



Connecticut Department of

**ENERGY &
ENVIRONMENTAL
PROTECTION**

**BUREAU OF AIR MANAGEMENT
NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE A STATIONARY SOURCE**

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-3a of the Regulations of Connecticut State Agencies (RCSA).

Owner/Operator	Pratt & Whitney, Division of Raytheon Technologies Corporation
Address	400 Main Street, Mail Stop 102-21, East Hartford, CT 06118
Equipment Location	400 Main Street, East Hartford, CT 06118
Equipment Description	Global Finishing Solutions (GFS) Custom Cross Draft Paint Booth
Town-Permit Numbers	053-0145
Premises Number	0009
Stack Number	123
Modification Issue Date	August 15, 2022
Modification Issue Dates	August 6, 2018 (Minor Modification) July 31, 2017 (Original)
Expiration Date	None

for 
Katherine S. Dykes
Commissioner

August 15, 2022
Date

This permit specifies necessary terms and conditions for the operation of this equipment to comply with state and federal air quality standards. The Permittee shall at all times comply with the terms and conditions stated herein.

PART I. DESIGN SPECIFICATIONS

A. General Description

Pratt & Whitney (P&W) is an aerospace manufacturer with global service operations. It is a division of United Technologies Corporation (UTC). P&W's East Hartford facility includes a custom designed cross draft specialty coating spray booth manufactured by Global Finishing Solutions. Specialty coatings are applied to jet engine aircraft parts. An electrically heated oven and/or ambient air is used to provide a final cure of the coating material.

B. Equipment Design Specifications

1. Type of Spray Guns:
 - a. Graco Corporation AirPro Auto HVLP or equivalent type
 - b. Paasche Corporation A-JUAF or equivalent type
 - c. Binks Corporation Model 115 Conventional Touch-Up Spray Gun or equivalent type
2. Maximum Rated Spray Gun Throughput (lb/hr): 65
3. Minimum Transfer Efficiency for HVLP Spray Gun (%): 65
4. Minimum Transfer Efficiency for Conventional Touch-Up Spray Gun (%): 35

C. Control Equipment Design Specifications

1. Particulate Filter
 - a. Make: GFS 3-Stage Dry Panel Filtration System or equivalent
 - b. Filtering Material: Polyester or equivalent
 - c. Minimum Particulate Matter Filter Removal (Control) Efficiency (%): 99.2

D. Stack Parameters

1. Minimum Stack Height (ft): 42
2. Minimum Exhaust Gas Flow Rate (acfm): 12,000
3. Minimum Stack Exit Temperature (°F): 68
4. Minimum Distance from Stack to Property Line (ft): 500

PART II. OPERATIONAL CONDITIONS

A. Operating Limits

1. Maximum Spray Gun Throughput (lb/hr): 36
2. Maximum Spray Guns Operating at Any One Time: 1

3. Aggregate of Coating Applied in Any One Hour of Spray Booth Operation (lb): 36
4. Types of Coatings Allowed:
 - a. Specialty coatings as defined by the National Emission Standards for Aerospace Manufacturing and Rework Facilities, 40 CFR Part 63 Subpart GG, as well as defined by RCSA Section 22a-174-20(s);
 - b. Coatings classified by the Department of Defense as "Classified National Security Information" and as defined in 40 CFR §63.742;and
 - c. Coatings used for Research & Development, and other exempt coatings as defined in 40 CFR §63.742.
5. Maximum VOC Content of Specialty Coatings as Applied (excluding water and exempt VOCs): Not to exceed VOC content limits as defined in RCSA §22a-174-20(s), as applicable and 40 CFR 63.745.
6. Other Types of Allowable Applicators: Spray cans, Brushes, Cotton Swabs, Tongue Depressors and other Non-atomizing applicator techniques
7. The Permittee shall use cleaning solvent in accordance with the requirements of 40 CFR §63.744, inclusive of exemptions.
8. The coating usage limits apply to any of the following components or mixtures of the following components: Paint, Enamel, Lacquer, Catalyst, Primer, Reducer, Sealer, Diluent, Additive, or other Coating Material or Preparation processed through the spray gun or applied in the spray booth.

B. Operating Procedures

The Permittee shall use the following work practices in accordance with RCSA §22a-174-20(s)(5).

