

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

MEMORANDUM

May 27, 2022

TO: Lee Warden, P.E., Permits and Engineering Group Manager

THROUGH: Richard Kienlen, P.E., Engineering Manager, New Source Permits Section

THROUGH: Junru Wang, E.I., Existing Source Permits Section

FROM: Ryan Buntyn, P.E., New Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2022-0014-C**
Hubbell Utility Solutions
Hubbell Manufacturing OKC, Inc. (SIC 3444/NAICS 332322)
Facility ID: 22693
Latitude: 35.40044°N, Longitude: 97.44165°W
Section 30, Township 11N, Range 2W, Oklahoma County, Oklahoma
Directions: 6801 S. Sunnyslane Road, Oklahoma City, OK 73135

SECTION I. INTRODUCTION

Hubbell Utility Solutions (Hubbell) has applied for an individual minor source construction permit for their Hubbell Manufacturing OKC, Inc. facility. Hubbell is proposing to install and operate an Armorcast Products manufacturing operation to produce concrete-resin utility boxes and vaults. Materials will be mixed and poured/casted directly into composite molds to produce products of various shapes and sizes. The facility will operate other miscellaneous support equipment such as mixers, molds, and pouring stations. The polyester resin used in the casting/molding processes contains styrene, a VOC and HAP. These VOC / HAP emissions will be captured and controlled using a regenerative thermal oxidizer (RTO). There will be resin storage tanks on-site as well. Some units at this facility were previously permitted under Permit No. 2018-1188-TVR2, issued to Quad Graphics Inc. OKC facility, on July 8, 2019, and canceled on March 3, 2021. The equipment will be treated as newly installed equipment for this construction permit.

Facility-wide emissions are estimated to be 7.73 TPY of NO_x, 6.49 TPY of CO, 6.35 TPY of VOC, 0.59 TPY of PM₁₀, and 6.07 TPY of HAPs. This facility, therefore, qualifies for a “synthetic minor” permit because the controlled emissions of each of the criteria pollutants are below the major source threshold of 100 TPY and the HAP emissions are below the 10 TPY threshold for a single HAP and below the 25 TPY threshold for any combination of HAPs.

SECTION II. PROCESS DESCRIPTION

Processes

The two processes at the facility are described below.

1. Compression Molding Presses (28)

Materials are directed to the closed American Food Equipment Company (AMFEC) dual paddle mixer via closed loop auger systems, closed pump/pipe systems, or fed directly into the mixer. Following mixing, the material is poured from the mixers into open containers, manually transferred to the compression molding presses, and cured in place within the closed matched-metal mold. Cured parts are removed from the mold. No cleaners or mold releases are used in the process. Cured pieces are removed from the molds manually, using mallets if necessary. Hubbell may consider using cleaners or mold releases in the future.

2. Auto-casters (3)

Non-Pads (1) Materials are either fed directly to the Gruber Autocaster machine's closed auger/mixing barrel or transferred via closed loop auger systems or closed pump/pipe systems. Mixed material is dispensed to a closed composite mold/tooling located directly beneath the auto-caster. Molds are cured in place within the closed matched-metal mold at room temperature. Cured parts are removed from the mold.

Pads (1) Materials are either fed directly to the Gruber Autocaster machine's closed auger/mixing barrel or transferred via closed loop auger systems or closed pump/pipe systems. The mixed material is dispensed directly to closed agitation holding vessels, then to Hobart mixers (equipped with 30-quart mixing bowls) along with methyl ethyl ketone peroxide (MEKP) catalyst, mixed, then hand-poured to pad molding/tooling. Molds are cured in place within the closed matched-metal mold at room temperature. Cured parts are removed from the mold.

No cleaners or mold releases are used in the process. Cured pieces are removed from the molds manually, using a mallet if necessary. Hubbell may consider using cleaners or mold releases in the future. The third Auto-caster may be used to produce either pads or non-pads, depending on demand.

