



**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	Hamilton Sundstrand Corporation- Collins Aerospace, A RTX Business
Address	1 Hamilton Rd., M/S 1-F-S23, Windsor Locks, CT 06096
Equipment Location	1 Hamilton Rd., Windsor Locks, CT 06096
Equipment Description	Thierica Automation & Equipment Custom Spray Booth with Three Stage Filter System or equivalent
Town-Permit Numbers	213-0120
Premises Number	2
Stack Number	178
Collateral Conditions	Part III.A.2 and 4-Premises Wide Emissions Limit for Volatile Organic Compounds (VOC) Part VI.A-Premises Wide Emissions Cap for Hazardous Air Pollutants (HAP)
Permit Issue Date	
Expiration Date	None

 Emma Cimino
 Deputy Commissioner

 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

Hamilton Sundstrand Corporation (Hamilton Sundstrand) designs and manufactures aircraft and spacecraft control systems and components for the aerospace and marine industries at the Windsor Locks facility. Hamilton Sundstrand operates a Thierica Automation & Equipment Custom Spray Booth with Three Stage Filter System. The booth uses aerospace specialty coatings. Coatings are applied to aluminum heat exchangers used in aircraft and other metal and composite aircraft components.

The paint mix room is adjacent to the spray booth. The paint mix room is vented through a separate stack. No paint application occurs in the paint mix room therefore emissions from the paint mix room stack emissions are negligible.

The coating application is by manual and robotic high volume low pressure (HVLP) spray gun. Some solid film lubricants are brush applied in the booth. Particulates are controlled by a three-stage dry fabric filter system.

The spray booth is subject to the Volatile Organic Compounds (VOC) requirements of:

- RCSA §22a-174-20(j)-Disposal and evaporation of solvents;
- RCSA §22a-174-20(s)(7)(G)-Premises wide VOC emission limit; and
- RCSA §22a-174-20(jj)-Spray application equipment cleaning.

The spray booth is also subject to the requirements of 40 CFR Part 63 Subpart HHHHHH(6H), National Emission Standards for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.

B. Equipment Design Specifications

1. Type of Spray Guns: HVLP or equivalent
2. Number of Spray Guns per Booth: 2
3. Maximum Rated Spray Gun Throughput (gallons per hour):
 - a. 3.98 (Applicator ID No. U1 a)
 - b. 3.17 (Applicator ID No. U1 b)
4. Minimum Transfer Efficiency (%): 65 for both guns

C. Control Equipment Design Specifications

1. Particulate Filter
 - a. Make and Model: Custom built three stage filter or equivalent
 - b. Filtering Material: Kraft (stage 1) and Synthetic (stages 2 and 3)
 - c. Minimum Overall Particulate Matter Filter Removal Efficiency (%): 99.90

D. Stack Parameters

1. Minimum Stack Height (ft): 42
2. Minimum Exhaust Gas Flow Rate (acfm): 2000
3. Minimum Stack Exit Temperature (°F): Ambient Temperature
4. Minimum Distance from Stack to Nearest Property Line (ft): 676

PART II. OPERATIONAL CONDITIONS

A. Equipment

1. Maximum VOC Content per Gallon of Coating, as Applied (lb/gal): Limited such that the emission limits in Part III of this permit are not exceeded.
2. Maximum VOC Content per Gallon of Coating, excluding water and exempt VOC, as Applied (lb/gal): Limited such that the emission limits in Part III of this permit are not exceeded.
3. Maximum Hourly Coating Usage, as Applied (gal): 1.4
4. Maximum Annual Coating Usage, as Applied (gal): 450

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.

B. Control Equipment

1. Particulate Filter Overall Control Efficiency (%): 99.90

C. Work Practices-Spray application equipment cleaning

1. The Permittee shall use the following work practices:
[RCSA §22a-174-20(jj)(5)(A-E)]
 - a. New and used cleaning solvent, including those 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;
 - b. Spills and leaks of cleaning solvent shall be minimized. Any leaked or spilled cleaning solvent shall be absorbed and removed immediately;
 - c. Absorbent applicators, such as cloth and paper that are moistened with cleaning solvent shall be stored in a closed, nonabsorbent, non-leaking container for disposal or recycling;
 - d. Cleaning solvent shall be conveyed from one location to another in a closed container or pipe; and
 - e. Air pollution control equipment shall be operated and maintained in accordance with the manufacturer's recommendations.

