



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



ATTACHMENT #1

STATE OF CONNECTICUT	)	
DEPT. OF ENVIRONMENTAL PROTECTION	)	
	)	<u>STATE ORDER NO. 8029</u>
VS.	)	
	)	Proposed-March 4, 1988
HAMILTON STANDARD DIVISION	)	Final Order-July 31, 1989
OF UNITED TECHNOLOGIES CORP.	)	
WINDSOR LOCKS, CONNECTICUT	)	

IN THE MATTER OF STATE ORDER NO. 8029

WHEREAS, the Hamilton Standard Division of United Technologies Corporation (hereinafter, the "Company"), a Delaware Corporation doing business at Hamilton Road, Windsor Locks, Connecticut operates open top vapor degreasers, a conveyORIZED open top vapor degreaser, solvent stills 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. 11137 on November 24, 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

Hamilton Standard Div.  
of United Technologies Corp.  
Windsor Locks, Connecticut

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STATE ORDER NO. 8029  
July 31, 1989

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 Hamilton Standard 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 fifty-six (56) vapor degreasers of which twenty-one (21) were previously exempted from Section 22a-174-20(1) of the Regulations because they were installed prior to July 1, 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 and the additional requirements in paragraph seven (7) of this Order for all open top vapor degreasers utilizing VOC and as meeting the applicable requirements of Section 22a-174-20(1) of the Regulations and the additional requirement in paragraph ten (10) of this Order for all conveyORIZED degreasers utilizing VOC.
- 2) Twenty-eight (28) of the fifty-six (56) vapor degreasers have been converted to or have always used either the exempt solvent 1,1,1 trichloroethane or Freon TF. 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 solvent 1,1,1 trichloroethane or Freon TF/PCA are listed in Tables B and C respectively, of the Compliance Timetable. Should the Company propose returning to a VOC again in any of the vapor degreasers in either Tables B or C currently using an exempt solvent, 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 H lists the maximum monthly VOC usage (gals./month) and the maximum allowable VOC emissions (tons/year) of each vapor degreaser currently using either the exempt solvent 1,1,1 trichloroethane or Freon TF if it should ever be converted back to using a VOC in the future. The levels specified by Table H 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 cloth and paper rags which are to be disposed of shall be stored in covered containers until final disposal, and
  - B) All dirty rags which are to be cleaned and recycled, shall be stored in covered containers until they are ready to be cleaned, and
  - C) Rags being used for handwiping shall not be visibly dripping VOC during use, and
  - D) 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 reused, and
  - E) 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 all open top vapor degreasers using either perchloroethylene, Freon TE or TES and DMSA or any other VOC as defined in 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. Unracked parts which are lowered into the degreaser by a hoist 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 (consisting of secondary coils which carry refrigerant) which is mounted above the water jacket and the primary condenser coils, 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 ( $^{\circ}$ F). For open top vapor degreasers using perchloroethylene, this temperature would be  $75^{\circ}$ F.

- 8) Any new open top vapor degreaser utilizing VOC which may be installed at a future date and does not require a permit under section 22a-174-3 of the Regulations, shall meet the applicable requirements of subsection 22a-174-20(1) of the Regulations and the additional requirements in paragraph seven (7) of this order. Correspondingly, any new conveyORIZED degreaser utilizing VOC which may be installed at a future date and does not require a permit under section 22a-174-3 of the Regulations, shall meet the applicable requirements of subsection 22a-174-20(1) of the Regulations and the additional requirements in paragraph ten (10) of this order.
- 9) The Company shall cease operation of any solvent recovery still processing a VOC, whether an integral part of a single vapor degreaser or a stand alone unit used exclusively as a solvent recovery still, whenever the solvent recovery still coolant circulating through the condenser coil on the solvent recovery still exceeds the maximum allowable temperature ( $^{\circ}$ F or  $^{\circ}$ C) in Table I for each of the VOC's used by the company. Table I is attached to the Compliance Timetable. The parameters established in Table I represent the requirements necessary to ensure that the solvent recovery stills are achieving a minimum ninety-five (95) percent recovery rate of the VOC being condensed. The condenser coil outlet coolant temperature on the solvent recovery still shall be monitored by a trip alarm set to the required limit in Table I for the VOC being condensed to ensure that the efficiency of the solvent recovery still does not go below a ninety-five (95) percent control efficiency.

The parameters shall be monitored once per day until the alarm is installed if the unit is in service. All malfunctions of the solvent recovery still shall be documented and the records made available on request.

