	74-82-8	2.25E-03	0.009	0.04	0.04
Carbon Dioxide Equivalent (CO_2e)[c]	-	1.18E+02	473.4	2,073	2,073

Hazardous Air Pollutants (HAPS)	CAS#	Emission Factor Natural Gas (lb/MMBtu)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Acetaldehyde[a]	75-07-0	1.49E-08	5.96E-08	2.61E-07	2.61E-07
Acrolein[a]	107-02-8	1.76E-08	7.06E-08	3.09E-07	3.09E-07
Lead[a]	NA	4.90E-07	1.96E-06	8.59E-06	8.59E-06
Benzene[a]	71-43-2	2.06E-06	8.24E-06	3.61E-05	3.61E-05
Benzo(a)pyrene[a]	50-32-8	1.18E-09	4.71E-09	2.06E-08	2.06E-08
Formaldehyde[a]	50-00-0	7.35E-05	2.94E-04	1.29E-03	1.29E-03
Hexane[a]	110-54-3	1.76E-03	7.06E-03	3.09E-02	3.09E-02
Naphthalene[a]	91-20-3	5.98E-07	2.39E-06	1.05E-05	1.05E-05
Toluene[a]	108-88-3	3.33E-06	1.33E-05	5.84E-05	5.84E-05
Cobalt[a]	7440-48-4	8.24E-08	3.29E-07	1.44E-06	1.44E-06
Selenium[a]	7782-49-2	2.35E-08	9.41E-08	4.12E-07	4.12E-07
			Total HAPs =	**3.23E-02**	**3.23E-02**

Toxic Air Pollutants (TAPS)	CAS#	Emission Factor Natural Gas (lb/MMBtu)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Acetaldehyde[a]	75-07-0	1.49E-08	5.96E-08	2.61E-07	2.61E-07
Acrolein[a]	107-02-8	1.76E-08	7.06E-08	3.09E-07	3.09E-07
Ammonia[a]	7664-41-7	3.14E-03	1.25E-02	5.50E-02	5.50E-02
Benzene[a]	71-43-2	2.06E-06	8.24E-06	3.61E-05	3.61E-05
Benzo(a)pyrene[a]	50-32-8	1.18E-09	4.71E-09	2.06E-08	2.06E-08
Formaldehyde[a]	50-00-0	7.35E-05	2.94E-04	1.29E-03	1.29E-03
Hexane[a]	110-54-3	1.76E-03	7.06E-03	3.09E-02	3.09E-02
Toluene[a]	108-88-3	3.33E-06	1.33E-05	5.84E-05	5.84E-05

Notes:

Miscellaneous Equipment

In addition to the previously described natural gas-fired process equipment associated with coating operations, the facility will also include a collection of natural gas-fired space heaters and building climate control sources totaling 4 million Btu/hr. These sources are insignificant activities and have been included in the overall potential to emit calculations. Because of their small size, they have not been individually identified but have been grouped with the identification IES4.

The facility will also have one 85 horsepower diesel-fired fire pump engine to be used for emergency purposes labeled as IES5. This engine is equipped with a 100-gallon fuel tank. The fire pump and associated fuel tank are insignificant activities and have been included in the overall potential to emit calculations.

IES5 Fire Pump Engine

Hours	Horsepower	Diesel Heating Value (Btu/gal)	Fuel Sulfur Content (%)
500	85.00	140,000	0.0015

Criteria Air Pollutants	CAS#	Emission Factor Diesel (lb/hp-hr)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Nitrogen Oxides (NO_x)[a]	10102-43-9	3.10E-02	2.635	0.66	0.66
Carbon Monoxide (CO)[a]	630-08-0	6.68E-03	0.568	0.14	0.14
Particulate Matter (PM)[a]	-	2.20E-03	0.187	0.05	0.05
Particulate Matter < 10 Microns (PM_{10})[a]	-	2.20E-03	0.187	0.05	0.05
Particulate Matter < 2.5 Microns ($PM_{2.5}$)[a]	-	2.20E-03	0.187	0.05	0.05
Volatile Organic Compounds (VOC)[a,c]	-	2.51E-03	0.213	0.05	0.05
Sulfur Dioxide (SO_2)[a]	7446-09-5	1.21E-05	0.001	0.00	0.00
Carbon Dioxide (CO_2)[b]	124-38-9	1.15E+00	97.8	24	24
Nitrous Oxide (N_2O)[b]	10024-97-2	9.26E-06	0.001	0.00	0.00
Methane (CH_4)[b]	74-82-8	4.63E-05	0.004	0.00	0.00
Carbon Dioxide Equivalent (CO_2e)[b]	-	1.15E+00	98.1	25	25

Hazardous Air Pollutants (HAPS)	CAS#	Emission Factor Diesel (lb/hp-hr)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Acetaldehyde[a]	75-07-0	5.37E-06	4.56E-04	1.14E-04	1.14E-04
Acrolein[a]	107-02-8	6.48E-07	5.51E-05	1.38E-05	1.38E-05
Arsenic[a]	NA	2.80E-08	2.38E-06	5.95E-07	5.95E-07
Lead[a]	NA	6.30E-08	5.36E-06	1.34E-06	1.34E-06
Benzene[a]	71-43-2	6.53E-06	5.55E-04	1.39E-04	1.39E-04
Benzo(a)pyrene[a]	50-32-8	1.32E-09	1.12E-07	2.81E-08	2.81E-08
Beryllium[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
1,3-Butadiene[a]	106-99-0	2.74E-07	2.33E-05	5.82E-06	5.82E-06
Cadmium[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Chromic Acid (VI)[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Formaldehyde[a]	50-00-0	8.26E-06	7.02E-04	1.76E-04	1.76E-04
Manganese[a]	NA	4.20E-08	3.57E-06	8.93E-07	8.93E-07
Mercury[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Naphthalene[a]	91-20-3	5.94E-07	5.05E-05	1.26E-05	1.26E-05
Nickel[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Toluene[a]	108-88-3	2.86E-06	2.43E-04	6.08E-05	6.08E-05
Xylene[a]	1330-20-7	2.00E-06	1.70E-04	4.25E-05	4.25E-05
Selenium[a]	7782-49-2	1.05E-07	8.93E-06	2.23E-06	2.23E-06
			Total HAPs =	**5.71E-04**	**5.71E-04**

Toxic Air Pollutants (TAPS)	CAS#	Emission Factor Diesel (lb/hp-hr)	Potential Emissions Hourly (lb/hr)	Unrestricted (tpy)	Limited (tpy)
Acetaldehyde[a]	75-07-0	5.37E-06	4.56E-04	1.14E-04	1.14E-04
Acrolein[a]	107-02-8	6.48E-07	5.51E-05	1.38E-05	1.38E-05
Arsenic[a]	NA	2.80E-08	2.38E-06	5.95E-07	5.95E-07
Benzene[a]	71-43-2	6.53E-06	5.55E-04	1.39E-04	1.39E-04
Benzo(a)pyrene[a]	50-32-8	1.32E-09	1.12E-07	2.81E-08	2.81E-08
Beryllium[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
1,3-Butadiene[a]	106-99-0	2.74E-07	2.33E-05	5.82E-06	5.82E-06
Cadmium[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Chromic Acid (VI)[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Formaldehyde[a]	50-00-0	8.26E-06	7.02E-04	1.76E-04	1.76E-04
Manganese[a]	NA	4.20E-08	3.57E-06	8.93E-07	8.93E-07
Mercury[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Nickel[a]	NA	2.10E-08	1.79E-06	4.46E-07	4.46E-07
Toluene[a]	108-88-3	2.86E-06	2.43E-04	6.08E-05	6.08E-05
Xylene[a]	1330-20-7	2.00E-06	1.70E-04	4.25E-05	4.25E-05

Notes:

[a] Emission factors from North Carolina Internal Combustion (small gasoline and diesel engines). ICE_sm_rev_S_20150622.xls.

