T**he Boeing Company** P.O. Box 16858 Philadelphia, PA 19142-0858

James Rebarchak Regional Air Program Manager PA Dept. of Environmental Protection Southeast Regional Office 2 East Main Street Norristown, PA 19401-4915

December 19, 2022



Re: Notification of Compliance with the Final-form of RACT III

Dear Mr. Rebarchak,

Enclosed, please find an outline of how Boeing intends to comply with the RACT III requirements.

Boeing will demonstrate that the previous case-by-case determination made under §§ 129.96-129.100 (RACT II) for the existing composite manufacturing operations (Source ID 251) remains RACT for the 2015 8-hour ozone standard. The original case-by-case determination was submitted and approved for this source on October 2016 and no changes to the operation have been made since the submittal.

In addition, you will find a notification form discussing the RACT III rule compliance strategy for the remaining emission units at the Philadelphia Facility, as well as stack test waivers for Source ID 053 and Source ID 042.

Finally, please find supporting documentation for facility-wide paint stripping operations (Title V Source ID 110). Boeing has documented that the potential emissions from facility-wide paint stripping operations are below RACT III applicability thresholds.

Thank you and please reach out to Mohamed Mellaouch at (484) 724-1237 or at Mohamed.Mellaouch@boeing.com if you have any questions.

Hen D. Well Sincerely,

Jeffery Webb Senior Director of Vertical Lift

Enclosures:

- Alternative Case-by-Case Determination for Source ID: 251 § 129.114(i)
- RACT III Notification Form
- Paint Stripping Operation Supporting Documentation
- Stack test waiver for emissions source 042-Turbine Generators
- Stack test waiver for emissions source 053-Nebraska 1 Boiler



CHAPTER 129. STANDARDS FOR SOURCES ADDITIONAL RACT REQUIREMENTS FOR MAJOR SOURCES OF NOx AND VOCs FOR THE 2015 OZONE NAAQS

Written notification, 25 Pa. Code §§129.111 and 129.115(a)

25 Pa. Code Sections 129.111 and 129.115(a) require that the owner and operator of an air contamination source subject to the final-form RACT III regulations submit a notification describing how you intend to comply with the final-form RACT III requirements, and other information spelled out in subsection 129.115(a). The owner or operator may use this template to notify DEP. Notification must be submitted in writing or electronically to the appropriate Regional Manager located at the appropriate DEP regional office. In addition to the notification required by §§ 129.111 and 129.115(a), you also need to submit an applicable analysis or RACT determination as per § 129.114(a) or (i).

Is the facility major for NOx?				Yes 🛛 No 🗆							
Is the f	facility ma	jor fo	r VOC?	Yes 🛛 No 🗆							
			FA	CILITY	INFOF	RMA	ΓΙΟΝ	N			
Facility	y Name		THE BOE	EING CO							
Permit	Number		23-00009		PF	ID if	' kno	wn			
Addres	ss Line1		100 Stewa	art Avenue	:						
Addres	ss Line2										
City	Ridley P	ark			Sta	te	PA	Zip		19078	
Munici	ipality		Ridley 7	ownship)		C	ounty	D	elaware County	
			0	WNER	INFOR	MAT	ION				
Owner	•										1
Addres	ss Line1										
Addres	ss Line2										
City					State			Zip			
Email						Pho	ne				
			CO	NTACI	T INFOR	RMA	ΓΙΟΙ	N			
	Contact		Mohamed	Mellaouc	h						
Name											
Permit	Contact	Fitle	Environm	ental Engi	neer						
Addres	ss Line		PO BOX	16858, MC	C P01-29						
City			Philadelph	nia	State	PA		Zip		19142	
Email			Mohamed	.mellaoucl	h@boeing	.com		Phone		484-724-1237	

Complete Table 1, including all air contamination sources that commenced operation on or before August 3rd, 2018. Air contamination sources determined to be exempt from permitting requirements also must be included. You may find this information in section A and H of your operating permit.