Raw Materials

Raw materials involved in the processes include: sand, limestone, polyester resin, BPO paste catalyst (press only), MEKP catalyst (Autocasters only), soybean oil, chipped fiberglass, and pigments (Autocasters only). The BPO paste serves as a polymerization initiator with a vapor pressure of 5×10^{-5} mmHg (Benzoyl peroxide [microkat.gr]) and therefore emissions are estimated to be negligible. MEKP is a reactive hardener with a vapor pressure of 8.05×10^{-5} mmHg at 25°C (2-Butanone peroxide, CAS 1338-23-4 [lookforchem.com]) and emissions are estimated to be negligible. Soybean oil vapor pressure is negligible (20011U6Y.PDF [epa.gov]). The unsaturated polyester resins contain up to 45 % styrene monomer—this is the primary source of emissions from

the press and Autocasters. Safety Data Sheets for the two most likely resins are included. Other, similar, resins may be used but styrene content of any resin proposed for use will be limited to 45%. Resin will likely be stored in the existing aboveground storage tanks 1, 5, or 7, but other existing tanks may be used for this purpose. Regardless of the number of tanks utilized, the annual throughput will not exceed those included in the emissions estimates.

Regenerative Thermal Oxidizer

The facility is equipped with three existing L & E America (Langbein Engelbracht America) / TANN Corporation RTOs (RTO-1, RTO-2, & RTO-3). While the facility intends to duct the molding equipment to RTO-3 as the primary control device, it may additionally be ducted to RTO-1 and/or RTO-2 for redundancy, in the event that a backup unit is needed.

SECTION III. EQUIPMENT

Process equipment for this phase is listed in Table 1.

Table 1: Equipment

EU	Description	Capacity	Const. Date
EU1	Armorcast Press	Undetermined	4/2022 (installation)
EU2	Autocaster Non-Pads	100 lb/hr	4/2022 (installation)
EU2	Autocaster Pads	100 lb/hr	4/2022 (installation)
RTO-1	Thermal Oxidizer	30,000 CFM	2013
RTO-2	Thermal Oxidizer	40,000 CFM	2013
RTO-3	Thermal Oxidizer	40,000 CFM	2013
AST	Resin Storage Tanks (3)	20,000 gal	2003

SECTION IV. EMISSIONS

VOC and HAP emissions from the casting process are from the polyester resin used in the casting/molding processes because the resin contains styrene. VOC and HAP emissions are based on maximum annual resin usage under two operating scenarios: processing while controls are not operating and processing when controls are operational. Total maximum annual resin usage will be limited to 11,400,000 pounds. The facility will limit total annual resin processed without controls to 1,140,000 pounds, as summarized in Table 2 following. The emission factor for Autocasters (0.007 lb/lb resin) is from Guidelines for Calculating Emissions from Polyester Resin Operations (December 2019), South Coast Air Quality Management District (AQMD) for closed molding with vapor suppressant and 45% Styrene content.

Table 2: Resin Usage - Uncontrolled Emissions

EU	Equipment	Maximum Resin Usage (processed with no controls)	Emission Factor	Uncontrolled VOC/HAP Emissions	
		lb/yr	lb/lb resin	lb/yr	TPY
EU1	Armorcast Press	400,000	0.007	2,800	1.40
EU2	Autocaster Non-Pads	670,000	0.007	4,690	2.35
EU2	Autocaster Pads	70,000	0.007	490	0.25
	TOTAL	1,140,000	0.007	7,980	3.99

The remainder of resin processed (10,260,000 pounds of resin) will employ an RTO for control of emissions. Table 3 summarizes controlled emissions from the process.

Table 3: Resin Usage - Controlled Emissions

EU	Equipment	Maximum Resin Usage (processed with controls)	Emission Factor	Uncontrolled VOC/HAP Emissions	Control ¹	Controlled VOC/HAP Emissions	
		lb/yr	lb/lb resin	TPY		lb/yr	TPY
EU1	Armorcast Press	3,600,000	0.007	12.6	97	756	0.38
EU2	Autocaster Non-Pads	6,030,000	0.007	21.1	97	1,266	0.63
EU2	Autocaster Pads	630,000	0.007	2.2	97	132	0.07
	TOTAL	10,260,000	0.007	35.9	---	2,155	1.08

¹While the facility intends to duct the molding equipment to RTO-3 as the primary control device, RTO-1 and/or RTO-2 may be used for redundancy purposes.

Total emissions from the Autocasters (controlled plus uncontrolled emissions) are presented in Table 4 below.

