BM

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMITS

Mr. J. L. Seelinger, Manager
Utilities Operations/Environmental Affairs
United Technologies Corporation
Pratt & Whitney
Post Office Box 109600
West Palm Beach, Florida 33410-9600

July 16, 1987

Enclosed are construction permits Nos. AC 50-130042 and -130043 to United Technologies Corporation - Pratt & Whitney, which authorizes the construction/installation of a paint spray booth, with an associated filtration system, and a sanding and planing work shop, with an associated dust collection system, at the applicant's existing facility in West Palm Beach, Palm Beach County, Florida. These permits are issued pursuant to Section 403, Florida Statutes.

Any Party to these permits have the right to seek judicial review of the permits pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date these permits are filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

Copy furnished to:
I. Goldman, SE District
T. E. Chechile, P.E.
E. Sacco, PBCHD

Final Determination

United Technologies Corporation
Pratt & Whitney

Palm Beach County
West Palm Beach, Florida

Permit Numbers:
AC 50-130042
AC 50-130043

Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

July 9, 1987

Final Determination

The construction permit applications have been reviewed by the Department. Public Notice of the Department's Intent to Issue was published in The Palm Beach Post on June 21, 1987. The Technical Evaluation and Preliminary Determination were available for public inspection at the Palm Beach County Health Department and the Department's SE District office and Bureau of Air Quality Management office.

No comments were received as a result of the public notice period.

The final action of the Department will be to issue the construction permits as drafted.

THE PALM BEACH POST

Published Daily and Sunday
West Palm Beach, Palm Beach County, Florida

PROOF OF PUBLICATION

STATE OF FLORIDA

COUNTY OF PALM BEACH

Before the undersigned authority personally appeared Barbara M. McCord who on oath says that she/he is Class. Adv. Mgr. of The Palm Beach Post, a daily and Sunday newspaper published at West Palm Beach in Palm Beach County, Florida; that the attached copy of advertising, being a Notice

in the matter of intent

in the ---- Court, was published in said newspaper in the issues of June 21, 1987

Affiant further says that the said The Post is a newspaper published at West Palm Beach, in said Palm Beach County, Florida, and that the said newspaper has heretofore been continuously published in said Palm Beach County, Florida, daily and Sunday and has been entered as second class mail matter at the post office in West Palm Beach, in said Palm Beach County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that she/he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Barbara M. McCord

Sworn to and subscribed before me this 22 day of June A.D. 1987

Karen M. Hinton

NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. NOV 15,1989.
BONDED THRU GENERAL INS. UND.

NO. 728683
State of Florida
Department of
Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue permits to United Technologies Corporation-Pratt & Whitney, to install a paint spray booth (PSB-1-RTF), with an associated filtration system, and a sanding and planing work shop (DC-1-RTF), with an associated dust collection system (baghouse fabric filter), at their existing facility in West Palm Beach, Palm Beach County, Florida. A determination of best available control technology (BACT) or lowest achievable emission rate (LAER) was not required.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administration hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009 Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of
Environmental Regulation
Bureau of
Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida
32399-2400

Dept. of
Environmental Regulation
Southeast District
1900 S. Congress Ave.,
Suite A
West Palm Beach,
Florida 33406

Palm Beach County
Health Dept.
901 Evernia
West Palm Beach,
Florida 33402

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

PUB: The Palm Beach Post
June 21, 1987

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
United Technologies Corp.
Pratt & Whitney
P. O. Box 109600
West Palm Beach, FL 33410-9600

Permit Number: AC 50-130042
Expiration Date: June 30, 1988
County: Palm Beach
Latitude/Longitude: 26° 55' 51" N
80° 20' 41" W
Project: Work Shop and Associated Baghouse Collection System: DC-1-RTF

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction/installation of a sanding and planing work shop that will process test objects composed of any combination of wood, aluminum, plastics (urethanes, polyesters, epoxies), fiberglass, and graphite (fibre). The particulate matter emissions will be collected, transported, and filtered by a baghouse (fabric filter) collection system (TORIT Model 140-15) with a motor operated shaker. The system will have a 15 hp fan motor, a filter area of 1200 square feet, and a dust storage area of 75 square feet.