All waste solvent (before being recovered in the solvent recovery still) and all waste 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.

- 10) Listed below are additional requirements which shall be met by any conveyORIZED vapor degreaser using either DMSA or any other VOC as defined in Section 22a-174-1 of the Regulations.
  - A) Do not 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.
  - B) Provide a vapor level control thermostat which shuts off the pump heat when the vapor level rises above the height of the primary condenser coils.
  - C) Minimize openings during operation so that entrances and exits will silhouette workloads with an average clearance between the parts and the edge of the degreaser opening of less than 10 centimeters (4 inches) or less than 10 percent of the width of the opening.
  - D) No conveyORIZED vapor degreaser shall operate with any visible solvent leak until the leak is repaired, or the degreaser will be emptied of solvent and shut down.
  - E) Do not operate the cleaner so as to allow water to be visually detectable in solvent exiting the water separator.
  - F) Provide a permanent, conspicuous label, summarizing the above operating procedures as well as those specified in subsection 22a-174-20(1).

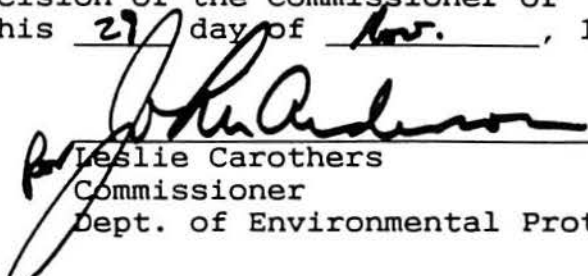
Hamilton Standard  
of United Technologies Corp.  
Windsor Locks, Connecticut

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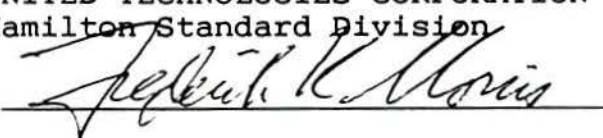
- 11) Any solvent spilled during the transfer either from the dispensing area or to any degreaser should be wiped up after such occurrence, and any wipe rags subsequently should be stored in a closed container until proper disposal.

Entered as a final decision of the Commissioner of Environmental Protection this 27 day of Nov., 1989.

  
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Leslie Carothers  
Commissioner  
Dept. of Environmental Protection

As a duly authorized representative of Hamilton Standard 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 NOVEMBER, 1989.

UNITED TECHNOLOGIES CORPORATION  
Hamilton Standard Division

By:   
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Title: Senior Vice President  
Strategic Planning & Administration

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Encs.



**COMPLIANCE TIMETABLE**

TYPE OF SOURCE:

MAJOR

MINOR

PROCEDURAL

OTHER \_\_\_\_\_

PRIME CONTACT: John LaFleur	SOURCE NAME: Hamilton Standard
TITLE OF CONTACT PERSON: Group Leader	Div. of UTC
SOURCE ADDRESS: Hamilton Road	PREMISE NO.: 213-002 CLIENT NO.: 000130
Windsor Locks, Conn.	ORDER NO.: 8029 DATE ISSUED: 7/31/89
TELEPHONE NO.: 654-6000 ext. 5376	N.V. NO.: 11137 DATE ISSUED: 11/24/86
VIOLATION SUBSECTION: 22a-174-20(ee)	EQUIPMENT TYPE: Vapor Degreasers (44)
	Handwiping Operations
	REG. NO.: INSPECTOR AND NO.: MC-#80

STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
	<p>The implementation of RACT for Hamilton Standard Division of United Technologies Corporation's fifty-six (56) open top vapor degreasers, a conveyORIZED vapor degreaser and handwiping operations is contingent upon demonstrated adherence to the following emission limitations and monitoring and recordkeeping provisions. All records required by this Compliance Timetable shall be kept on file for a period of three (3) years and be submitted or made available immediately to the Commissioner or her staff on request.</p> <p>Hamilton Standard Division of United Technologies Corporation shall monitor the fifty-six (56) vapor degreasers and handwiping operations in the manner described by the Compliance Timetable and as further described within State Order No. 8029. The following conditions apply to the above equipment until such time as this order may be amended or otherwise altered in a manner approved by the Commissioner of Environmental Protection and are required as conditions of compliance.</p>			
1.	<p>The Company shall continue using the exempt solvents 1,1,1 trichloroethane and Freon TF in the twenty-eight (28) vapor degreasers listed in Table B and C which is attached to this Compliance Timetable. If the Company ever proposes returning to a Volatile Organic Compound (VOC) again in any of the twenty-eight (28) vapor degreasers listed in Table B and C, the Department shall be notified in advance in writing. Any vapor degreaser being considered for conversion back to using a VOC must meet the requirements of Section 22a-174-20(1) of the <u>Regulations</u> 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 included in the monthly totals of VOC's.</p>			