Source ID	Source Name	Make	Model	Physical location of a source (i.e, building#, plant#, etc.)	Was this source subject to RACT II?
53	Nebraska 1 Boiler	Cleaver Brooks	NB-300D- 50	(BLDG 3-05)	Presumptive RACT for NOx and VOC per 129.97(g)(1)
54	CLEAVER BROOKS 4 BOILER	Cleaver Brooks	CBI-200- 000-125	(BLDG 3-05)	Presumptive RACT for NOx and VOC per 129.97(b)(2)
56	CB - 6 BOILER	Cleaver Brooks	CBL-1200	(BLDG 4-14)	Presumptive RACT for NOx and VOC per 129.97(b)(2)
57	CB - 7 BOILER	Cleaver Brooks	CBL-1200	(BLDG 4-14)	Presumptive RACT for NOx and VOC per 129.97(b)(2)
58	NEBRASKA 2 BOILER	Cleaver Brooks	SP-NB- 100D-40	(BLDG 3-05)	No (new source)
59	NEBRASKA 3 BOILER	Cleaver Brooks	SP-NB- 100D-40	(BLDG 3-05)	No (New source)
60	SUP-3 BOILER	Superior	MS7-X- 5000-S200- WBCFGA2	(BLDG 4-14)	No (New Source)
61	NATURAL GAS BOILERS <10 MMBTU/HR	Bryan Boilers (identical)	RV350-S- 150- FDG-LX	(BLDG 3-29)	No (New source)
41	EMERGENCY GENERATOR	Caterpillar	G3412 TA130HCR	(BLDG 3-10)	Presumptive RACT for NO _X and VOC per 129.97(c)(8)
42	(4) TURBINE GENERATORS FORMERLY 040	US Turbine (UST) 4000/Allison	501- KBSS	(BLDG 3-52)	Presumptive RACT for NO _X and VOC per 129.97(g)(2)(iii)
50	NG EMERGENCY GENERATORS (18 GENERATORS)	Varies, see Attachment	Varies, see Attachment	Various Locations	Presumptive RACT for NO _X and VOC per 129.97(c)(8)
51	CI EMERGENCY GENERATORS & DIESEL FIRE PUMP	Varies, see Attachment 1	Varies, see Attachment 1	(BLDG 3- 52,3-19)	Presumptive RACT for NO _X and VOC per 129.97(c)(8)
110	PAINT STRIPPER	NA	NA	(FACILITY WIDE)	Exempt - per 129.96(c)
171	TOUCH & REPAIR BOOTH	NA	NA	(BLDG 3-06)	Exempt - Subject to 129.73

Table 1 - Source Information

Source ID	Source Name	Make	Model	Physical location of a source (i.e, building#, plant#, etc.)	Was this source subject to RACT II?
201	GASOLINE TANK (TK043A)	NA	NA	East of BLDG 3-57	Exempt - Subject to 129.61
202	GASOLINE TANK (TK043B)	NA	NA	East of BLDG 3-57	Exempt - Subject to 129.61
213	3-12 DEGREASER 11-088308	Build-All Corporation	AL- 564449-350	BLDG 312	Exempt - Subject to 129.63
214	BLDG 3-12 VACUUM DEGREASER (BCC#30991)	Serec Corporation System	Custom	BLDG 312	No (New source)
216	CLEANING SOLVENT EMISSION	NA	NA	Facility-wide	Exempt - Subject to 129.73(7)
218	MISC COLD DEGREASERS	NA	NA	Multiple locations	Exempt - Subject to 129.63
228	FREKOTE EXHAUST BOOTH # 1	NA	NA	(BLDG 3-07)	Exempt - Subject to 129.73
229	FREKOTE EXHAUST BOOTH #2	NA	NA	(BLDG 3-07)	Exempt - Subject to 129.73
231	MISC MINOR PAINT BOOTHS	NA	NA	(BLDG 3-25, BLDG 3- 31)	Presumptive RACT for VOC per 129.97(c)(2)
251	COMPOSITE MANUFACTURING	NA	NA	(BLDG 3-07)	Case-by-Case RACT for VOC per 129.99
300A	BLDG 3-80 BAY 3 SPRAY BOOTH	NA	NA	BLDG 3-80	Exempt - Subject to 129.73
300B	BLDG 3-80 BAY 4 SPRAY BOOTH	NA	NA	BLDG 3-80	Exempt - Subject to 129.73
301	BLDG 4-04 DETAIL PAINT BOOTHS (2)	NA	NA	BLDG 4-04	Exempt - Subject to 129.73
302	BLDG 3-12 SPRAY BOOTHS	NA	NA	BLDG 3-12	Exempt - Subject to 129.73
303	TWO (2) SPRAY BOOTHS	NA	NA	BLDG 3-73	Exempt - Subject to 129.73
304	BLDG 3-07 SPRAY BOOTHS	NA	NA	BLDG 3-07	Exempt - Subject to 129.73
305	FUGITIVE SPECIALTY COATING OPERATIONS	NA	NA	Paint Booths	Exempt - Subject to 129.73
307	TOOLING PRIMERS & TOPCOATS	NA	NA	Fugitive	Exempt - Subject to 129.73
309	BLDG 3-80 BAY 2 SPRAY BOOTH	NA	NA	BLDG 3-80	Exempt - Subject to 129.73