Table 4: Total Emissions from Autocasters

EU	Equipment	Total VOC/HAP Emissions	
		lb/yr	TPY
EU1	Armorcast Press	3,556	1.78
EU2	Autocaster Non-Pads	5,956	2.98
EU2	Autocaster Pads	622	0.31
	TOTAL	10,135	5.07

In addition to emissions from the presses and Autocasters themselves, emissions from natural gas combustion in the RTOs is included. To be conservative, emission estimates have assumed that the

RTOs will be fully fueled by natural gas. Under actual operations, the RTOs will be fueled by the resin fumes and natural gas will provide supplemental fuel. In addition, while only one RTO is expected to be needed to control resin emissions, emissions from all three RTOs have been included.

Emissions from the thermal oxidizers are based on emission factors from AP 42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources, Table 1.4-1 (7/98) Emission Factors for Nitrogen Oxides and Carbon Monoxide from Natural Gas Combustion (NO_x and CO), Table 1.4-2. Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion (VOC) and EPA's emission factor spreadsheet natgas_procgas_lpg_pm_efs_not_ap42_032012_revisions.xls and the following parameters.

Table 5: RTO Equipment Information

EU	Equipment	Fan Rating	Heat Input
		CFM ¹	MMBTUH
RTO-1	Thermal Oxidizer	30,000	6.0
RTO-2	Thermal Oxidizer	40,000	6.0
RTO-3	Thermal Oxidizer	40,000	6.0

¹CFM = cubic feet per minute.

Table 6: RTO Emissions

EU	Equipment	NO _x Emissions		CO Emissions		VOC Emissions	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
RTO-1	Thermal Oxidizer	0.59	2.58	0.49	2.16	0.03	0.14
RTO-2	Thermal Oxidizer	0.59	2.58	0.49	2.16	0.03	0.14
RTO-3	Thermal Oxidizer	0.59	2.58	0.49	2.16	0.03	0.14
TOTAL		1.77	7.73	1.47	6.49	0.09	0.43

Working and breathing (W/B) emissions for the three 20,000-gallon resin storage tanks (ASTs) were estimated using the Oklahoma DEQ Storage Tank Emissions Calculation Tool (which is based on AP-42, Section 7.1 (6/20)) and the following parameters.

Table 7: Resin Storage Emissions

Parameter	Resin Storage Tanks (AST)
Throughput, gal/yr	10,000,000
Liquid in Tank(s)	Resin (Styrene)
Working/Breathing Method/Tool	AP-42 (06/20)
Flash Calculation Method/Tool	None
Working/Breathing Emissions, TPY	0.86
Flashing Emissions, TPY	None
Control Type	None
Total VOC Emissions, TPY	0.86

Storage tank emissions were conservatively assumed to pass through a single tank (this assumption maximizes turnovers and therefore over-estimates working losses).

Facility-wide emissions for this phase of the Hubbell project are included below.

Table 8: Facility-Wide Emissions Summary

Source	NO _x		CO		VOC		SO ₂		PM ₁₀		HAPs	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Armorcast Press	---	---	---	---	0.17	0.38	---	---	---	---	0.17	0.38
Armorcast Press (Uncontrolled)	---	---	---	---	0.61	1.40	---	---	---	---	0.61	1.40
Autocaster Non-Pads	---	---	---	---	0.28	0.63	---	---	---	---	0.28	0.63
Autocaster Non-Pads (Uncontrolled)	---	---	---	---	1.02	2.35	---	---	---	---	1.02	2.35
Autocaster Pads	---	---	---	---	0.03	0.07	---	---	---	---	0.03	0.07
Autocaster Pads (Uncontrolled)	---	---	---	---	0.11	0.25	---	---	---	---	0.11	0.25
Thermal Oxidizer	0.59	2.58	0.49	2.16	0.03	0.14	0.004	0.02	0.04	0.20	0.01	0.05
Thermal Oxidizer	0.59	2.58	0.49	2.16	0.03	0.14	0.004	0.02	0.04	0.20	0.01	0.05
Thermal Oxidizer	0.59	2.58	0.49	2.16	0.03	0.14	0.004	0.02	0.04	0.20	0.01	0.05
Resin Storage	---	---	---	---	0.38	0.86	---	---	---	---	0.38	0.86
Total	1.77	7.74	1.47	6.48	2.69	6.36	0.012	0.06	0.12	0.60	2.63	6.09

Emissions of each of the criteria pollutants are below the major source threshold of 100 TPY and the HAP emissions are below the major source threshold of 10 TPY for an individual HAP and 25 TPY of combined HAPs. The permit includes caps on individual HAP emissions (9.9 TPY) and total HAP emissions (24.9 TPY).