[b] Based on 40 CFR 98, Subpart C, Table C-2, and Subpart A, Table A-1, Global Warming Potentials: CH_4 - 25, N_2O - 298.

[c] VOC emissions include evaporative loss from fuel tank (0.13 lbs VOC).

IES6 Glue Usage

Glue	Annual Usage (lbs/yr)[a]	Density (lb/gal)	Usage (gal/yr)	VOC (lb/gal)	VOC Emissions (lb/hr)[b]	VOC Emissions (tpy)
Assembly High Tack Fluorescent	8640	9.24	935.06	0.1020	0.05	0.20
Swift Tak 47915	7590	9.10	834.07	0.0000	0.00	0.00
				Total:	**0.05**	**0.20**

Notes:

[a] Annual potential usage based on actual usage at Howard Lake, MN facility multiplied by 1.5.

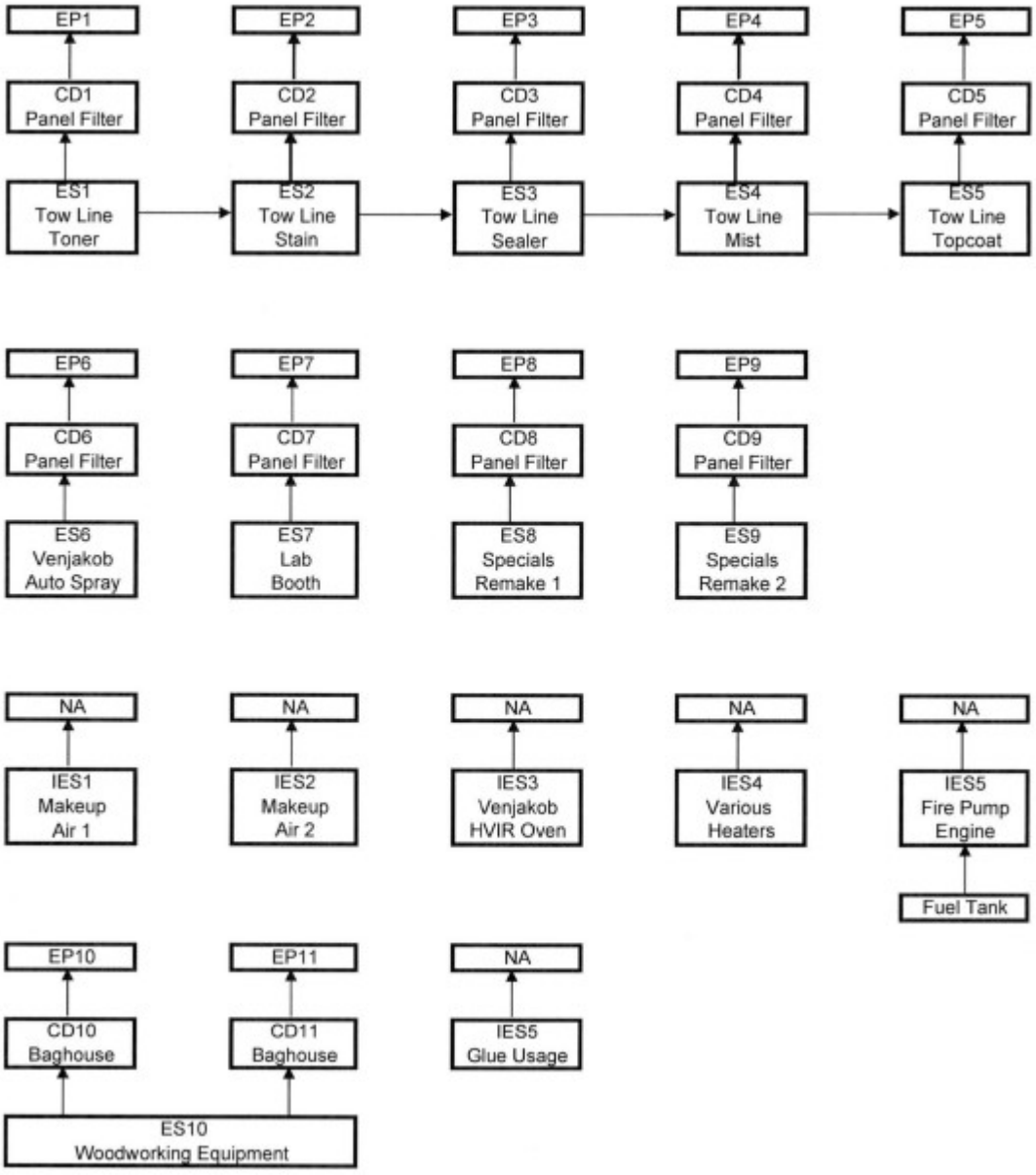
[b] Lb/hr emissions based on typical operating year of 2060 hrs.

[c] Glues are brush applied. No particulate emissions generated.

Facility-Wide Potential Emissions

Emissions Summary Table				
Pollutant Name	CAS #	Lbs per Hr	Unc tpy	Limited tpy
NOx	10102-43-9	4.84	10.32	10.32
CO	630-08-0	2.42	8.26	8.26
PM	-	17.98	1,604.54	77.99
PM10	-	17.98	1,604.54	77.99
PM2.5	-	14.97	1,302.61	64.79
VOC	-	904.98	3,962.94	249.0
SO2	7446-09-5	0.01	0.06	0.06
CO2	-	2,745.4	11,621.13	11,621.13
CH4	74-82-8	0.05	0.22	0.22
N2O	-	0.05	0.22	0.22
CO2e	-	2,761.46	11,690.13	11,690.13
Acetaldehyde	75-07-0	4.57E-04	1.16E-04	1.16E-04
Acrolein	107-02-8	5.55E-05	1.55E-05	1.49E-05
Arsenic	-	2.38E-06	5.95E-07	5.95E-07
Benzene	71-43-2	6.01E-04	3.42E-04	3.42E-04
Benzo(a)pyrene	50-32-8	1.39E-07	1.44E-07	1.44E-07
Beryllium	-	1.79E-06	4.46E-07	4.46E-07
1,3-Butadiene	106-99-0	2.33E-05	5.82E-06	5.82E-06
Cadmium	-	1.79E-06	4.46E-07	4.46E-07
Chromic Acid (VI)	-	1.79E-06	4.46E-07	4.46E-07
Cobalt	7440-48-4	4.73E+00	2.07E+01	3.27E+00
O-Cresol	95-48-7	1.13E-01	4.93E-01	6.83E-01
Ethyl Benzene	100-41-4	8.41E+00	3.68E+01	1.26E+01
Formaldehyde	50-00-0	1.68E+00	7.35E+00	2.39E+00
Glycol Ethers	112-34-5	3.19E+00	1.40E+01	3.16E+00
Hexane	110-54-3	3.97E-02	1.74E-01	1.74E-01
Lead	-	1.64E-05	4.97E-05	4.97E-05
Manganese	7439-96-5	7.45E-01	2.61E+02	3.12E+00
Mercury	-	1.79E-06	4.46E-07	4.46E-07
Methyl Alcohol	67-56-1	1.42E+01	6.21E+01	9.78E+00
Methyl Isobutyl Ketone	108-10-1	6.06E+00	2.65E+01	9.27E+00
Naphthalene	91-20-3	1.96E+00	8.57E+00	2.75E+01
Nickel	-	1.79E-06	4.46E-07	4.46E-07
Selenium	7782-49-2	9.45E-06	4.55E-06	4.55E-06
Toluene	108-88-3	8.86E+01	3.88E+02	1.60E+02
Xylene	1330-20-7	4.80E+01	2.10E+02	6.28E+01

Process Flow Diagram



VI. Permit Modifications/Changes and ESM Discussion

The following table describes all changes made to permit 10787R00.