Source ID	Source Name	Make	Model	Physical location of a source (i.e, building#, plant#, etc.)	Was this source subject to RACT II?
311B	BLDG 3-57 V-22 SECTIONS/ AIRCRAFT PAINT BOOTH	NA	NA	BLDG 3-57	No (New source)
311D	BLDG 3-57 V-22 WASH & SAND BOOTH	NA	NA	BLDG 3-57	No (New source)

Complete Table 2 or 3 if the facility is a major NOx or VOC emitting facility. For the column with the title "How do you intend to comply", compliance options are:

- Presumptive RACT requirement under §129.112 (**PRES**),
- Facility-wide averaging (FAC) §129.113,
- System-wide averaging (SYS) §129.113, or
- Case by case determination §129.114 (**CbC**).

Please provide the applicable subsection if source will comply with the presumptive requirement under §129.112.

Source ID	Source Name	NOx PTE TPY	VOC PTE TPY	Exempt from RACT III (yes or no)	How do you intend to comply? (PRES, CbC, FAC or SYS)	Specific citation of rule if presumptive option is chosen	
53	Nebraska 1 Boiler	26.94	1.81	No	Presumptive RACT for NOx and VOC	129.112 (g)(1)	
54	CLEAVER BROOKS 4 BOILER	(combined)	(combined)	No	Presumptive RACT for NOx and VOC	129.112 (b)(1)(ii)	
56	CB - 6 BOILER			No	Presumptive RACT for NOx and VOC	129.112 (b)(1)(ii)	
57	CB - 7 BOILER			No	Presumptive RACT for NOx and VOC	129.112 (b)(1)(ii)	
58	NEBRASKA 2 BOILER	13.21	1.77	No	Presumptive RACT for NOx and VOC	129.112 (b)(1)(ii)	
59	NEBRASKA 3 BOILER				No	Presumptive RACT for NOx and VOC	129.112 (b)(1)(ii)
60	SUP-3 BOILER			Yes (started operation on 1/8/2019			
61	NATURAL GAS BOILERS <10 MMBTU/HR	1.15	0.17	No	Presumptive RACT for NOx and VOC	129.112(c)(4)	
41	EMERGENCY GENERATOR (3-10)	1.83	0.20	No	Presumptive RACT for NOx and VOC	129.112 (c)(10)	
42	(4) TURBINE GENERATORS FORMERLY 040	17.76	0.04	No	Presumptive RACT for NOx and VOC	129.112(g)(2)(iv)	
50	NG EMERGENCY GENERATORS (18 GENERATORS)	9.42 (total)	1.11	No	Presumptive RACT for NOx and VOC	129.112 (c)(10)	
51	CI EMERGENCY GENERATORS & DIESEL FIRE PUMP	6.04	0.02	No	Presumptive RACT for NOx and VOC	129.112 (c)(10)	
110	PAINT STRIPPER (FACILITY WIDE)		0.22	Yes		per 129.111(c)	
171	TOUCH & REPAIR BOOTH (BLDG 3-06)		0.44	Yes		Subject to 129.73 per 129.111(a)	