SECTION V. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the “Federal Regulations” section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated

pollutants. Required annual information (Turn-Around Document) shall be provided to Air Quality by April 1st every year.

OAC 252:100-7 (Permits for Minor Facilities)

[Applicable]

Since uncontrolled emissions of HAPs will be above 10 TPY for styrene and controlled HAP emissions will be less than 10 TPY, the facility is considered as a synthetic minor source.

OAC 252:100-9 (Excess Emissions Reporting Requirements)

[Applicable]

Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning)

[Applicable]

Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter (PM))

[Applicable]

Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment. Particulate emission limits are based on maximum design heat input rating, as described in Appendix C. The thermal oxidizers are the only combustion sources at the facility. Since the RTOs are control devices, they are not considered fuel-burning equipment and are therefore not subject to this subpart.

This subchapter also limits PM emissions from industrial processes. There are no significant particulate emissions from any other activity at this facility.

OAC 252:100-25 (Visible Emissions and Particulates)

[Applicable]

No discharge of greater than 20% opacity is allowed except for short-term occurrences that consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. The permit will require that natural gas be used as supplemental fuel for the RTOs to ensure compliance with these requirements.

OAC 252:100-29 (Fugitive Dust)

[Applicable]

No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Under normal operating conditions, this facility will not cause a problem in this area, therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds)

[Applicable]

Part 2 limits the ambient air concentration of H₂S emissions from any facility to 0.2 ppmv (24-hour average) at standard conditions which is equivalent to 283 µg/m³. Fuel-burning equipment fired with commercial natural gas or commercial propane gas will not have the potential to exceed the H₂S ambient air concentration limit.

Part 5 limits sulfur dioxide emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels, the limit is 0.2 lb/MMBTU heat input, 3-hour average. AP-42 (3/98), Table 1.4-2, lists the total SO₂ emissions for natural gas to be 0.6 lb/MMft³ or about 0.0006 lb/MMBTU which is in compliance with this limitation. AP-42 (10/96), Table 1.5-1, lists the total SO₂ emissions for propane as 0.10S lb/10³ gallons. S equals the sulfur content expressed in gr/100 ft³ gas vapor. Propane has an average sulfur content of approximately 5 gr/100 ft³. Therefore, the total SO₂ emissions for propane are approximately 0.0054 lb/MMBTU which is in compliance with this limitation. The permit requires the use of commercial-grade natural gas or propane for all fuel-burning equipment to ensure compliance with Subchapter 31.

OAC 252:100-33 (Nitrogen Oxides)

[Not Applicable]

This subchapter limits NO_x emissions from new fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.2 lb of NO_x per MMBTU. There are no equipment items that exceed the 50 MMBTUH threshold.

OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

None of the following affected processes are located at this facility: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds)

[Part 7 Applicable]

Part 3 requires VOC storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. None of the tanks on-site store material which has a vapor pressure greater than 1.5 psia under actual storage conditions. Part 5 limits the VOC content of coatings used in coating lines or operations. This facility does not perform coatings (or have coating lines) as part of phase 1 of normal operations.

Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. Fuel burning equipment will be operated in accordance with manufacturer recommendations.

OAC 252:100-39 (Organic Compounds, Former Nonattainment Areas)

[Not Applicable]

This subchapter imposes additional conditions beyond those of Subchapter 37 on emissions of organic materials from new and existing facilities in Tulsa and Oklahoma Counties. This facility is in Oklahoma County. The facility is not involved in any of these specific operations at this time.

OAC 252:100-42 (Toxic Air Contaminants (TAC))

[Applicable]

This subchapter regulates TAC that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated, there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping)

[Applicable]

This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement.

Each emissions unit must be evaluated for periodic testing in accordance with the Periodic Testing Standardization guidance issued December 1, 2011, on a pollutant-by-pollutant basis. The frequency of the periodic testing requirement is based on the quantity of emissions an emission unit is permitted to emit. Periodic testing requirements are not required for an emission unit that is subject to an applicable requirement that already requires periodic testing, continuous emission monitoring (CEMS), or predictive emission monitoring (PEMS). The RTO, RTO-3, has potential HAP emissions greater than 25 TPY. The following table lists the applicable testing for each pollutant required under the guidance.

