



STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



ATTACHMENT #1

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STATE OF CONNECTICUT
DEPT. OF ENVIRONMENTAL PROTECTION
VS.
PRATT & WHITNEY DIVISION
OF UNITED TECHNOLOGIES CORP.
NORTH HAVEN, CONNECTICUT

STATE ORDER NO. SECRETARY OF THE STATE

Proposed - March 7, 1988
Final - January 17, 1989

IN THE MATTER OF STATE ORDER NO. 8027

WHEREAS, the Pratt & Whitney Division of United Technologies Corporation (hereinafter, the "Company"), a Delaware Corporation doing business at 415 Washington Avenue, North Haven, Connecticut operates open top vapor degreasers and performs handwiping operations with volatile organic compounds subject to Section 22a-174-20(ee) of the Administrative Regulations for the Abatement of Air Pollution (hereinafter, "Regulations"); and

WHEREAS, Section 22a-174-20(ee) of the Regulations requires a demonstration of Reasonably Available Control Technology (RACT) for any premise with "actual" emissions, as currently defined by the Administrative Regulations for the Abatement of Air Pollution, of Volatile Organic Compounds in excess of one hundred (100) tons per year. The discharges of volatile organic compound emissions are required to be limited by RACT by 12/31/85 unless a compliance plan is filed under Section 22a-174-20(ee)(3); and

WHEREAS, RACT is considered the lowest achievable emission limitation that a source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility; and

WHEREAS, the Company was issued Notice of Violation No. 10893 on April 10, 1986 and has proposed RACT for the relevant sources and its determination has been accepted by the Commissioner; and

WHEREAS, the Company and this Department each acknowledges that final approval of the RACT proposal must be issued by the United States Environmental Protection Agency in that approval of RACT proposals required pursuant to Section 22a-174-20 (ee) must be submitted as revisions to Connecticut's State Implementation Plan.

Phone:

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An Equal Opportunity Employer

NOW, THEREFORE, by authority of Section 22a-178, et. seq. of the Connecticut General Statutes and Section 110(a) of the Clean Air Act, as amended, 42 U.S.C. Section 7410(a), the Commissioner hereby orders the Pratt & Whitney Division of United Technologies to complete the following measures, as further delineated by the Compliance Timetable which is hereby incorporated by reference in this Order. The applicable requirements are as follows:

- 1) The Company has twenty-nine (29) vapor degreasers which were previously exempted from Section 22a-174-20(1) of the Regulations because they were installed prior to 1980. For the purpose of compliance with Section 22a-174-20(ee) of the Regulations, Reasonably Available Control Technology has been defined as meeting the requirements of Section 22a-174-20(1) of the Regulations concerning open top vapor degreasers and the additional requirements in paragraph seven (7) of this order for the twenty-nine (29) open top vapor degreasers.
- 2) Nineteen (19) of the twenty-nine (29) vapor degreasers which previously used the VOC perchloroethylene have been converted to the exempt VOC 1,1,1 trichloroethane. Three (3) recently installed vapor degreasers use freon (Table C). Therefore, Section 22a-174-20(1) of the Regulations and paragraph seven (7) of the order does not apply to these vapor degreasers. The vapor degreasers using the exempt VOC 1,1,1 trichloroethane are listed in Table B of the Compliance Timetable. If the Company ever proposes returning to a VOC again in any of the nineteen (19) vapor degreasers in Table B or the three (3) vapor degreasers in Table C currently using an exempt VOC, the Department shall be notified in writing in advance. Any vapor degreaser being considered for conversion back to using a VOC must meet the requirements of Section 22a-174-20(1) of the Regulations concerning open top vapor degreasers and the additional requirements in paragraph seven (7) of this order on the day it starts production. Recordkeeping of the VOC's will also be required upon startup and the VOC emissions shall be included in the monthly record totals of VOC's. Table D lists the maximum monthly VOC usage (gals./month) and the maximum allowable VOC emissions



(tons/year) of each vapor degreaser currently using the exempt VOC 1,1,1 trichloroethane if it should ever be converted back to using a VOC in the future. The levels specified by Table D will be enforceable VOC emission limitations.

- 3) The current handwiping operations are not considered to represent RACT by this Department. Handwiping is defined as the cleaning of any metal (or fiberglass) part with a VOC which does not take place in the tank of a degreaser. Several requirements are being imposed on the rags used for handwiping which represent RACT.
  - A) All dirty rags shall be stored for disposal in covered containers until disposal, and
  - B) Rags being used for handcleaning shall not be visibly dripping VOC during use, and
  - C) If a rag has been used with a VOC and is to be used again with a VOC, it shall be stored in a covered container until reuse, and
  - D) The dispensing containers for the solvents used in the handwiping operations must be equipped with a lid or similar device which is closed when not in use.
- 4) Monitoring and Recordkeeping requirements as noted by the Compliance Timetable.
- 5) Continued compliance with the applicable provisions of Section 22a-174-20(f)(2) and 20(f)(4) of the Regulations.
- 6) The implementation of these RACT determinations does not excuse the source from compliance with any source-specific VOC emission limitations which may be adopted at any future time nor does it exempt any VOC emission from compliance with Section 22a-174-29 of the Regulations concerning Hazardous Air Pollutants.