1. New and used VOC-containing coating, diluent or cleaning solvent, including a coating mixed on the premises, shall be stored in a nonabsorbent, non-leaking container. Such a container shall be kept closed at all times except when the container is being filled, emptied or is otherwise actively in use;
2. Spills and leaks of VOC-containing coating, diluent or cleaning solvent shall be minimized. Any leaked or spilled VOC-containing coating, diluent or cleaning solvent shall be absorbed and removed immediately;
3. Absorbent applicators, such as cloth and paper, which are moistened with a VOC containing coating or solvent, shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling; and
4. Air pollution control equipment shall be operated and maintained in accordance with the manufacturer's recommendations.

C. Equipment

1. The Permittee shall comply with the written recommendations set forth by the manufacturers for maintaining and operating the spray guns, spray booth, and particulate panel filters in order to achieve their guaranteed transfer and filter removal (control) efficiencies.

2. The control equipment shall be in place at all times the spray booth is in use.
3. The Permittee shall properly operate the control equipment at all times this equipment is in operation and emitting air pollutants.
4. Methods used to increase transfer efficiency shall include, but not be limited to, the following:
 - a. Operating Equipment (Spray Guns)
 - i. A reasonable effort shall be made to minimize the distance from the spray gun or aerosol spray can to the object being coated while still maintaining process requirements.
 - ii. Keep the atomizing air pressure to a minimum level, as recommended by the spray gun manufacturer while still maintaining process requirements.
 - iii. Spray gun cleaning shall be done in accordance with 40 CFR §63.744(c).
 - b. Control Equipment (Filter System)
 - i. The Permittee shall properly operate the particulate filter system at all times that this equipment is in operation and emitting air pollutants.
 - ii. The Permittee shall maintain and operate the equipment in order to obtain the particulate matter control efficiency found in Part I.C of this permit.
 - iii. The Permittee shall replace the particulate filter material as recommended by the manufacturer and/or employ some other means to demonstrate that the filter system is being properly maintained.

PART III. ALLOWABLE EMISSION LIMITS

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time.

A. Criteria Pollutants

1.

Pollutant	lb/hr	lb/month	tpy
PM, PM ₁₀ , PM _{2.5}	0.098	72	0.43
VOC	36		9.99

2. VOC Premises-wide limit of 1,666 pounds of VOC emissions per month from all miscellaneous metal and plastic parts surface coating operations.

B. Hazardous Air Pollutants

This equipment shall not cause an exceedance of the Maximum Allowable Stack Concentration (MASC) for any hazardous air pollutant (HAP) emitted and listed in RCMA Section 22a-174-29. [STATE ONLY REQUIREMENT]

- C. Demonstration of compliance with the above emission limits may be met by calculating the emission rates using emission factors from the following sources:
- Material Balance
 - For Particulate only, the material balance calculations may assume a transfer efficiency of 65% for HVLP Spray Guns, 35% for Conventional Spray Guns, and 25% for Aerosol Spray Cans and the particulate control efficiency in Part I.C of this permit.

The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

PART IV. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring

The Permittee shall perform maintenance inspections at least once every calendar year of the spray booth, particulate filter, spray guns, and other non-atomizing applicators used as recommended by the manufacturer to achieve compliance with the emission limits in this permit.

B. Record Keeping

1. The Permittee shall record the aggregate amount of coating applied through all methods during each hour of spray booth operation, in lb/hr.
2. The Permittee shall keep monthly records for each coating and diluent used in the spray booth, such records shall include:
 - a. Date coating used;
 - b. Description of coating, including name, type (see Part II.A.4 of this permit), and density (lb/gal);
 - c. Volatile organic compound content by weight (lb VOC/gal);
 - d. HAP content by weight (lb HAP/gal);
 - e. Water and exempt VOC content by weight (lb/gal);
 - f. VOC content as applied (lb/gal);
 - g. Quantity of coating used (gal/day); and
 - h. Quantity of diluent used for each coating (lb, gallons).
3. The Permittee shall maintain monthly records of all VOC containing cleaning solvents used in the spray booth. Such records shall include:
 - a. Name and description of each cleaning solvent;
 - b. VOC content of each cleaning solvent, as-applied, and the associated calculations;
 - c. VOC content of each cleaning solvent, as supplied;
 - d. The amount of each cleaning solvent used; and
 - e. A description of the type of cleaning equipment and process.
4. The Permittee shall make and keep records of the monthly and consecutive 12 month VOC, PM₁₀, and PM_{2.5} emissions from all operations associated with this unit. The consecutive 12 month VOC, PM₁₀, and PM_{2.5} emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.