Periodic Testing Review

EUG/EU	Pollutant	Destructive Efficiency¹	Current Monitoring	Periodic Testing
RTO-3	HAP	%	None	Yes, 5 Years

¹ – Measured using inlet and outlet concentrations.

SECTION VI. FEDERAL REGULATIONS

NSPS, 40 CFR Part 60

[Not Applicable]

Subparts K, Ka, Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813 gallons capacity for Subpart Kb and 40,000 gallons for Subparts K and Ka. Subparts K and Ka are not applicable since there are no VOL storage vessels at this facility with this capacity. Subpart Kb would apply to the resin storage tanks (AST) (20,000-gallons each) if the maximum true vapor pressure of the liquid stored is 15.0 kPa or greater. The resins Hubbell is proposing to store all have vapor pressures less than 15 kPa. Therefore, Subpart Kb does not apply.

NESHAP, 40 CFR Part 63

[Not Applicable]

There are no applicable requirements under 40 CFR Part 63 that apply to the facility.

Chemical Accident Prevention Provisions, 40 CFR Part 68

[Not Applicable]

This facility does not process or store more than the threshold quantity of and regulated substance (Section 112r of the Clean Air Act 1990 Amendments). More information on this federal program is available on the web page: www.epa.gov/rmp.

SECTION VII. COMPLIANCE

Tier Classification

This application has been classified as **Tier I** based on the request for a new minor NSR construction permit for a minor facility.

The draft permit will undergo public notice on the DEQ's web site as required in OAC 252:4-7-13(g). The public, tribal governments, and the EPA will have 30 days to comment on the draft permit. Permits available for public review and comment are found at this location:

<https://www.deq.ok.gov/permits-for-public-review/>

Landowner Affidavit

The applicant has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the real property.

Enforcement Case/Violation

There is no active enforcement case for this facility.

Inspection

An initial inspection is not required for construction permits.

Fee Paid

A fee of \$2,000 was paid for a minor source construction permit on April 20, 2022.

SECTION VIII. SUMMARY

The facility has demonstrated the ability to comply with all applicable Air Quality rules and regulations. There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the construction permit is recommended, contingent on public review.

DRAFT

PERMIT TO CONSTRUCT AIR POLLUTION CONTROL FACILITY SPECIFIC CONDITIONS

Hubbell Utility Solutions
Hubbell Manufacturing OKC, Inc.

Permit No. 2022-0014-C

The permittee is authorized to construct in conformity with the specifications submitted to the Air Quality Division on January 14, 2022, and subsequent submittal on March 17, 2022. The Evaluation Memorandum dated May 27, 2022, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction and continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. **Facility-Wide Emission Limits:** NO_x, CO, VOC, SO₂, PM₁₀/PM_{2.5}, and HAP emissions from the whole facility shall be based on material usage, emission factors, and hours of operation, and shall be limited to the emission limits shown in the table below. Compliance with the emission limits for NO_x, CO, VOC, SO₂, and PM₁₀/PM_{2.5} from the whole facility shall be demonstrated based on monthly fuel usage, 12-month rolling basis. Emissions of HAP from the whole facility shall not exceed the following limits based on a monthly, 12-month rolling total. Each month the permittee shall calculate HAP emissions from the whole facility and add them to the previous eleven months.

Pollutant	Facility-Wide Emission Limit ¹
NO _x	99.9 TPY
CO	99.9 TPY
VOC	99.9 TPY
SO ₂	99.9 TPY
PM ₁₀ /PM _{2.5}	99.9 TPY
Individual HAP	9.9 TPY
Combined HAPs	24.9 TPY

¹ TPY limits are based upon a 12-month rolling emissions total.

2. The permittee is authorized to operate this facility continuously (24 hours per day, every day of the year).
3. The fuel-burning equipment shall be fired with propane or natural gas. Compliance can be shown by a current propane or natural gas company bill. Compliance shall be demonstrated at least once each calendar year.
4. The Autocasters shall use the emission factor (0.007 lb/lb resin) from Guidelines for Calculating Emissions from Polyester Resin Operations (December 2019) AQMD, for closed molding with vapor suppressant and 45% Styrene content when calculating emissions.