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. Thierica Automation & Equipment Custom Spray Booth with Three Stage Filter System or equivalent

Pollutant	lb/hr	tpy
PM/ PM ₁₀ / PM _{2.5}	0.017	0.001
VOC	26.29	1.5

2. *Disposal and evaporation of solvents*-The Permittee shall not, during any one day, dispose of more than one and one half gallons (5.7 liters) of any VOC or of any material containing more than one half gallons (5.7 liters) of any VOC by any means which will permit the evaporation of such solvent into the atmosphere. [RCSA §22a-174-20(i)]
3. *Premises wide VOC emission limit*-The total VOC emissions from all miscellaneous metal and plastic parts coating, including emissions from related cleaning, at this premises shall be limited to 1,666 lb/month. Exceedance of this limit shall subject this source to the requirements of RCSA §22a-174-20(s)(3). [RCSA §22a-174-20(s)(7)(G)]
4. *Spray application equipment cleaning*-The Permittee shall use only cleaning solvent with an as-applied VOC content that does not exceed 50 grams per liter (0.417 lb/gal) by placing cleaning solvent in the pressure pot and forcing the solvent through the gun with the atomizing cap in place, without the use of atomizing air. Used cleaning solvent shall be directed into a vat, drum or other waste container that is closed when not in use. [RCSA §22a-174-20(ii)(4)(B)]

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 RCSA §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:

- PM/ PM₁₀/ PM_{2.5}: Material Balance
- VOC: Material Balance

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

1. The Permittee shall inspect, and replace, the particulate filters as recommended by the manufacturer to achieve compliance with the minimum overall particulate control efficiency and emission limits in this permit.

B. Record Keeping

1. The Permittee shall keep daily records of the volume and type of VOC disposed and means of disposal.
2. The Permittee shall keep daily records for each coating and diluent used, such records shall include:
 - a. Date coating used;
 - b. Description of coating, including name and density (lb/gal);
 - c. Volatile organic compound content by weight (lb VOC/gal);
 - d. Water and exempt VOC content by weight (lb/gal);
 - e. VOC content per amount of solids applied (lb VOC/ lb solids applied);
 - f. Quantity of coating used (gal/day); and
 - g. Quantity of diluent used for each coating (lb, gallons).
3. The Permittee shall maintain daily records of all cleaning solvents used, as follows: [RCSA §22a-174-20(jj)(6)(B)(i-viii)]
 - 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;
 - e. A Material Safety Data Sheet (MSDS) for each cleaning solvent;
 - f. A description of the type of cleaning equipment and process;
 - g. Documentation of control device efficiency and capture efficiency, if applicable, using an applicable EPA reference method or alternate method as approved by the commissioner; and
 - h. Date and type of maintenance performed on air pollution control equipment, if applicable.
4. The Permittee shall calculate and record the monthly and consecutive 12 month VOC, PM₁₀, and PM_{2.5} emissions in units of tons. 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 keep annual records of the type and quantity of any solvent used to clean the guns and booth. In addition, accurate annual records must be kept of the quantity and type of solvents spilled, evaporated, or manifested as waste material.
6. The Permittee shall keep records of the dates the particulate filters were inspected and replaced.

7. The Permittee shall keep records of the performance guarantees and manufacturer written recommendations for the particulate filters and spray guns.
8. 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.
9. Daily records shall clearly display, at a minimum, compliance with all materials usage and emissions limitations set forth in this permit.
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

1. The Permittee shall notify the commissioner, in writing, of the following:
 - a. the date of commencement of construction as defined in RCSA §22a-174-1(27); and
 - b. the date of initial startup of this equipment/process.

Any required written notification(s) above shall be submitted to DEEP.CACU@ct.gov, DEEP.SEM@ct.gov and DEEP.BAM.AirPermits@ct.gov no later than 30 days after the subject event.

PART V. OPERATION AND MAINTENANCE REQUIREMENTS

- A.** The Permittee shall comply with all written recommendations set forth by the manufacturers for maintaining and operating the spray gun, spray booth, and particulate filter in order to achieve their guaranteed transfer and capture efficiencies. The control equipment shall be place at all times. In addition, methods used to increase transfer efficiency shall include, but not be limited to, the following:
 1. Minimize the distance from the spray gun to the object being coated;
 2. Minimize the air velocity in the spray booth (but not below health-based requirements); and
 3. Keep the atomizing air pressure to a minimum level, as recommended by the spray gun manufacturer.
- B.** The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants.
- C.** The Permittee shall cover all open drums and vessels that contain solvents, cleaners, coatings, or cleaning rags so as to minimize the amount of VOCs emitted to the atmosphere. Empty containers shall be disposed of in a manner consistent with handling techniques for hazardous materials, as applicable.

PART VI. SPECIAL REQUIREMENTS

- A. HAP emissions for the premises shall be less than 10 tons per year (TPY) of a single HAP and less than 25 TPY of any combination of HAPs over any consecutive 12 month period.
- B. 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 HHHHHH(6H) and A

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

C. 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 VI.C.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 §22a-174-33;
 - b. RCSA §22a-174-33a; or
 - c. RCSA §22a-174-33b.
- D. 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 §22a-174-23.
[STATE ONLY REQUIREMENT]
 - E. 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 §§22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]
 - F. The Permittee shall resubmit for review and approval a Best Available Control Technology (BACT) analysis if such construction or phased construction has not commenced within the 18 months following the commissioner's approval of the current BACT determination (i.e., the date of this permit) for such construction or phase of construction. [RCSA §22a-174-3a(i)(4)]

PART VII. ADDITIONAL TERMS AND CONDITIONS

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- 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; Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.