5. The Permittee shall make and keep records of the premises-wide total VOC emissions from all miscellaneous metal and plastic parts surface coating operations on a monthly and consecutive 12 month basis. Such records shall be made within 30 days of the end of the previous month.
6. The Permittee shall keep material safety data sheets (MSDS) or technical data sheets (TDS) or Safety Data Sheets (SDS) for each paint and solvent used. Such information shall include the quantity and type of each hazardous air pollutant contained in the paint or solvent. For paperwork reduction, these sheets may be kept on computer file in electronic form, access to above paperwork requirement may also be allowed via internet on-demand.
7. Monthly records shall clearly display, at a minimum, compliance with all materials usage and emissions limitations set forth in this permit.
8. The Permittee shall keep records of the annual maintenance inspection required by Part IV.A of this permit as well as any other maintenance inspections performed on the spray booth, particulate filter, spray guns, or any other non-atomizing applicators used. At a minimum, such records shall include: date, person conducting inspection and the outcome of such inspection.
9. The Permittee shall keep a record of the manufacturer's guarantee for the minimum particulate removal (control) efficiency for any filter used in the paint booth.
10. The Permittee shall keep all records required by this permit for a period of no less than five years and shall submit such records to the commissioner upon request.

C. Reporting

The Permittee shall submit to the Department, a report of any exceedances of the material usage or emission limitations set forth in this permit, in writing within 30 days of the date of such exceedance. Such report shall at a minimum include:

1. a description of the nature of the exceedance;
2. the duration and magnitude of the exceedance;
3. the steps taken to reestablish compliance;
4. the success of such steps; and
5. the steps taken to assure that compliance is maintained in the future.

PART V. SPECIAL REQUIREMENTS

- A.** The Permittee shall comply with all applicable sections of the following National Emission Standards for Hazardous Air Pollutants at all times.

Title 40 CFR Part 63 Subpart GG – National Emission Standard for Aerospace Manufacturing

Copies of the Code of Federal Regulations (CFR) are available online at the U.S. Government Printing Office website.

B. Premises Emissions Summary

1. On January 1st of each calendar year, if the potential emissions of NO_x or VOC from the premises are equal to or greater than 25 tons per year per pollutant, then for such pollutant(s), the Permittee shall:
 - a. Monitor NO_x and/or VOC emissions, as applicable, from the premises for such calendar year.
 - b. Calculate and record annual NO_x and/or VOC emissions, as applicable, from the premises for such calendar year, in units of tons. The Permittee shall make these calculations on or before February 1st of the following year with respect to the previous calendar year. Such records shall include a sample calculation(s).
 - c. If actual NO_x and/or VOC emissions, as applicable, from the premises are equal to or greater than 25 tons for such calendar year, the Permittee shall submit to the commissioner, on or before March 1st of the following year, an annual emissions summary with respect to the premises for the previous calendar year. Such summary shall be submitted on forms prescribed or provided by the commissioner.

2. A Permittee is exempt from Part V.B.1 requirements of this permit if, on January 1st of the subject year, the premises was operating in accordance with any of the following:
 - a. A valid Title V permit issued pursuant to RCSA section 22a-174-33;
 - b. RCSA section 22a-174-33a; or
 - c. RCSA section 22a-174-33b

C. The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises that constitutes a nuisance as set forth in RCSA Section 22a-174-23.
[STATE ONLY REQUIREMENT]

D. The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in RCSA Sections 22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]

PART VI. ADDITIONAL TERMS AND CONDITIONS

- A.** This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.

- B.** Any representative of the DEEP may enter the Permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.

- C.** This permit may be revoked, suspended, modified or transferred in accordance with applicable law.

- D.** This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons of municipalities who are not parties to this permit.
- E.** Any document, including any notice, which is required to be submitted to the commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."
- F.** Nothing in this permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.
- G.** Within 15 days of the date the Permittee becomes aware of a change in any information submitted to the commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the commissioner.
- H.** The date of submission to the commissioner of any document required by this permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.
- I.** Any document required to be submitted to the commissioner under this permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of Director; Engineering & Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.