5. Each air pollution control device (RTO-1, RTO-2, or RTO-3) shall be maintained in accordance with the manufacturer's specifications, which shall be kept on-site and made available to inspection staff upon request. The thermal oxidizers shall be operated in accordance with manufacturer's specifications: recommended bed temperature: 1,450 to 1,700°F; recommended pressure drop: less than 14" w.c. at design flow. An alternate pollution control device may be used provided that the new system has an efficiency equal to or greater than the replaced system.
6. A performance test of RTO-3 shall be performed within 180 days of the initial use of the RTO as a control device. The test shall determine destructive efficiency of the unit at representative operating conditions. Subsequent periodic testing will be required at least once every five years thereafter. Testing shall be conducted under representative conditions and using approved reference methods.
 - a. A protocol describing the reference methods to be used, data to be collected, and proposed calculations shall be submitted to the Air Quality Division at least 30 days before the scheduled test date.
 - b. A written report documenting the results of performance testing shall be submitted within 60 days of completion of on-site testing.
 - c. Results of the test shall be used to identify the maximum allowable control efficiency for use in annual emission inventory and monthly emission calculations for processes controlled by RTO-3.
7. Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event.
8. Records of operations listed below shall be maintained on-site and shall be available for review by regulatory personnel during normal business hours. These records shall be maintained for a period of at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
 - a. Records of resin usage (monthly, 12-month rolling basis).
 - b. Emission calculations showing compliance with the emission limits in Specific Condition No. 1 (monthly, 12-month rolling basis).
 - c. For fuel(s) burned, the appropriate document(s) as described in Specific Condition No. 3.
 - d. Records as required by Specific Condition No. 5.
 - e. Records of excess emission events, per Specific Condition No. 7.
 - f. Pressure readings for each thermal oxidizer or other appropriate parameter or check to ensure proper operation of the control device (daily when operating).
9. Upon commencement of operation and in accordance with OAC 252:100-7-18(a)(1), the permittee shall submit an application for an operating permit and notify of any changes in operation from the construction permit application.

**MINOR SOURCE PERMIT TO OPERATE / CONSTRUCT
AIR POLLUTION CONTROL FACILITY
STANDARD CONDITIONS
(February 13, 2020)**

- A. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ) in accordance with and under the authority of the Oklahoma Clean Air Act. The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. This specifically includes compliance with the rules of the other Divisions of DEQ: Land Protection Division and Water Quality Division.
- B. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-7-15(g)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-7-15(f)]
- C. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-7-18(a)]
- D. Unless specified otherwise, the term of an operating permit shall be unlimited.
- E. Notification to the Air Quality Division of DEQ of the sale or transfer of ownership of this facility is required and shall be made in writing by the transferor within 30 days after such date. A new permit is not required. [OAC 252:100-7-2(f)]
- F. The following limitations apply to the facility unless covered in the Specific Conditions:
1. No person shall cause or permit the discharge of emissions such that National Ambient Air Quality Standards (NAAQS) are exceeded on land outside the permitted facility. [OAC 252:100-3]
 2. All facilities that emit air contaminants are required to file an emission inventory and pay annual operating fees based on the inventory. Instructions are available on the Air Quality section of the DEQ web page. www.deq.ok.gov [OAC 252:100-5]
 3. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-9]
 4. Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning subchapter. [OAC 252:100-13]
 5. No particulate emissions from new fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lbs/MMBTU. [OAC 252:100-19]
 6. No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. [OAC 252:100-25]
 7. No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent

- properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
8. No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lbs/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
 9. Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with an organic material vapor-recovery system. [OAC 252:100-37-15(b)]
 10. All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

G. Any owner or operator subject to provisions of NSPS shall provide written notification as follows: [40 CFR 60.7 (a)]

1. A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
2. A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
3. A notification of the actual date of initial start-up of an affected facility postmarked within 15 days after such date.
4. If a continuous emission monitoring system is included in the construction, a notification of the date upon which the test demonstrating the system performance will commence, along with a pretest plan, postmarked no less than 30 days prior to such a date.