The source will be constructed/installed at the permittee's existing facility on SR 710 approximately 20 miles NW of West Palm Beach. The UTM coordinates are Zone 17, 565.6 km East and 2978.5 km North.

The Standard Industrial Classification Codes are: Major Group 73: Business Services; Group No. 739: Miscellaneous Business Services; and, Industry No. 7397: Commercial Testing Laboratories.

Construction shall be in accordance with the permit application, plans, documents, amendments, and drawings, except as otherwise noted in the Specific Conditions.

Attachments to be Incorporated:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Mr. J. L. Seelinger's cover letter received January 28, 1987.
2. Mr. C. H. Fancy's letter dated February 27, 1987.
3. Mr. J. L. Seelinger's letter with attachments received April 17, 1987.

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130042
Expiration Date: June 30, 1988

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The operating times shall not exceed 8 hrs/day, 5 days/wk, and 52 wks/yr.

2. The maximum allowable particulate matter (PM) emissions shall not exceed 0.21 lb/hr and 0.22 TPY. EPA Method 5, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, shall be used to verify compliance. The mass (PM) emissions compliance test requirement shall be deferred pursuant to FAC Rule 17-2.700(3)(d).

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130042
Expiration Date: June 30, 1988

SPECIFIC CONDITIONS:

3. Visible emissions (VE) shall not exceed 5% opacity (no visible emissions) pursuant to FAC Rule 17-2.700(3)(d). EPA Method 9, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, shall be used to verify compliance. Failure to maintain the VE standard shall initiate the requirement for a mass (PM) emissions test pursuant to FAC Rule 17-2.700(3)(d).

4. The pollution abatement equipment shall be maintained, properly operated, and on at all times during operations.

5. Objectionable odors shall not be allowed off plant property.

6. The DER's Southeast Florida District office shall be notified in writing 15 days before testing. Test results shall be submitted to the District office 45 days after the last test run.

7. Testing and reporting shall be in accordance with FAC Rule 17-2.700.

8. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the Department's Southeast District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130042
Expiration Date: June 30, 1988

SPECIFIC CONDITIONS:

Issued this 14 day of July, 1987

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

Dale Twachtmann, Secretary

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
United Technologies Corp.
Pratt & Whitney
P. O. Box 109600
West Palm Beach, FL 33410-9600

Permit Number: AC 50-130043
Expiration Date: June 30, 1988
County: Palm Beach
Latitude/Longitude: 26° 55' 51" N
80° 20' 41" W
Project: Paint Spray Booth:
PSB-1-RTF

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction/installation of a paint spray booth to serve development and test activities and will not be used for a production line process. The PSB-1-RTF will be special Binks Model CA-528-T-LH dry Andreae filter type combination truck and automobile spray booth. The source will process subassemblies (1 ft. diameter x 1 ft. long) and major assemblies (4 ft. diameter x 26 ft long). The PSB-1-RTF will have an associated filtration system to prevent particulate matter emissions.

The source will be constructed/installed at the permittee's existing facility on SR 710 approximately 20 miles NW of West Palm Beach. The UTM coordinates are Zone 17, 565.6 km East and 2978.5 km North.

The Standard Industrial Classification Codes are: Major Group 73: Business Services; Group No. 739: Miscellaneous Business Services; and, Industry No. 7397: Commercial Testing Laboratories.

Construction shall be in accordance with the permit application, plans, documents, amendments, and drawings, except as otherwise noted in the Specific Conditions.

Attachments to be Incorporated:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Mr. J. L. Seelinger's cover letter received January 28, 1987.
2. Mr. C. H. Fancy's letter dated February 27, 1987.
3. Mr. J. L. Seelinger's letter with attachments received April 17, 1987.

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130043
Expiration Date: June 30, 1988

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The operating times shall not exceed 8 hrs/day, 5 days/wk, and 52 wks/yr.

2. Total volatile organic compounds and organic solvents emissions shall not exceed 2.73 lbs/hr, 11.75 lbs/day, and 2.84 TPY, and shall be verifiable on a daily (24-hour) basis.