Page No.	Section	Description of Changes
N/A	N/A	N/A - Initial permit for this Greenfield Facility

There were changes made to the Emissions Source Module (ESM) under this permit application.

VII. Regulatory Review/Equipment Changes

The facility is currently subject to the following regulations:

a. 15A NCAC 02D .0512 "Particulates from Miscellaneous Wood Products Finishing Plants"
- Nine (9) dry filter-type spray booths (ID Nos. ES-1 through ES-9)
- Woodworking activities (ID No. ES-10) controlled by two (2) bagfilters (ID Nos. CD-10 and CD-11)

Under this regulation, the paint booths and woodworking activities are controlled with dry filters and bagfilters. The panel filters, bagfilters, and ductwork are subject to monthly external inspections. The emission sources are controlled by adequate ductwork and properly designed collectors. The panel filters and bagfilters are subject to weekly inspections. The bagfilters, along with the spray booth ductwork and panel filters are subject to an annual internal inspection.

All inspection results are to be maintained in a logbook. The Permittee shall submit a summary report of the monitoring and recordkeeping activities 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. Compliance is expected but will be verified after commencement of operations for each of these sources.

b. 15A NCAC 02D .0521, "Control of Visible Emissions"
- Nine (9) dry filter-type spray booths (ID Nos. ES-1 through ES-9)
- Woodworking activities (ID No. ES-10) controlled by two (2) bagfilters (ID Nos. CD-10 and CD-11)

For sources manufactured after July 1, 1971, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute. However, except for sources required to install COMs, six-minute averaging periods may exceed 20 percent opacity if:

(1) No six-minute period exceeds 87 percent opacity;
(2) No more than one six-minute period exceeds 20 percent opacity in any hour; and
(3) No more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

A source subject to an emission standard for visible emissions in Rules 02D .0506, .0508, .0524, .1110, .1111, .1206, or .1210 of 15A NCAC shall meet the standard in that particular rule instead of the standard contained in 02D .0521.

To ensure compliance, this rule requires monthly observations of the paint booths and woodworking activities for visible emissions above normal. The facility must act as necessary to correct emissions above normal as soon as practicable. Monitoring results must be kept in a logbook. The Permittee shall submit a summary report of the monitoring and recordkeeping activities 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. Compliance is expected but will be verified after commencement of operations for each of these sources.

c. 15A NCAC 02D .0535, Excess Emissions Reporting and Malfunctions
- Facility-wide sources

Any excess emissions that do not occur during start-up or shut-down are considered a violation of the appropriate rule, unless the owner or operator of the source of excess emissions demonstrates to the Director, that the excess emissions are the result of a malfunction.

This rule generally does not apply to sources to which 15A NCAC 02D .0524, .1110, or .1111 applies, unless excess emissions exceed an emission limit established in a permit issued under 15A NCAC 02Q .0700 that is more stringent than the emission limit set by 15A NCAC 02D .0524, .1110, or .1111.

The owner or operator is required to notify the DAQ if the affected source emits excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions. The facility shall notify the Director or his designee of any such occurrence by 9:00 a.m. EST of the Division's next business day of becoming aware of the occurrence and describe:

i. the name and location of the facility;
ii. the nature and cause of the malfunction or breakdown;
iii. the time when the malfunction or breakdown is first observed;
iv. the expected duration; and
v. an estimated rate of emissions.

Finally, the owner/operator is required to notify the Director or his designee immediately when the corrective measures have been accomplished.

d. 15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions
- Facility-wide sources

This regulation is state enforceable only. 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. This facility is a greenfield facility. No objectionable odors are expected.

e. 15A NCAC 02Q .0207, Annual Emissions Reporting
The facility must report by June 30 of each year the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as established by the Director. The accuracy of the report shall be certified by the responsible official of the facility. Compliance will be determined through receipt of the annual emission inventory.

f. 15A NCAC 02Q .0304, Application
The facility, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 02Q .0304(d) and (f). No application fee is required for renewal of an existing air permit. The renewal request should be submitted to the Regional Supervisor, DAQ. Compliance will be determined during the next permit renewal.

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

NSPS

15A NCAC 02D .0524, New Source Performance Standards (NSPS IIII)
- Fire pump emergency engine (diesel-fired rated at 85 horsepower)

In accordance with 40 CFR 60.4200(a)(2), the owner/operator of any stationary emergency compression ignition engine is subject to NSPS Subpart IIII, if unit commences construction after July 11, 2005, and if the fire pump is manufactured after July 1, 2006. The proposed fire pump emergency engine is subject to this NSPS due to the expected commence construction dates falling after the applicability date of July 11, 2005 and the manufacturing date falling after July 1, 2006.

Emission Standards
From Table 3 to Appendix I to 40 CFR 1039, the following pollution standards apply to the fire pump engine:

NMHC and NOx (combined): 4.0 g/kW-hr [3.0 g/hp-hr]
CO: 3.5 g/kW-hr [2.6 g/hp-hr]
PM: 0.20 g/kW-hr [0.15 g/hp-hr]

Fuel Requirements
In accordance with 40 CFR 60.4207(b), the facility will be limited to using diesel fuel with a sulfur content of less than 15 ppm. Furthermore, in accordance with 40 CFR 80.510(b) and (c), the diesel fuel must meet one of the following standards: (1) minimum cetane index of 40 and (2) maximum aromatic content of 35 volume percent.

Monitoring Requirements
In accordance with 40 CFR 60.4209(a), the Permittee is required to install a non-resettable hour meter prior to startup of the emergency engine.

In accordance with 40 CFR 60.4209(b), if the emergency engine is equipped with diesel particulate filters to comply with the above emissions standards, the Permittee shall install a backpressure monitor on the diesel particulate filter that notifies the Permittee when the high backpressure limit of the engine is approached.

In accordance with 40 CFR 60.4206 and 60.4211(a), the Permittee shall operate and maintain the stationary CI ICE that achieves the emission standards in 40 CFR 60.4205 over the entire life of the engine according to the manufacturer's emission-related written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee may only change engine settings that are permitted by the manufacturer.

In accordance with 40 CFR 60.4211(c), the Permittee is required to purchase an engine which is certified to the emission standards listed in Table 1 of 40 CFR 89.112.

In accordance with 40 CFR 60.4211(f), the Permittee will be allowed to operate the emergency engine for the purposes of maintenance checks and readiness testing for no more than 100 hours per year. Any operation of the emergency engine other than for emergency operation, maintenance, and readiness testing will be prohibited. If an engine is not operated according to the requirements of 40 CFR 60.4211 paragraphs (f)(1) through (3), the engine will not be considered an emergency engine under this Subpart and shall meet all requirements for non-emergency engines.