- 7) Listed below are additional requirements which shall be met by the open top vapor degreasers using perchloroethylene or any other solvent that is considered a VOC under Section 22a-174-1 of the Regulations.
- A) Minimize solvent carryout by;
- (1) racking parts that are normally racked to allow maximum drainage, and
  - (2) maintaining the verticle speed of a powered hoist, if one is used, when raising and lowering the parts from the degreaser at less than 3.3 meters per minute (11 feet per minute), and
  - (3) holding the parts in the vapor zone at least 30 seconds or until condensation ceases, whichever is longer, and
  - (4) tipping out any pools of solvent on the cleaned parts when feasible before removal from the vapor zone, and
  - (5) allowing parts to dry just above the vapor zone for at least 15 seconds or until dripping has stopped in this area, whichever is longer.
- B) Do not degrease porous or absorbent materials, such as cloth, leather, wood or rope. Nylon slings, used to suspend large parts, are exempt from this requirement.
- C) Do not occupy more than half of the degreaser's open top area with a workload. Unracked parts which are lowered into the degreaser by a hoist are exempt from this requirement.

- D) Do not load the degreaser to the point where the vapor level would drop more than 10 centimeters (4 inches) when the workload is removed from the vapor zone. Unracked parts which are lowered into the degreaser by a hoist are exempt from this requirement.
- E) Always spray within the vapor layer.
- F) No vapor degreaser shall operate with any visible solvent leak until the leak is repaired, or the vapor degreaser will be emptied of solvent and shut down.
- G) When the cover is open, do not expose the open top vapor degreaser to drafts greater than 40 meters/minute (131 ft./min.), as measured between 1 and 2 meters upwind at the same elevation as the tank lip, nor provide exhaust ventilation exceeding 20 cubic meters per minute per square meter (65 cubic feet per minute per square foot) of degreaser opening, unless necessary to meet OSHA requirements.
- H) The Company shall provide a permanent, conspicuous label on or posted near each degreaser summarizing the operating requirements in paragraph seven (7) of this order as well as those specified in subsection 22a-174-20(1) of the Regulations.
- I) Each open top vapor degreaser shall have a freeboard ratio of at least 0.75. "Freeboard ratio" means a ratio of the freeboard height to the small interior dimension (length, width, or diameter) of the degreaser. "Freeboard height" is the distance from the solvent vapor level in the tank during idling to the lip of the tank.
- J) Each open top vapor degreaser with an open area greater than one square meter (10.8 square feet) shall be equipped with one of the control devices in either subparagraphs 22a-174-20 (1)(4)(iii)(b) or 22a-174-20 (1)(4)(iii)(d) of the Regulations.



A "refrigerated chiller" means a device which is mounted above the water jacket and the primary condenser coils, consisting of secondary coils which carry refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath. The chilled air blanket temperature, measured at the centroid of the degreaser at the coldest point, shall be no greater than 30 percent of the solvent's boiling point ( $^{\circ}\text{F}$ ). For open top vapor degreasers using perchloroethylene, this temperature would be  $75^{\circ}\text{F}$ .

- 8) Any new open top vapor degreasers utilizing VOCs which may be installed at a future date and do not meet the conditions which would require the Company to file for a permit shall meet the requirements for open top vapor degreasers in Section 22a-174-20(1) of the Regulations and paragraph seven (7) of this order.

9) The Company shall cease operation of any solvent recovery still processing perchloroethylene, whether an integral part of a single vapor degreaser or a stand alone unit used exclusively as a solvent recovery still, whenever the condenser coil outlet water temperature exceeds  $37.5^{\circ}\text{C}$  ( $100^{\circ}\text{F}$ ) above which temperature the perchloroethylene solvent recovery still is achieving less than the minimum required ninety-five (95) percent recovery rate of perchloroethylene. The condenser coil outlet water temperature on the solvent recovery still shall be monitored by an alarm set at  $37.5^{\circ}\text{C}$  ( $100^{\circ}\text{F}$ ) to ensure that the efficiency of the solvent recovery still does not go below a ninety-five (95) percent control efficiency. The condenser coil outlet water temperature shall be monitored once per day until the alarm is installed if the unit is in service. All malfunctions of the solvent recovery unit shall be documented and the records be made available on request.