H. Any owner or operator subject to provisions of NSPS shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility or any malfunction of the air pollution control equipment. [40 CFR 60.7 (b)]

I. Any owner or operator subject to the provisions of NSPS shall maintain a file of all measurements and other information required by this subpart recorded in a permanent file suitable for inspection. This file shall be retained for at least five years following the date of such measurements, maintenance, and records. [40 CFR 60.7 (f)]

J. Any owner or operator subject to the provisions of NSPS shall conduct performance test(s) and furnish to AQD a written report of the results of such test(s). Test(s) shall be conducted within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial start-up. [40 CFR 60.8]



PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2022-0014-C

Hubbell Utility Solutions,

having complied with the requirements of the law, is hereby granted permission to construct the Hubbell Manufacturing OKC, Inc., located in Section 30, Township 11N, Range 2W, Oklahoma County, Oklahoma, subject to standard conditions dated February 13, 2020, and specific conditions, both attached.

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section B of the Standard Conditions.

DRAFT

Lee Warden, P.E.
Permits and Engineering Group Manager

Date Issued

Todd Lehmann
Hubbell Utility Solutions
40 Waterview Drive
Shelton, CT 06484

Subject: Construction Permit No. **2022-0014-C**
Hubbell Manufacturing OKC, Inc. (Fac. ID: 22693)
Section 30, Township 11N, Range 2W, Oklahoma County

Dear Mr. Lehmann:

Enclosed is the permit authorizing construction at the referenced facility. Please note that this permit is issued subject to standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emission inventory for this facility. An emission inventory must be completed through DEQ's electronic reporting system by April 1st of every year. Any questions concerning the form or submittal process should be referred to the Emission Inventory Staff at (405) 702-4100.

Thank you for your cooperation in this matter. If we may be of further service, please contact the permit writer at Ryan.Buntyn@deq.ok.gov, or at 405-702-4213.

Sincerely,

DRAFT

Lee Warden, P.E.
Permit and Engineering Group Manager
AIR QUALITY DIVISION

Enclosure

Department of Environmental Quality (DEQ)
Air Quality Division (AQD)
Acronym List

9-10-21

ACFM	Actual Cubic Feet per Minute	GAL	Gallon (gal)
AD	Applicability Determination	GDF	Gasoline Dispensing Facility
AFRC	Air-to-Fuel Ratio Controller	GEP	Good Engineering Practice
API	American Petroleum Institute	GHG	Greenhouse Gases
ASTM	American Society for Testing and Materials	GR	Grain(s) (gr)
BACT	Best Available Control Technology	H₂CO	Formaldehyde
BAE	Baseline Actual Emissions	H₂S	Hydrogen Sulfide
BBL	Barrel(s)	HAP	Hazardous Air Pollutants
BHP	Brake Horsepower (bhp)	HC	Hydrocarbon
BTU	British thermal unit (Btu)	HCFC	Hydrochlorofluorocarbon
C&E	Compliance and Enforcement	HFR	Horizontal Fixed Roof
CAA	Clean Air Act	HON	Hazardous Organic NESHAP
CAM	Compliance Assurance Monitoring	HP	Horsepower (hp)
CAS	Chemical Abstract Service	HR	Hour (hr)
CAAA	Clean Air Act Amendments	I&M	Inspection and Maintenance
CC	Catalytic Converter	IBR	Incorporation by Reference
CCR	Continuous Catalyst Regeneration	ICE	Internal Combustion Engine
CD	Consent Decree	LAER	Lowest Achievable Emission Rate
CEM	Continuous Emission Monitor	LB	Pound(s) [Mass] (lb, lbs, lbm)
CFC	Chlorofluorocarbon	LB/HR	Pound(s) per Hour (lb/hr)
CFR	Code of Federal Regulations	LDAR	Leak Detection and Repair
CI	Compression Ignition	LNG	Liquefied Natural Gas
CNG	Compressed Natural Gas	LT	Long Ton(s) (metric)
CO	Carbon Monoxide or Consent Order	M	Thousand (Roman Numeral)
COA	Capable of Accommodating	MAAC	Maximum Acceptable Ambient Concentration
COM	Continuous Opacity Monitor	MACT	Maximum Achievable Control Technology
D	Day	MM	Prefix used for Million (Thousand-Thousand)
DEF	Diesel Exhaust Fluid	MMBTU	Million British Thermal Units (MMBtu)
DG	Demand Growth	MMBTUH	Million British Thermal Units per Hour (MMBtu/hr)
DSCF	Dry Standard (At Standard Conditions) Cubic Foot (Feet)	MMSCF	Million Standard Cubic Feet (MMscf)
EGU	Electric Generating Unit	MMSCFD	Million Standard Cubic Feet per Day
EI	Emissions Inventory	MSDS	Material Safety Data Sheet
EPA	Environmental Protection Agency	MWC	Municipal Waste Combustor
ESP	Electrostatic Precipitator	MWe	Megawatt Electrical
EUG	Emissions Unit Group	NA	Nonattainment
EUSGU	Electric Utility Steam Generating Unit	NAAQS	National Ambient Air Quality Standards
FCE	Full Compliance Evaluation	NAICS	North American Industry Classification System
FCCU	Fluid Catalytic Cracking Unit	NESHAP	National Emission Standards for Hazardous Air Pollutants
FESOP	Federally Enforceable State Operating Permit	NH₃	Ammonia
FIP	Federal Implementation Plan	NMHC	Non-methane Hydrocarbon
FR	Federal Register	NGL	Natural Gas Liquids
GACT	Generally Achievable Control Technology		