Table 2 – Method of RACT III Compliance, NOx & VOCs

Source ID	Source Name	NOx PTE TPY	VOC PTE TPY	Exempt from RACT III (yes or no)	How do you intend to comply? (PRES, CbC, FAC or SYS)	Specific citation of rule if presumptive option is chosen
201	GASOLINE TANK (TK043A)		0.14	Yes		Subject to 129.61 per 129.111(a)
202	GASOLINE TANK (TK043B)		0.14	Yes		Subject to 129.61 per 129.111(a)
213	3-12 DEGREASER		0.44	Yes		Subject to 129.63 per 129.111(a)
214	VACUUM DEGREASER		0.01	Yes		Subject to 129.63 per 129.111(a). In addition to the exemption, the permit requires that this source emit less than 2.7 tpy of VOC
216	CLEANING SOLVENT EMISSION		181	Yes		Subject to 129.73(7) per 129.111(a)
218	MISC COLD DEGREASERS		4.5	Yes		Subject to 129.73(7) per 129.111(a)
228	FREKOTE EXHAUST BOOTH # 1 (BLDG 3- 07)		16	Yes		Subject to 129.73 per 129.111(a)
229	FREKOTE EXHAUST BOOTH #2 (BLDG 3- 07)		0.83	Yes		Subject to 129.73 per 129.111(a)
231	MISC MINOR PAINT BOOTHS (3-25, 3-31)		2.7	Yes		129.112(c)(2)
251	COMPOSITE MANUFACTURING (BLDG 3-07)		8.50	No	Alternative RACT established for RACT II assures compliance with RACT III	Alternative RACT established for RACT II assures compliance with RACT 3 per 129.114(i)
309	BLDG 3-80 BAY 2 SPRAY BOOTH			Yes		Subject to 129.73 per 129.111(a)
300A	BLDG 3-80 BAY 3 SPRAY BOOTH		17.2	Yes		Subject to 129.73 per 129.111(a)
300B	BLDG 3-80 BAY 4 SPRAY BOOTH			Yes		Subject to 129.73 per 129.111(a)
301	BLDG 4-04 DETAIL PAINT BOOTHS (2)		6.73	Yes		Subject to 129.73 per 129.111(a)

Source ID	Source Name	NOx PTE TPY	VOC PTE TPY	Exempt from RACT III (yes or no)	How do you intend to comply? (PRES, CbC, FAC or SYS)	Specific citation of rule if presumptive option is chosen
311B	"BLDG 3-57 V-22			Yes		Subject to 129.73 per 129.111(a)
	SECTIONS/ AIRCRAFT PAINT					
302	BLDG 3-12 SPRAY BOOTHS		3.6	Yes		Subject to 129.73 per 129.111(a)
303	TWO (2) SPRAY BOOTHS (BLDG 3- 73)		861	Yes		Subject to 129.73 per 129.111(a)
304	BLDG 3-07 SPRAY BOOTHS		331	Yes		Subject to 129.73 per 129.111(a)
305	FUGITIVE SPECIALTY COATING OPERATIONS		753.4	Yes		Subject to 129.73 per 129.111(a)
307	TOOLING PRIMERS & TOPCOATS		306.60	Yes		Subject to 129.73 per 129.111(a)
308	BUILDING 3-25 SPRAY BOOTH		1.3	Yes		Subject to 129.73 per 129.111(a)
311D	BLDG 3-57 V-22 WASH & SAND BOOTH (Mechanical depainting only)			Yes		129.111(c)

Bldg	System/Model	Engine Make	Generator Make
3-01	Onan/45.0EM-15R	Ford	Onan
3-02	Onan/30.0EK-15R31	Ford	Onan
303	Cummins/GTA19	Cummins	Cummins
3-04	Onan/30.0SK- 15R/21505A	Chrysler	Onan
3-12	Cummins/GTA855-B	Cummins	Cummins
3-25	Caterpillar/ GTA855-B	Caterpillar	Caterpillar
3-28	Cummins/NPower GFPA	Power Solutions	Newage
3-30	Katolight/N125FRH4	Hercules	Katolight
3-31	Cummins/125GGKB	Cummins	Cummins
3-31B	Kohler/70RZ272	Ford	Kohler
3-32	Onan/12.5JC-18R	Onan	Onan
3-35	Newage/250GFBC	Cummins	Stamford Newage
3-61	Newage/250GFBC	Cummins	Stamford Newage
3-61A	Cummins 100GGHH	Cummins	Newage
3-95	Cummins 60GGHE	Ford	Cummins
3-96	Katolight N70FRG4	Great Lakes/GM/	Katolight
3-20	Cummins/NPower GFEB	Cummins	Cummins
3-57	Cummins/C500N6	Cummins	Cummins

Attachment-1

Attachment-2

Bldg	System/Model	Engine Make	Generator Make
352	Clarke/JU6H- UFADX8	John Deere	-
3-52	Katolight/D400FRX4	Detroit Diesel	Katolight
3-19	Wistar/503320	John Deere	Power Tech
3-28B	Cummins/QSL9-G7	Cummins	Cummins