Recordkeeping Requirements
In accordance with 40 CFR 60.4214(b), if the emergency engine does not meet the standards applicable to non-emergency engine in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time and operation of the engine and the reason the engine was in operation during that time.

In accordance with 40 CFR 60.4214(c), if the stationary CI internal combustion engine is equipped with a diesel particulate filter, the Permittee shall keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached.

Reporting Requirements
In accordance with 40 CFR 60.4214(e), owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).

The facility has indicated that the new engines will be EPA certified and the documents shall be available for viewing during the initial compliance inspection. Compliance will be determined during the initial compliance inspection. Compliance with this regulation is expected and will be determined during inspections.

NESHAP/MACT

a. 15A NCAC 02D .1111, Maximum Achievable Control Technology (MACT JJ)
The wood furniture manufacturing operations (ID Nos. ES-1 through ES-9) shall comply with all requirements of 15A NCAC 02D .1111 "Maximum Achievable Control Technology" and 40 CFR Part 63 Subpart JJ "National Emission Standards for Wood Furniture Manufacturing Operations." [40 CFR 63.800]

The Permittee shall adhere to the work practice standards as specified by 40 CFR 63.803.

i. Recordkeeping Requirements – The Permittee shall prepare, maintain, and follow a written work practice implementation plan in accordance with 40 CFR 63.806(e) that defines environmentally desirable work practices for each wood furniture manufacturing operation and addresses each of the work practice standards specified in items (A) through (K) below:
   (A) Operator training – in accordance with 40 CFR 63.803(b),
   (B) Inspection and maintenance plan – in accordance with 40 CFR 63.803(c),
   (C) Cleaning and wash-off solvent accounting system – in accordance with 40 CFR 63.803(d),
   (D) Chemical composition of cleaning and wash-off solvents – in accordance with 40 CFR 63.803(e),
   (E) Spray booth cleaning – in accordance with 40 CFR 63.803(f),
   (F) Storage requirements – in accordance with 40 CFR 63.803(g),
   (G) Application equipment requirements – in accordance with 40 CFR 63.803(h). Conventional air spray guns are allowed only when emissions are vented to a control device.

(H) Line cleaning – in accordance with 40 CFR 63.803(i),
(I) Gun cleaning – in accordance with 40 CFR 63.803(j),
(J) Wash-off operations – in accordance with 40 CFR 63.803(k), and
(K) Formulation assessment plan - in accordance with 40 CFR 63.803(l).

ii. Reporting Requirements – The Permittee shall submit the compliance status report to the Regional Supervisor in accordance with 40 CFR 63.804(f)(8) and 63.807(b). The Permittee shall submit semiannual reports to the Regional Supervisor in accordance with 40 CFR 63.804(g)(8) and 63.807(c). The Permittee shall follow the reporting requirements in 40 CFR 64.807(e) as required and 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).

Finishing Operations

Per 40 CFR 63.804(a)(4), the Permittee has chosen to use both the compliant coatings and the facility averaging compliance options for the finishing operations listed above.

Recordkeeping Requirements – Compliance with each of these options is considered a separate ALTERNATIVE COMPLIANCE SCENARIO and the Permittee, prior to using a known non-compliance coating, i.e., knowingly switching from the use of compliant coatings to facility averaging as a compliance scenario, shall record in a logbook (written or electronic format) the scenario under which it is operating.

i. Emission Limits – The Permittee shall either:
(A) comply with all provisions of 40 CFR 63.802(a)(1) and 63.804(a)(2) as applicable to the finishing operations listed above. All thinners, stains, washcoats, sealers, topcoats, basecoats, and enamels used at the facility shall meet the emission limitations as detailed in the following table:

Emission Source	Regulated Material	Emission Limitation
ES-1 through ES-9	Thinners	10% by weight HAP
	Stains, washcoats, sealers, topcoats, basecoats, and enamels	1.0 lb VHAP/lb solids (or kg VHAP per kg solids), as applied
	Washcoat, basecoat, or enamel formulated on-site	Coatings – 1.0 lb VHAP/lb solids (or kg VHAP per kg solids) Thinners – 3.0% by weight VHAP

OR
(B) comply with all provisions of 40 CFR 63.802(a)(1) and 63.804(a)(1) as applicable to the finishing operations listed above. The weighted average VHAP content across all coatings, as applied, shall not exceed 1.0 lb VHAP per lb solids (1.0 kg VHAP per kg solids).

ii. Compliance Procedures and Monitoring Requirements – The Permittee shall either:
(A) demonstrate that only compliant thinners are being used and that all stains, washcoats, sealers, topcoats, basecoats, and enamels are compliant, as applied, in accordance with 40 CFR 63.804(g)(2) for Noncontinuous coaters and 40 CFR 63.804(g)(3) for continuous coaters, if applicable.
OR
(B) demonstrate that the monthly average VHAP content for all finishing materials used at the facility is no greater than 1.0 lb VHAP per lb solids (1.0 kg VHAP per kg solids), as applied, in accordance with 40 CFR 63.804(g)(1).

iii. Performance Test Method – EPA Method 311 [40 CFR 63, Appendix A] shall be used to determine the VHAP content of liquid coatings in accordance with 40 CFR 63.805(a).

iv. Recordkeeping Requirements – The Permittee shall keep records in accordance with 40 CFR 63.806(a) following the applicability criteria in 40 CFR 63.800(d), 63.806(b)(1) and (b)(2), 63.806(h), 63.806(i), and 63.806(j) and either:
(A) 63.804(g)(2-3) and 63.806(d),
OR
(B) 63.804(g)(1) and 63.806(c).

v. Reporting Requirements – The Permittee shall submit the compliance status report to the Regional Supervisor in accordance with 40 CFR 63.807(b) and either: 40 CFR 63.804(f)(2), OR 40 CFR 63.804(f)(1). The Permittee shall submit semiannual reports to the Regional Supervisor in accordance with

40 CFR 63.807(c) and either: 40 CFR 63.804(g)(2), OR 40 CFR 63.804(g)(1). The Permittee shall follow the reporting requirements in 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).

Cleaning Operations

i. Emission Limits - The Permittee shall comply with the limits of 40 CFR 63.802(a)(3) applicable to the strippable spray booth operations as detailed in the following table:

Emission Source	Regulated material	Emission Limitation
ES-1 through ES-9	strippable spray booth coatings	0.8 lb VOC per lb solids (or kg VOC/kg solids), as applied

ii. Compliance Procedures and Monitoring Requirements - The Permittee shall demonstrate that only compliant strippable spray booth coatings are used in accordance with 40 CFR 63.804(g)(7).

iii. Performance Test Method - EPA Method 311 [40 CFR Part 63 Appendix A] shall be used to determine the VHAP content of liquid coatings in accordance with 40 CFR 63.805(a).

iv. Recordkeeping Requirements - The Permittee shall keep records in accordance with 40 CFR 63.806(a) following the applicability criteria in 40 CFR 63.800(d), 63.806(b)(1) and (b)(3), 63.806(h), 63.806(i), and 63.806(j).

v. Reporting Requirements - The Permittee shall submit the compliance status report to the Regional Supervisor in accordance with 40 CFR 63.804(f)(7) and 63.807(b). The Permittee shall submit semiannual reports to the Regional Supervisor in accordance with 40 CFR 63.804(g)(7) and 63.807(c). The Permittee shall follow the reporting requirements in 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).