## COMPLIANCE TIMETABLE

SOURCE NAME: Hamilton Standard, Div. of UTC	PREMISE NO.: 213-002	CLIENT NO.: 000130
VIOLATION SUBSECTION: 22a-174-20 (ee)	ORDER NO.: 8029	DATE ISSUED: 7/31/89

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 208.14 tons and a maximum monthly VOC emission of 17.35 tons for the twenty-eight (28) vapor degreasers listed in Table A, D, E, F and G which presently use the VOC's perchloroethylene Freon TE, DMSA or methyl alcohol. The above annual and monthly emission limitations will vary if vapor degreasers currently using an exempt VOC are converted to a non-exempt VOC. Table H lists the monthly and annual allowable emission rates if conversion occurs on a per 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, Freon TE, DMSA, methyl alcohol or any other VOC. This record shall include the date of the add and the amount in gallons.</p> <p>B) The Company shall develop and maintain a monthly recordkeeping system of all VOC's dispensed for operations other than degreasing as identified in item A above broken down by each type of VOC. The monthly recordkeeping system shall be implemented no later than six (6) months after the signing of this Consent Order by the Commissioner.</p> <p>C) The Company shall maintain a monthly recordkeeping system for all waste VOC (solvent portion only) from all vapor degreasers using perchloroethylene, Freon TE, DMSA, methyl alcohol 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, Freon TE, DMSA, methyl alcohol or any other VOC and the handwiping operation broken down by each type of VOC. Convert the gallons to tons of VOC.</p>			

<b>COMPLIANCE TIMETABLE</b>
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SOURCE NAME: Hamilton Standard Div. of UTD	PREMISE NO.: 213-002	CLIENT NO.: 000130
VIOLATION SUBSECTION: 22a-174-20 (ee)	ORDER NO.: 8029	DATE ISSUED: 7/31/89

STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
	<p>E) Submit a quarterly summary of total waste VOC (solvent portion only) from all vapor degreasers using perchloroethylene, Freon TE, DMSA, methyl alcohol or any other VOC in gallons which was manifested as waste or recycled. Convert the gallons to tons of VOC.</p> <p>F) Reports shall be submitted on January 30, 1990, April 30, 1990, and July 30, 1990.</p> <p>G) Although no longer required to be submitted to the Department after July 30, 1990, the quarterly reports shall be maintained and kept on file at the Company for Departmental review or submittal upon request.</p>			
3.	Any changes or proposed changes in the solvent used in a vapor degreaser shall be reported to the to the Department immediately.			
4.	The Company shall submit a complete detailed record of total VOC usage and emissions as specified in 2(F) and 2(G) for the Pre-Inspection Questionnaire.			
5.	If any of the twenty-eight (28) 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, D, E, F and G for the actual reduction). If any vapor degreasers which currently use either the exempt solvent 1,1,1 Trichloroethane or Freon TF/PCA convert to a non-exempt VOC, Table H indicates the allowable monthly and annual VOC emissions on a per vapor degreaser basis.			

<b>COMPLIANCE TIMETABLE</b>
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SOURCE NAME: Hamilton Standard Div. of UTC	PREMISE NO.: 213-002	CLIENT NO.: 000130
VIOLATION SUBSECTION: 22a-174-20 (ee)	ORDER NO.: 8029	DATE ISSUED: 7/31/89

STEP	EVENTS LEADING TO COMPLIANCE	TIMETABLE	COMPLETED	VER.
6.	The Company shall notify the Department whenever a vapor degreasing unit is being replaced and assigned a new identification number. The Company shall notify the Department in writing prior to the commencement of operation of the unit and supplying the building location number, identification number of the unit, capacity in gallons, solvent type and maximum allowable monthly usage. The Department will modify the appropriate Table and send the revised Table to EPA for approval. When approval by EPA is received a copy of the new table and EPA's approval letter will be sent to the Company.			
7.	The Company shall be in compliance with all the requirements of this State Order by December 31, 1987.	Completed (12/31/87)		