Alternative Case-by-Case RACT determination Under § 129.114(i)

Prepared by: Boeing – Ridley Park

December 23, 2022

The composite manufacturing operations in Building 3-07 consist of multiple operations. The process begins by cutting the pre-impregnated resin sheets to the size and shape for the components to be manufactured. The parts are then made by layup of the composite material where the material is placed in layers on a "tool" or mold for a given part. Once layup is complete, a vacuum bag is sealed around the part and tool. The part is then sent for curing with the application of heat (maximum temperature is approximately 350°F) and pressure in either the autoclaves, ovens or presses.

A block flow diagram for the composite manufacturing process is provided in Appendix A. Specifically, the following operations are included under Source ID 251.

- Cutting operations multiple stations vent within the building
- Layup operations multiple stations vent within the building
- Fiber placement machines (3) vent within the building
- Autoclaves (3) vent out of three types of exhaust points
- Blade presses (6) vent within the building
- Ovens (2) vent out of exhaust stacks
- Holmes press (1) vents within the building

Material Type	Max VOC Content (lb/gal)	Maximum Throughput (lb/yr)	Maximum Annual Average VOC (%)	VOC Emissions (tpy)
Resins & Hardeners	1.0	10,000	10.0%	0.50
Tooling Fill/Fairing	3.5	2,500	20.0%	0.25
Engineering Foam	2.5	2,500	10.0%	0.13
Core Stabilizer	5.7	2,500	10.0%	0.13
Prepreg	0.65	500,000	3.0%	7.50
Total Potential	Emissions			8.5
2020 AIMS -	Actual Emissions			1.06
2021 AIMS -	Actual Emissions			1.11

Composite Manufacturing Potential and Actual Emissions

Composite manufacturing is not covered by 40 CFR 63 Subpart GG (Aerospace NESHAP). In February 2015, EPA proposed updates to the Aerospace NESHAP to address the residual risk and technology review (RTR). These updates were finalized on December 7, 2015. During the RTR review of the Aerospace NESHAP, EPA evaluated whether to regulate composite processing as a source category under the NESHAP. After review, EPA concluded that composite processing did not present unacceptable risks and thus was not eligible for regulation under the rule.

Boeing's research on the composite manufacturing process has not be able to identify any instances of an add-on control device being utilized. Boeing currently uses process design and material selection which minimize the emissions of VOCs from composite manufacturing operations. As a result, it is Boeing's position there are no demonstrated add-on control devices available for this source. This position is supported by the fact that EPA did not identify any available control technologies for this source category in its recent RTR review of the Aerospace NESHAP.

As discussed in the original RACT, cutting, layup and fiber placement operations are expected to have negligible fugitive VOC emissions. A greater potential for VOC emissions generation occurs during the curing process in the autoclaves, ovens, or presses. However, the presses, which vent within the building, produce no adverse odors or worker discomfort. Thus, for the purposes of this RACT Analysis, Boeing has assumed that the most feasible emission sources from the composite manufacturing process to install controls on are the autoclaves.

Basis	Control	VOC	Purchased	Total	Direct	Total	Cost
	Equipment	Removal	Equipment	Installed	Annual	Annualized	Effectiveness
		Efficiency	Cost b (\$)	Capital c	Cost d	Cost e	of VOC
		a (%)		Cost (\$)	(\$/yr)	(\$/yr)	Reduction
							(\$/ton)
EPA	Regenerative	98%	537,300	1,020,700	20,900	164,400	59,900
Manual	Thermal						
	Oxidizer						
	(95% Heat						
	Recovery)						
EPA	Recuperative	98%	344,100	653,700	63,500	157,700	57,500
Manual	Thermal						
	Oxidizer						
	(70% Heat						
	Recovery)						
EPA	Fixed Bed	95%	369,900	702,800	40,800	141,300	53,100
Manual	Catalytic						
	Oxidizer						
	(70% Heat						
	Recovery)						
EPA	Fluid Bed	95%	431,400	819,600	40,700	157,000	59,000
Manual	Catalytic						
	Oxidizer						
	(70% Heat						
	Recovery)						
EPA	Carbon	95%	170,300	296,000	13,300	72,700	27,300
Manual	Adsorber						

Summary of Composite Manufacturing Single Autoclave Air Pollution Control Costs

a Overall system removal efficiency for entire air pollution control system.

b Purchased equipment cost updated to current cost, but excluding instrumentation, sales tax and freight.

c Corrected to uniform and comprehensive cost basis using EPA cost factors.

d Includes operating and maintenance labor and materials, replacement parts and installation, and utilities (water, chemicals, waste/wastewater disposal, and electricity). For labor and utilities costs, assumes 900 APC operating hours per year, controlling entire projected annual emissions per unit.

e Includes capital recovery, overhead, administration, taxes and insurance.