Contact Adhesive Operations

i. Emission Limits - The Permittee shall comply with all provisions of 40 CFR 63.802(a)(2) and 63.804(b-c) as applicable to the contact adhesive operation as detailed in the following table:

Emission Source	Regulated material	Emission Limitation
Gluing operations	Foam contact adhesives used in products which meet flammability requirements per California Technical Bulletin 116, 117, or 133, the Business and Institutional Furniture Manufacturers Association's (BIFMA's) X5.7, UFAC flammability testing, or any similar requirements from local, State, or Federal fire regulatory agencies	1.8 lb VHAP per lb solids (or kg VOC/kg solids), as applied
	All other contact adhesives	1.0 lb VHAP/lb solids (or kg VOC/kg solids), as applied

ii. Compliance Procedures and Monitoring Requirements - When emission source is using foam and other contact adhesives, the Permittee shall demonstrate that only compliant adhesives are used in accordance with 40 CFR 63.804(g)(5).

iii. Performance Test Method - EPA Method 311 [40 CFR Part 63 Appendix A] shall be used to determine the VHAP content of liquid coatings in foam and other contact adhesives in accordance with 40 CFR 63.805(a).

iv. Recordkeeping Requirements - When foam and other contact adhesives are used, the Permittee shall keep records in accordance with 40 CFR 63.806(a) following the applicability criteria in 40 CFR 63.800(d), 63.806(b)(1) and (b)(2), 63.806(h), 63.806(i), and 63.806(j).

v. Reporting Requirements - When foam and other adhesives are used, the Permittee shall submit the compliance status report to the Regional Supervisor in accordance with 40 CFR 63.804(f)(5) and 63.807(b). When foam and other contact adhesives are used, the Permittee shall submit semiannual reports to the Regional Supervisor in accordance with 40 CFR 63.804(g)(5) and 63.807(c). When foam and other contact adhesives are used, the Permittee shall follow the reporting requirements in 40 CFR 63.807(a) following the applicability criteria in 40 CFR 63.800(d).

Formaldehyde Requirements

The permittee shall comply with one of the following two options:

i. Option #1 (400 lb formaldehyde limit per rolling 12-month period) –
   (A) Emissions Limits – In accordance with 40 CFR 63.802(a) and (b), limit total formaldehyde (F_{total}) use in coatings and contact adhesives to no more than 400 pounds per rolling 12 month period.
   (B) Compliance Procedures and Monitoring Requirements – In accordance with 40 CFR 63.804(h), calculate total formaldehyde emissions from all finishing materials and contact adhesives used at the facility using Equation 5 and maintain a value of F_{total} no more than 400 pounds per rolling 12 month period.
   (C) Recordkeeping Requirements – In accordance with 40 CFR 63.806(b), the Permittee shall keep records of the formaldehyde content, in lb/gal, as applied, of each finishing material and contact adhesive subject to the emission limits of 40 CFR 63.802(a) and (b).
   (D) Reporting Requirements - The Permittee shall submit semi-annual reports to the Regional Supervisor in accordance with 40 CFR 63.807(c).

ii. Option#2 (CPDS ≤ 1.0% by weight formaldehyde) –
   (A) Emissions Limits – In accordance with 40 CFR 63.802(a) and (b), use coatings and contact adhesives only if they are low-formaldehyde coatings and adhesives, in any wood furniture manufacturing operations. *Low-formaldehyde* means, in the context of a coating or contact adhesive, a product concentration of less than or equal to 1.0 percent formaldehyde by weight, as described in a certified product data sheet for the material.
   (B) Compliance Procedures and Monitoring Requirements – In accordance with 40 CFR 63.804(h), demonstrate compliance by use of coatings and contact adhesives only if they are *low-formaldehyde* coatings and contact adhesives maintaining a certified product data sheet for each coating and contact adhesive used and submitting a compliance certification with the semi-annual report.
   (C) Recordkeeping Requirements – In accordance with 40 CFR 63.806(b), the Permittee shall keep a certified product data sheet for each coating and contact adhesive used.
   (D) Reporting Requirements - The Permittee shall submit semi-annual reports to the Regional Supervisor in accordance with 40 CFR 40 CFR 63.807(c) and 40 CFR 63.804(h). The compliance certification shall state that low-formaldehyde coatings and contact adhesives, as applicable, have been used each day in the semiannual reporting period or should otherwise identify the periods of noncompliance and the reasons for noncompliance. An affected source is in violation of the standard whenever a coating or contact adhesive that is not low-formaldehyde, as demonstrated by records or by a sample of the coating or contact adhesive, is used. Use of a noncompliant coating or contact adhesive is a separate violation for each day the noncompliant coating or contact adhesive is used. The compliance certification shall be signed by a responsible official of the company that owns or operates the affected source.

b. 15A NCAC 02D .1111, Maximum Achievable Control Technology (MACT ZZZZ)

CFR Part 63 applies to RICE located at a major or area source of hazardous air pollutants (HAP). Pursuant to 40 CFR §63.6590(c) (amended January 30, 2013), a new stationary RICE located at a major source must meet the requirements of this part by meeting the requirements of 40 CFR Part 60 Subpart IIII for compression ignition engines. The new diesel-fired fire pump engine (ID No. IES-5) is subject to the requirements of this regulation. 40 CFR Part 63, Subpart ZZZZ compliance is ensured by meeting the requirements of 40 CFR Part 60, Subpart IIII. No further requirements apply to such engines under this part. Compliance will be determined during inspections and semi-annual reporting.

PSD Applicability and Increment Tracking

Dura-Supreme has accepted 15A NCAC 02Q .0317, Avoidance Conditions in their permit application to avoid applicability of 02D .0530, Prevention of Significant Deterioration. Under this condition, facility-wide affected sources must emit less than 250 tons of volatile organic compounds (VOCs) per consecutive 12-month period. To ensure compliance with the above limitations, the Permittee shall multiply the total amount of each type of VOC-containing material consumed in the wood furniture finishing operations during the calendar month by the VOC content of the material. The Permittee shall calculate the total emissions of VOCs monthly and shall record the emissions monthly in a logbook (written or electronic format) kept on-site and made available to DAQ personnel upon request. Monthly VOC emissions, in tons, shall be calculated by the following equations:

$$E_{\text{VOC (total)}} = \sum E_{\text{VOC }(Each\ Material)} + 0.07$$

For each material used.

$$E_{\text{VOC(Each Material)}} = \frac{(A1\ x\ D1\ x\ B1)}{2{,}000}$$

Where:

$E_{VOC\ (Total)}$	=	total tons of VOC emissions per month from the facility.
$E_{VOC\ (Each\ Material.)}$	=	total VOC used in tons/accounting period (month)
A#	=	amount of each VOC-containing material used, in gallons/accounting period (month)
D#	=	the density of A# in pounds per gallon
B#	=	weight percent VOC in A#, as a fraction
0.07	=	equates to the monthly VOC potential to emit tons for the miscellaneous insignificant activity sources including, makeup air systems, ovens, heating, fire engine pump, and glue usage

Example calculation for material ID No. E63UXA34012
Description: Cashmere Primer
{[(100 gallons/month) x (10.98 pounds/gallon) x (33.4/100)] / (2000 pounds/ton)} + 0.07
Estimated VOC emissions = 0.253 tons/month

Dura-Supreme is required to document the calculated emissions along with the calculated rolling average for each of the 12-month periods over the previous 17 months and submit a summary report of the required monitoring and recordkeeping every six months. This permit renewal does not affect this status. Continued compliance is expected.