All waste perchloroethylene sludge residues (before being sent out as a waste product) must be stored in closed containers which prevent the evaporation of VOC to the atmosphere.

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North Haven, Connecticut

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- 10) Any VOC solvent spilled during the transfer either from the dispensing area or to any degreaser should be wiped upon occurrence, and the wipe rags subsequently should be stored in a closed container until proper disposal.

Entered as a final decision of the Commissioner of Environmental Protection this 31 day of March, 1989.

Julie Carothers  
Leslie Carothers  
Commissioner  
Dept. of Environmental Protection

As a duly authorized representative of Pratt & Whitney Division of United Technologies Corporation, I hereby consent to the terms and conditions of this Order and do hereby waive the right to appeal this Order pursuant to Section 22a-174-20(b)(4) of the Regulations this 22nd day of March, 1989.

UNITED TECHNOLOGIES CORPORATION  
Pratt & Whitney Division

By:

Robert F. Bescher

Title:

Robert F. Bescher  
Vice President - Manufacturing

LC

Encs.







<b>COMPLIANCE TIMETABLE</b>
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SOURCE NAME: Pratt & Whitney Div. of UTC	PREMISE NO.: 135-004	CLIENT NO.: 000130
VIOLATION SUBSECTION: 22a-174-20 (ee)	ORDER NO.: 8027	DATE ISSUED: 1/17/89

STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
2.	<p>The Company shall adhere to a maximum annual limitation on total Volatile Organic Compound (VOC) emissions of 218 tons and a maximum monthly VOC emission of 17.3 tons for the ten (10) vapor degreasers listed in Table A which presently use the VOC perchloroethylene. The above annual and monthly emission limitations will vary if vapor degreasers currently using exempt VOC are converted to a non-exempt VOC. Table D lists the monthly and annual allowable emission rates if conversion occurs on a per vapor degreaser basis. Compliance shall be verified based upon the following recordkeeping requirements.</p> <p>A) The Company shall maintain a recordkeeping system of all adds to each vapor degreaser using perchloroethylene or any other VOC. This record shall include the date of the add and the amount in gallons.</p> <p>B) The Company shall maintain a monthly record-keeping system of all VOC's used in the handwiping operations broken down by each type of VOC.</p> <p>C) The Company shall maintain a monthly recordkeeping system for all waste VOC (solvent portion only) from all vapor degreasers using perchloroethylene or any other VOC which is either recycled or manifested as waste. The amounts recorded will be subtracted from the VOC's recorded in Parts A and B to determine actual emissions.</p> <p>D) Submit a quarterly summary of total VOC usage in gallons for each vapor degreaser using perchloroethylene or any other VOC and the handwiping operation broken down by each type of VOC. Convert the gallons to tons of VOC.</p> <p>E) Submit a quarterly summary of total waste VOC (solvent portion only) from all vapor degreasers using perchloroethylene or any other VOC in gallons which was manifested as waste or recycled. Convert the gallons to tons of VOC.</p>			

<b>COMPLIANCE TIMETABLE</b>
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SOURCE NAME: Pratt & Whitney Div. of UTC	PREMISE NO.: 135-004	CLIENT NO.: 000130
VIOLATION SUBSECTION: 22a-174-20 (ee)	ORDER NO.: 8027	DATE ISSUED: 1/17/89

STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
	<p>F) Quarterly reports shall be submitted on April 15, 1989, July 15, 1989 and October 15, 1989.</p> <p>G) Although no longer required to be submitted to the Department after October 15, 1989 the quarterly reports shall be maintained and kept on file at the Company for Departmental review or submittal upon request.</p> <p>3. Any changes or proposed changes in VOC content of the vapor degreasing solvent shall be reported to the Department immediately.</p> <p>4. The Company shall submit a complete detailed record of total VOC usage and emissions using the identical recordkeeping system which is required for the quarterly reports for the most recent year completed (January 1 - December 31) whenever a Pre-Inspection Questionnaire is submitted to the Department.</p> <p>5. If any of the ten (10) vapor degreasers which currently use VOC and which are limited by this order are permanently shutdown, the maximum annual and monthly allowable VOC limitation shall be reduced accordingly by the number of vapor degreasers that have actually shut down (refer to Table A for the actual reduction). If any vapor degreasers which currently use the exempt VOC 1,1,1 trichloroethane convert to a non-exempt VOC, Table D indicates the allowable monthly and annual VOC emissions on a per vapor degreaser basis.</p> <p>6. The Company shall be in compliance with all the requirements of this State Order by December 31, 1987.</p>			
		Completed (12/31/87)		