Based on the top-down analysis provided above, all add-on VOC control options were determined to be technically or economically infeasible and not "reasonably available" for installation as RACT on the composite

manufacturing process. This position is supported by the fact that EPA did not identify any available control technologies for this source category in its recent RTR review of the Aerospace NESHAP.

The volatile content of the prepregs and other composite materials used at the Philadelphia Facility are very low and are set by military specification. The appropriate emissions "control" for these materials is the inherent product design such that the potential volatile materials react to form the composite product. Through the original RACT and Title V permitting processes, PADEP has already identified emission limitations, monitoring, recordkeeping, and work practice requirements to minimize emissions from this source. Thus, Boeing proposes to use the current operation limits and practices in the facility's Title V permit to demonstrate compliance with RACT III. Section 5 provides proposed RACT III compliance requirements for the source.

The proposed RACT and related monitoring, testing, recordkeeping and reporting are summarized in the table below. These proposed conditions will continue to ensure that emissions are minimized from composite manufacturing operations. Because Boeing is not proposing to change any limits in the Philadelphia Facility's current Title V permit, the facility will continue to be in compliance with all applicable requirements as of the RACT III Rule compliance date of December 31, 2022.

Emission Source ID(s):	251	
Source Description	Composite Manufacturing	
Description of RACT:	VOC emissions from composite manufa sealants, and specialty coatings, are rolling basis. VOC content, as appli materials may not exceed the following	limited to 8.5 tpy on a 12-month ied, of the composite processing
	• Prepregs	0.65 lbs VOC/gal78 g VOC/l
	• Tooling Fill & Fairing	3.50 lbs VOC/gal420 g VOC/l
	• Tooling Resin & Hardeners	1.0 lbs VOC/gal. 120 g VOC/l
	• Core Stabilizing & Tacking Resin	5.70 lbs VOC/gal 684 g VOC/l
	• Engineering Foams	2.50 lbs VOC/gal300 g VOC/l
	<i>Current operation of source per the re permit.</i>	quirements of the facility's Title V

Case-by-Case RACT Summary

Proposed Monitoring: Boeing will continue to monitor the amount of composite material used monthly, the VOC content as applied, and calculate VOC emissions monthly and on a 12-month rolling basis.

Proposed Testing: N/A

Proposed Recordkeeping: Boeing will continue to keep the following records: the amount of composite material used monthly, the VOC content as applied, and the calculations of

VOC emissions on a monthly and 12-month rolling basis.

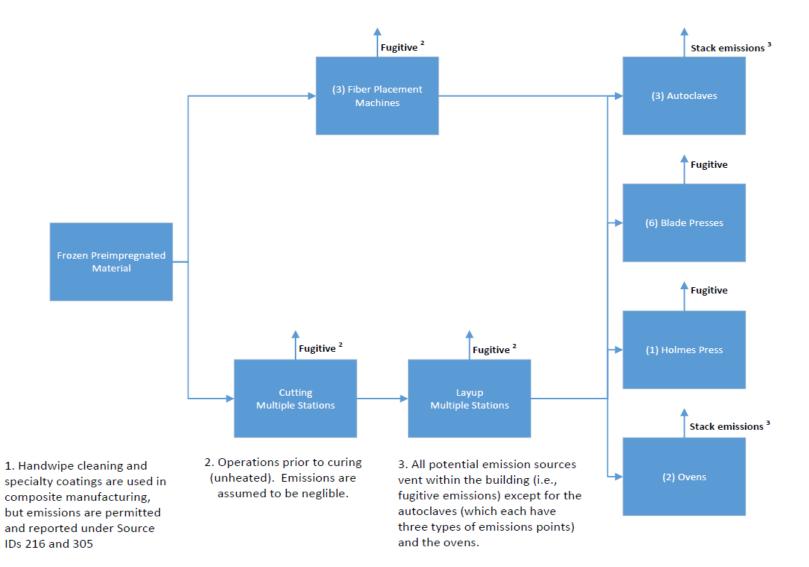
Proposed Reporting: N/A

Proposed Work Practice Requirements: Boeing will continue to operate and maintain all the equipment and materials associated with Composite Manufacturing in a manner consistent with good operating and maintenance (O&M) practices. The practices shall include, but not be limited to the following:

(a) good housekeeping procedures for storage, use, and disposal of composite material

(b) employee training detailing good work practices

(c) periodic inspection of production activities



APPENDIX A: COMPOSITE MANUFACTURING BLOCK FLOW DIAGRAM (SOURCE ID 251)

Paint Stripping Operation Supporting Documentation Exemption (PTE<1 TPY)

Prepared by: Boeing-Ridley Park

December 23, 2022

Paint stripping operations are permitted under Source ID 110 in the Philadelphia Facility's Title V permit. These operations are subject to the depainting requirements in 40 CFR 63 Subpart GG (Aerospace NESHAP) which are included in the facility's Title V permit. Per PADEP's request, Boeing has formally documented the potential VOC emissions for facility-wide paint stripping operations (Source ID 110) as part of this RACT Proposal.

There are two categories of paint stripping operations at the Boeing-Ridley Park. The facility operates a 1,000- gallon (approximately) paint stripping tank where parts to be depainted are processed. The facility also conducts spot stripping of aircraft parts throughout the facility using paint stripper in 5-gallon pails. The paint stripping solvents are primarily made of methylene chloride, which is a hazardous air pollutant (HAP) but is not a VOC. However, some of the paint stripping solvents used at the facility also contain phenol, which is a VOC. Boeing reports actual VOC and methylene chloride emissions from paint stripping activities in annual AIMS reports for the facility. Boeing reported 0.01 tpy VOC emissions from Source ID 110 in 2021 and 0.05 tpy VOC in 2020. The facility reported 0.19 tpy of methylene chloride in 2020 and 0.21 tpy of methylene chloride in 2021 from Source ID 110. Thus, actual VOC emissions from this source are very low.

Nevertheless, Boeing has documented potential emissions from this source. The paint stripping tank is filled by 55-gallon drums of solvent. A full tank contains two (2) drums of methylene chloride and twelve (12) drums of methylene chloride/phenol mixture. Each drum of methylene chloride/phenol mixture contains a maximum of 110 lbs of VOC. Conservatively assuming that the solvent in the tank was replaced completely once per year (12 drums) and four (4) additional drums of methylene chloride/phenol mixture were added to the tank, potential VOC emissions from the tank were determined to be 0.88 tpy. This is an extremely conservative assumption which does not account for disposal as waste of the replaced solvent and layering by product which naturally occurs in the tank. Detailed emission calculations for this source are provided below.

Paint Stripping Tank

Components	VOC (lb/drum)	Maximum Number of Drums per Tank ³	Maximum Number of Replacement Drums per Year	Maximum Potential VOC Emissions (tons/yr)
Methylene Chloride ¹	0	2	4	0
Methylene Chloride/Phenol Mix ²	110	12	4	0.88

1. Per 40 CFR 51.100(s), methylene chloride is not a VOC, but is regulated as a HAP.

2. Phenol portion of the methylene chloride/phenol mix is 110 lb/drum.

- 3. When the contents of the tank are replaced, 2 drums of methylene chloride are added and 12 drums of methylene chloride/phenol mix
- 4. Occasionally, the tank is refilled with additional replacement drums.

5. Maximum potential VOC emissions assumes all VOC in the tank and replacement drums volatilizes.

This is an extremely conservative assumption which does not account for disposal as waste and layering which naturally occurs in the tank.

Spot Paint Stripping

			Maximum
	VOC Content (lb/gal) ¹		Potential VOC
Product		Maximum Usage per year (gal/yr)	Emissions (tons/yr)
Cee-Bee R-256	1.49	150	0.11

1. Per SDS for Cee-Bee R-256 VOC content is 1.49 lb/gal.

Total Paint Stripping PTE

	Maximum	
	Potential VOC	
	Emissions	
Operations	(tons/yr)	
Paint Stripping Tank	0.88	
Spot Paint Stripping	0.11	
Total Paint Stripping Operations	0.99	