Iredell County is in attainment or unclassifiable for all promulgated National Ambient Air Quality standards (NAAQs) in accordance with 81.334. The PSD program applies to major stationary sources and major modifications in this airshed.

Iredell County has triggered minor source baseline dates for PM_{10}, SO_2, and NOx. This new facility construction will result in an increase in 17.7 pounds per hour of PM_{10}, 0.013 pounds per hour of SO_2, and 2.36 pounds per hour of NO_x.

112(r)
40 CFR Part 68 requires stationary sources storing more than threshold quantities of regulated substances to develop an RMP in accordance with Section 112(r) of the Clean Air Act. The RMP lists the potential effects of a chemical accident at the facility, steps the facility is taking to prevent an accident, and emergency response procedures to be followed if an accident should occur. The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any regulated substances in quantities above the thresholds in the rule.

CAM
This application is processed pursuant to 15A NCAC 02Q .0300 "Construction and Operation Permits" and not under 02Q .0500 "Title V Procedures". Compliance assurance monitoring (CAM) requirement under 40 CFR 64, as implemented through 02D .0614, is strictly a Title V requirement. When DAQ processes the facility's initial Title V application, such applicability analysis will be conducted. Therefore, CAM analysis need not be performed at this time.

IX. Facility Wide Air Toxics (State Enforceable Only)

Toxics Regulatory Review

a. Wood furniture manufacturing operations as defined in 40 CFR 63.801(a) that comply with emission limitations and other requirements of 40 CFR 63 Subpart JJ are normally exempt from a permit to emit toxic air pollutants. The surface coating paint booths ID Nos. (ES-l through ES-9) are subject to 40 CFR 63 Subpart JJ. The diesel-fired fire pump engine (IES-5) is subject to 40 CFR 63, Subpart ZZZZ.

Per 15A NCAC 02Q .0702 EXEMPTIONS (a) A permit to emit toxic air pollutants shall not be required pursuant to this Section for: (Item 23) wood furniture manufacturing operations as defined in 40 CFR 63.801(a) that comply with the emission limitations and other requirements of 40 CFR Part 63 Subpart JJ, provided that the terms of this exclusion shall not affect the authority of the Director pursuant to 15A NCAC 02Q .0712.

Per 15A NCAC 02Q .0712 CALLS BY THE DIRECTOR Notwithstanding any other provision of this Section or 15A NCAC 02D .1100, upon a written finding that a source or facility emitting toxic air pollutants presents an unacceptable risk to human health based on the acceptable ambient levels in 15A NCAC 02D .1104 or epidemiology studies, the Director shall require the owner or operator of the source or facility to submit a permit application to comply with 15A NCAC 02D .1100 for any or all of the toxic air pollutants emitted from the facility.

Based on the potential emissions submitted by the facility, DAQ's permit engineer requested the facility to demonstrate that they do not emit toxic air pollutants (TAP) that presents an unacceptable risk to human health based on the acceptable ambient levels in 15A NCAC 02D .1104 on August 15, 2023. Initial modeling results from the facility were sent to DAQ as an addendum on August 30, 2023. The facility submitted updated calculations and modeling results on September 18, 2023. A final complete addendum to the permit was received on September 28, 2023 that included the 15A NCAC 02Q .0711 TPER screening evaluation below.

Table 3 – TPER Screening Evaluation

Hourly

Air Toxic	CAS Number	Total Site Emissions lb/hr	TPER* lb/hr	Trigger Modeling? lb/hr
Acetaldehyde	75-07-0	0.0	6.8	NO
Acrolein	107-02-8	0.00	0.02	NO
Ammonia	7664-41-7	0.07	0.68	NO
Cresol	1319-77-3	0.11	0.56	NO
Formaldehyde	50-00-0	1.68	0.04	YES
Methyl Ethyl Ketone	78-93-3	81.9	22.4	YES
Methyl Isobutyl Ketone	108-10-1	6.1	7.6	YES
Toluene	108-88-3	88.6	14.4	YES
Xylene	1330-20-7	48.00	16.40	YES

Daily

Air Toxic	CAS Number	Total Site Emissions lb/day	TPER* lb/day	Trigger Modeling? lb/day
Soluble chromate compounds	-	0.000	0.013	NO
Hexane	110-54-3	1	23	NO
Manganese and compounds	-	17.87	0.63	YES
Mercury, alkyl	-	0.0000	0.0013	NO
Methyl Ethyl Ketone	78-93-3	1,965	78	YES
Methyl Isobutyl Ketone	108-10-1	145	52	YES
Nickel, soluble compounds, as nickel	-	0.00	0.01	NO
Toluene	108-88-3	2,126	98	YES
Xylene	1330-20-7	1,152	57	YES

Annual

Air Toxic	CAS Number	Total Site Emissions lb/yr	TPER* lb/yr	Trigger Modeling? lb/yr
Arsenic	-	0.001	0.053	NO
Benzene	71-43-2	0.7	8.1	NO
Benzo(a)pyrene	50-32-8	0.0	2.2	NO
Beryllium	-	0.00	0.28	NO
1,3-Butadiene	106-99-0	0	11	NO
Cadmium	-	0.00	0.37	NO

* Corresponds to the Obstructed or Non-Vertical Oriented TPER from 15 NCAC 02Q .0711(a).

Modeling Review

b. DAQ's supervisor from Air Quality Analysis Branch (AQAB) reviewed the dispersion modeling analysis, received on September 18, 2023 from Dura-Supreme. The purpose for the modeling was to demonstrate compliance with guidelines specified in 15A NCAC 2D .1104 for Toxic Air Pollutants (TAPs) emitted above the Toxic Permitting Emission Rates (TPERs) listed in 15A NCAC 2Q .0711. The modeling adequately demonstrates compliance, on a source-by-source basis, for air toxics.

Six air toxics, formaldehyde, manganese, MEK, MIBK, toluene and xylene were evaluated using AERMOD (version 22112) with five years (2014-2018) of surface meteorological data from Charlotte with upper air data from Greensboro. Direction-specific building dimensions, determined using EPA's BPIP-Prime program (04274), were used as input to the model for building wake effect determination for point sources. The compliance demonstration assumes the source parameters and pollutant emission rates used in the dispersion modeling analysis are correct.

Maximum Modeled Toxics Impacts for Dura Supreme
Statesville, Iredell County, NC

Pollutant	Averaging Period	Max. Conc. (µg/m³)	AAL (µg/m³)	% of AAL
Formaldehyde	1-hr	145	150	97%
Manganese	24-hr	16.5	31	53%
MEK	24-hr	1,782	3,700	48%
	1-hr	6,263	88,500	7%
MIBK	24-hr	160	2,560	6%
	1-hr	691	30,000	2%
Toluene	24-hr	2,296	4,700	49%
	1-hr	9,581	56,000	17%
Xylene	24-hr	1,005	2,700	37%
	1-hr	4,203	65,000	6%

c. Pursuant to 15A NCAC 02D .1100 and in accordance with the application No. 4900314.23A addendum for an air toxic compliance demonstration performed on a source-by-source basis. The main assumptions with the demonstration are the maximum spray rate, highest material toxic percentage for each booth, and product performance specifications. The maximum application of materials are 60 minutes per hour, 24 hours per day, 8,760 hours per year. The toxic emissions below will not be exceeded:

TOXIC AIR POLLUTANTS (CAS NUMBER)	UNITS	ES-1	ES-2	ES-3	ES-4	ES-5	ES-6
Formaldehyde (50-00-0)	lb/hour	4.64E-01	9.86E-02	6.07E-02	0.0E-00	1.51E-01	5.25E-01
Manganese & compounds	lb/day	3.21E+02	2.00E+00	1.23E+00	2.00E+00	1.23E+00	4.30E+00
Methyl Ethyl Ketone (78-93-3)	lb/hour lb/day	3.18+E01 7.62E+02	4.75E+00 1.14E+02	3.03E+00 7.28E+01	4.75E+00 1.14E+02	3.03E+00 7.28E+01	1.02E+01 2.44E+02
Methyl Isobutyl Ketone (108-10-1)	lb/hour lb/day	6.95E-01 1.67E+01	3.48E-01 8.34E+00	2.93E+00 7.02E+01	2.18E+00 5.24E+01	2.14E-01 5.14E+00	1.67E+00 4.01E+01
Toluene (108-88-3)	lb/hour lb/day	1.42E+01 3.42E+02	7.12E+00 1.71E+02	4.39E+00 1.05E+02	3.21E+01 7.70E+02	4.51E+00 1.08E+02	1.53E+01 3.67E+02
Xylene (1330-20-7)	lb/hour lb/day	1.17E+01 2.81E+02	5.86E+00 1.41E+02	3.61E+00 8.67E+01	1.58E+00 3.80E+01	3.61E+00 8.66E+01	1.26E+01 3.02E+02

TOXIC AIR POLLUTANTS (CAS NUMBER)	UNITS	ES-7	ES-8	ES-9	IES-3	IES-5	FAN1 through FAN11
Formaldehyde (50-00-0)	lb/hour	7.53E-02	1.51E-01	1.51E-01	3.71E-05	7.02E-04	1.47E-04 Each FAN
Manganese & compounds	lb/day	6.12E-01	1.23E+00	1.23E+00	0.0E-00	8.57E-05	0.0E-00 Each FAN
Methyl Ethyl Ketone (78-93-3)	lb/hour lb/day	4.89E+00 1.17E+02	9.78+E00 2.35E+02	9.78+E00 2.35E+02	0.0E-00 0.0E-00	0.0E-00 0.0E-00	0.0E-00 0.0E-00 Each FAN
Methyl Isobutyl Ketone (108-10-1)	lb/hour lb/day	1.46E-01 3.51E00	2.92E-01 7.02E+00	2.92E-01 7.02E+00	0.0E-00 0.0E-00	0.0E-00 0.0E-00	0.0E-00 0.0E-00 Each FAN
Toluene (108-88-3)	lb/hour lb/day	2.19E+00 5.27E+01	4.39E+00 1.05E+02	4.39E+00 1.05E+02	1.68E-06 4.04E-05	2.43E-04 5.83E-03	6.67E-06 1.60E-04 Each FAN
Xylene (1330-20-7)	lb/hour lb/day	1.81E+00 4.33E-01	3.61E+00 8.67E+01	3.61E+00 8.67E+01	0.0E-00 0.0E-00	1.70E-04 4.08E-03	0.0E-00 0.0E-00 Each FAN

ii. To ensure compliance with the above emissions, the Permittee will record product material information and usages in a logbook (written or electronic format) kept on-site and made available to DAQ personnel upon request. Below is an example equation for hourly emissions in pounds.

$$E_{\text{TAP (total)}} = \sum E_{\text{TAP } (ES1\ through\ ES-9)}$$

For each paint booth ID Nos ES-1 through ES-9.

$$\sum E_{\text{TAP } (Each\ Paint\ Booth)} = \frac{(\%\ WT\ \ x\ Density\ x\ \%\ Mix\ Rate\ x\ Max\ Spray\ Rate\ x\ 60\ min/hr\ \ )}{128\ ounces/gal}$$

Where:

$E_{(Total)}$ = total hourly toxic emissions from the facility.
$E_{(Each\ Booth)}$ = total hourly toxic emissions from each paint booth ID Nos. ES-1 through ES-9.
% WT = percent weight of toxic in each material used.
Density = density of each material used (lb/gal)
% Mix Rate = percentage mix rate type for each material used
Max Spray Rate = maximum spray gun rate for each booth (ounces/min)

Example calculation for paint booth ES-1 for Formaldehyde (CH_2O)
Max Spray Rate: 52.6 oz/min
Material: Product ID E63C5013S Description: Transparent Primer High Blend Type: Primer
%WT = 0.003 CH_2O, Density: 8.97 lb/gal, % Mix Rate: 70%
Material: Product ID SW 80 Description: SW 80 Reducer Type: Solvent Reducer
%WT = 0.000 CH_2O, Density: 7.69 lb/gal, % Mix Rate: 18%
Material: Product ID V66V101 Description: KEMVAR Catalyst Fast Type: Catalyst
%WT = 0.000 CH_2O, Density: 6.92 lb/gal, % Mix Rate: 12%

E = (0.003 x 8.97 lb/gal x 70% x 52.6 oz/min x 60 min/hr) / 128 oz/gal = 0.4644 lb/hr
E = (0.000 x 7.69 lb/gal x 18% x 52.6 oz/min x 60 min/hr) / 128 oz/gal = 0.0000 lb/hr
E = (0.000 x 6.92 lb/gal x 12% x 52.6 oz/min x 60 min/hr) / 128 oz/gal = 0.0000 lb/hr

Facility Toxics Discussion from Addendum

d. Potential pound per hour emission calculations for each coating booth were performed following the same procedures as outlined below:
   - All possible coating products for each booth are listed
   - The Mix Rate Type is listed based on how much product is used in the as-applied mixture. For some products it is conservatively assumed that 100 percent of the product will be sprayed full time. However, for paints and primers, the following as-applied recipe is used based on product performance specifications: Paint/Primer: 70%, Reducer: 18%, Catalyst: 12%
   - The first step in the calculation process is to calculate the unrestricted spray rate in gal/hr by multiplying the mix rate (100% or 70% + 28% + 12%) by the maximum spray gun rate (oz/min).
   - The second step is to calculate the pollutant content (lb/gal) for each coating by multiplying the material density by the weight percent of each pollutant.
   - The third step is to calculate the hourly emission rate for each pollutant by multiplying the pollutant content (lb/gal) by the unrestricted spray rate (gal/hr).
   - Total emissions for each spray booth are then calculated by assuming the worst-case maximum product emissions rate on a pollutant-by-pollutant basis. This value may be from an individual pollutant applied at a 100% mixture or by the combination of paint/reducer/catalyst applied using the recipe above (70%, 18%, 12%).
   - The calculations result in a conservatively high estimate of potential emissions because it is assumed that the given worst-case product is sprayed all day and all year. In normal production practice, several different products are applied throughout the production day and year, thus individual pollutant levels would be lower because pollutant contents (lb/gal) vary for each product.
   - For particulate-based pollutants (PM/PM10/PM2.5 and manganese trioxide) a transfer efficiency of 75% for HVLP spray guns and a control efficiency of 95% for panel filters is incorporated (99.92% is anticipated). All volatile pollutants are assumed to be 100% emitted with no transfer or control.

e. Potential ton per year emission calculation assumptions:
   - Annual (ton/yr) emissions of HAPs are secondarily limited based on the maximum VOC maximum limit of 249 ton/yr. The HAP ton/yr values were calculated for each individual product by determining how many gallons of product would result in 249 tons of VOC based on product VOC content. The maximum number of gallons was then used to calculate HAP emissions for each product by incorporating the lb/gal HAP content for each product.
   - The annual HAP calculation methodology results in a conservatively high estimate of annual HAP emissions because it is assumed that the given worst-case product is sprayed all day and all year. In normal production practice, several different products are applied throughout the production day and year, thus individual pollutant levels would be lower because pollutant contents (lb/gal) vary for each product.