NO₂	Nitrogen Dioxide	SER	Significant Emission Rate
NO_x	Nitrogen Oxides	SI	Spark Ignition
NOI	Notice of Intent	SIC	Standard Industrial Classification
NSCR	Non-Selective Catalytic Reduction	SIP	State Implementation Plan
NSPS	New Source Performance Standards	SNCR	Selective Non-Catalytic Reduction
NSR	New Source Review	SO₂	Sulfur Dioxide
		SO_x	Sulfur Oxides
O₃	Ozone	SOP	Standard Operating Procedure
O&G	Oil and Gas	SRU	Sulfur Recovery Unit
O&M	Operation and Maintenance		
O&NG	Oil and Natural Gas	T	Tons
OAC	Oklahoma Administrative Code	TAC	Toxic Air Contaminant
OC	Oxidation Catalyst	TEG	Triethylene Glycol
		THC	Total Hydrocarbons
PAH	Polycyclic Aromatic Hydrocarbons	TPY	Tons per Year
PAE	Projected Actual Emissions	TRS	Total Reduced Sulfur
PAL	Plant-wide Applicability Limit	TSP	Total Suspended Particulates
Pb	Lead	TV	Title V of the Federal Clean Air Act
PBR	Permit by Rule		
PCB	Polychlorinated Biphenyls	µg/m³	Micrograms per Cubic Meter
PCE	Partial Compliance Evaluation	US EPA	U. S. Environmental Protection Agency
PEA	Portable Emissions Analyzer		
PFAS	Per- and Polyfluoroalkyl Substance	VFR	Vertical Fixed Roof
PM	Particulate Matter	VMT	Vehicle Miles Traveled
PM_{2.5}	Particulate Matter with an Aerodynamic Diameter <= 2.5 Micrometers	VOC	Volatile Organic Compound
PM₁₀	Particulate Matter with an Aerodynamic Diameter <= 10 Micrometers	VOL	Volatile Organic Liquid
POM	Particulate Organic Matter or Polycyclic Organic Matter	VRT	Vapor Recovery Tower
		VRU	Vapor Recovery Unit
ppb	Parts per Billion	YR	Year
ppm	Parts per Million		
ppmv	Parts per Million Volume	2SLB	2-Stroke Lean Burn
ppmvd	Parts per Million Dry Volume	4SLB	4-Stroke Lean Burn
PSD	Prevention of Significant Deterioration	4SRB	4-Stroke Rich Burn
psi	Pounds per Square Inch		
psia	Pounds per Square Inch Absolute		
psig	Pounds per Square Inch Gage		
RACT	Reasonably Available Control Technology		
RATA	Relative Accuracy Test Audit		
RAP	Regulated Air Pollutant or Reclaimed Asphalt Pavement		
RFG	Refinery Fuel Gas		
RICE	Reciprocating Internal Combustion Engine		
RO	Responsible Official		
ROAT	Regional Office at Tulsa		
RVP	Reid Vapor Pressure		
SCC	Source Classification Code		
SCF	Standard Cubic Foot		
SCFD	Standard Cubic Feet per Day		
SCFM	Standard Cubic Feet per Minute		
SCR	Selective Catalytic Reduction		