X. PFAS and Other Emerging Compounds

North Carolina DEQ is working to address the environmental impacts of PFAS, or per- and poly- fluoroalkyl substances. DEQ is advancing science-based, standards-setting approach for thorough permitting of PFAS releases into the environment. DEQ believes that the standards-based permit limits reduce the PFAS compounds entering the environment, give the industrial community certainty and set clear targets for PFAS reductions. Accordingly, to undertake any future standards-setting for PFAS emissions, the DEQ is currently collecting information on PFAS uses, creation (product or byproduct), and its environmental releases through a set of screening-questions from some air quality permit-applicants.

The facility was sent a PFAS questionnaire on August 8, 2023. A response was received on August 9, 2023. The questionnaire and the responses received are attached below.

Addressing Emerging Contaminants Screening Questions

1. Will your facility use any material or products in your operations that contain fluorinated chemicals? If so, please identify such materials or products and the fluorinated chemicals they contain.

Dura Supreme - No

2. Will your facility formulate/create products or byproducts (directly or indirectly) be containing fluorinated chemicals (across multiple media)? If so, please identify such products or byproducts and the fluorinated chemicals they contain.

   Dura Supreme - No

3. Will your facility generate solid, liquid, or gaseous related emissions, discharges, or wastes/products containing fluorinated chemicals? If so, please identify such waste streams or materials and the fluorinated chemicals they contain.

   Dura Supreme - No

4. Do your facility's processes or operations use equipment, material, or components that contain fluorinated chemicals (e.g., surface coating, clean room applications, solvents, lubricants, fittings, tubing, processing tools, packaging, facility infrastructure, air pollution control units)? Could these processes or operations directly or indirectly (e.g., through leaching, chemical process, heat treatment, pressurization, etc.) result in the release of fluorinated chemicals into the environment?

   Dura Supreme - No

5. List the fluorinated chemicals identified (i.e., through testing or desktop review) above in your response under the appropriate methods/approaches? If one is not, are they on any other known US or International target lists?

   - OTM-45 (air emissions)
   - Methods 533 & 537.1 (drinking water)
   - SW-846: Method 8327 (water)
   - Draft Method 1633 (water, solids, tissue)
   - "Total PFAS" Draft Method 1621 for Adsorbable Organic Fluorine (wastewater)
   - Non targeted analytical methods
   - Qualitative approach through suspect screening

   Dura Supreme – None Identified

6. Are there other facilities or operations in the U.S. or internationally engaged in the same or similar activities involving fluorinated chemicals addressed in your response to the above questions? If so, please provide facility identification information? In addition, are there any ISO (International Organization for Standardization) certification requirements?

   Dura Supreme - No

7. Do you plan to store AFFF on site, use it in fire training at the site, use it for fighting fires at the facility, or include it in a fire fighting system at the site?

   Dura Supreme - No

8. Are other emerging contaminants (e.g., 1,4-dioxane, brome, perchlorate, 1,2,3-Trichloropropane) used in some capacity within your facility or operations?

   Dura Supreme - No

9. Do you need technical assistance to answer the above questions?

   Dura Supreme - No

In identifying any fluorinated chemicals or emerging contaminants in response to any of the above questions, please use CAS numbers (if available) and specify the relevant quantities of any such chemicals. If your answers to any of the above questions rely on assumptions or, if information necessary to respond to any of these questions is unavailable, please state. If any of the information requested is deemed a "trade secret" under N.C.G.S. § 66-152(3) and subject to confidential treatment under N.C.G.S. § 132-1.2(1) as required under the Public Record Act, please contact us to discuss proper designation of this information.

The facility also responded by email the following statement: "Dura Supreme has reviewed the Emerging Contaminants Screening Questions. To the best of our knowledge, based on a review of environmental data sheets provided by our coating suppliers, no emerging contaminates are contained in the coating materials to be used in our manufacturing processes, in any of our facilities. Therefore, no emerging contaminates will be used or emitted from facility operations. Dura Supreme will continue to review product information as it becomes available and provide additional information as necessary."

XI. Public Participation

Generally, the draft permits issued in accordance with 02Q .0300 "Construction and Operation Permits" are not required to be noticed for public comment unless the public participation is specifically required for such permits in 02Q .0306(a). For this greenfield Title V facility located in Iredell County, DEQ determined that an environmental justice review was necessary and an EJ report is required to be prepared. A 30-day public notice period will occur with the issuance of this draft permit due to the EJ review. The public comment period is detailed in the application chronology above. A summary of the comments received and DAQ's responses are detailed in Section XI below. A complete listing of all comments received, either by voice mail, email, or letter, are included as Attachment 1 of this Document.

XII. Other Regulatory Considerations

- Professional Engineer (PE) Seal Requirement – 15A NCAC 02Q .0112 APPLICATIONS REQUIRING PROFESSIONAL ENGINEER SEAL
  This regulation requires that a professional engineer (PE) licensed to practice in NC is required to seal the technical portions of air permit application for new and modified sources that involve design, determination of applicability and appropriateness, or determination and interpretation of performance of air pollution capture and control systems. The applicant consultant, Brian Eichlin, has fulfilled the requirement of this rule by providing a PE seal for all control devices included in the application (ref. Robert J. Rella, P.E. Seal # 022474, May 8, 2023). Per the NCBELS (North Carolina Board of Examiners for Engineers and Surveyors) website, Mr. Robert J. Rella's PE license appears to be current.

- Zoning Requirement – 15A NCAC 02Q .0305(a)(1)(B) and .0304(b)(1)
  The new Dura-Supreme facility requires a local zoning consistency determination. A zoning consistency determination request was mailed to the Town of Siler City and reviewed by Jack Meadows, Community Development Director, City of Statesville Planning Department on May 9, 2023. The review indicated that "the proposed operation is consistent with applicable zoning ordinances" and was signed by planning technician Xavier Bauguess.

- A Title V Greenfield fee of $11,452 was required for this application and was received by the DAQ on May 19, 2023.

- The appropriate number of application copies were received by the DAQ.

- The draft permit was sent to the regional office (Mooresville Regional Office (MRO)) for review on August 10, 2023. No comments were received.

- The draft permit was sent to the applicant for review on August 10, 2023. Comments were received on August 16, 2023. Minor typos and format changes are not included.

  Comment 1:
  In Section 2.2 A.2.c, the permitee requested material usage records be kept for total facility operations and not be tracked per booth. Is it acceptable to perform the calculation on a total booth basis?

  DAQ response: Instead of a usage per paint booth, the formula was changed to incorporate the facility's usage of each paint booth product ID No.

- The NCDAQ prepared a public notice that was published in the *Statesville Newspaper*. The public comment period ran from TBD, 2023 through TBD, 2023. A total of TBD comments were received; TBD were received via email, TBD were received via voicemail, and TBD letters were received in the mail. The comments and DAQ's responses are summarized below.

  1. ## (#) comments were received that indicated the commenter was concerned about the environmental impact of the additional air emissions that will be cause …..

  DAQ response:

XIII. Recommendations

The Greenfield permit application for Dura-Supreme, LLC - Statesville in Statesville, Iredell 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. 10787R00.