3. EPA Method 24, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, or any other method approved by the Department, shall be required to determine the volatile matter content, water content, density, volume solids, and weight solids for each surface coating material. The paint should be tested as applied and testing should only be required again if the formula, as applied, changes.

SPECIFIC CONDITIONS:

4. The permittee shall notify the DER's Southeast District in writing 15 days prior to testing. Compliance test results shall be submitted to the District no later than 45 days after the final test run.

5. The permittee shall maintain accurate record-keeping of all paints and solvents used in operation of the spray booth. The permittee shall submit annual reports to the DER's Southeast District office as proof of compliance with permit VOC limits commencing one year after the operating permit is issued and annually thereafter.

6. During those times when the facility is being used for spray painting of other related activities where solvent emissions can escape to the atmosphere, the doors shall be closed. Additional precautions, such as covering of solvent containers when not in use, shall be taken to prevent escape of VOC fugitive emissions.

7. The paint spray booth shall not be operated unless the exhaust fan and abatement equipment are functioning properly.

8. Compliance with the conditions of the permit shall be determined through visual inspection by a Department representative and submittal of paint/solvent records as stated in Specific Condition No. 5.

9. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor pursuant to FAC Rule 17-2.620(2). Objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance pursuant to FAC Rule 17-2.100(130). Odor is defined as a sensation resulting from stimulation of the human olfactory organ pursuant to FAC Rule 17-2.100(131).

10. The permittee shall report any delays in construction and completion of this modification to the DER's Southeast Florida District office.

11. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130043
Expiration Date: June 30, 1988

SPECIFIC CONDITIONS:

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the Department's Southeast District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

12. Upon obtaining an operating permit, the applicant will be required to submit periodic test reports on the actual operation and emissions of the facility, such as paint analyses obtained by using EPA Method 24, paint vendors specifications to show concurrence with paint analyses performed, and the annual operating report which contains the quantified and qualified actual pollutant emissions from the facility.

13. Testing and reporting shall be in accordance with FAC Rule 17-2.700.

14. The following exhibits the VOC emissions tracking:

Source	VOC Potential Pollutant Emissions (TPY)
Previous Permits	7.35
PSB-1-RTF	2.84
	Total: 10.19

Note: New Source Review (NSR; FAC Rule 17-2.510(4)) will be triggered once a 40 TPY total of VOC emissions increases have occurred. Also, a New Source Allowance percentage will be assigned to the project triggering the NSR.

Issued this 14 day of July, 1987

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Dale Twachtmann, Secretary

Bruce's Copy

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

June 10, 1987

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. J. L. Seelinger
Manager
Utilities Operations/Environmental Affairs
United Technologies Corporation
Pratt & Whitney
P.O. Box 109600
West Palm Beach, Florida 33410-9600

Dear Mr. Seelinger:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permits to construct/install a paint spray booth (PSB-1-RTF), with an associated filtration system, and a sanding and planing work shop (DC-1-RTF), with an associated dust collection system (baghouse fabric filter), at your existing West Palm Beach, Palm Beach County, facility.

Please submit, in writing, any comments which you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/bm

Attachments

cc: T. E. Chechile, P.E.
I. Goldman
G. Sacco

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permits by:

United Technologies Corporation
Pratt & Whitney
P.O. Box 109600
West Palm Beach, Florida 33410-9600

DER File No. AC 50-130042
AC 50-130043

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue permits (copies attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, United Technologies Corporation-Pratt & Whitney, on January 28, 1987, applied to the Department of Environmental Regulation for permits to construct air pollution sources at Pratt & Whitney's existing facility in West Palm Beach, Palm Beach County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that air construction permits were needed for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, FAC, you (the applicant) are required to publish at your own expense the enclosed Notice of Proposed Agency Action on permit application. The notice must be published one time only in a section of a major local newspaper of general circulation in the county in which the project is located and within thirty (30)

days from receipt of this intent. Proof of publication must be provided to the Department within seven days of publication of the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permits.

The Department will issue the permits with the attached conditions unless petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copies enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32301-8241. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality Management

Copy furnished to:

J. L. Seelinger
T. E. Chechile, P.E.
I. Goldman
G. Sacco

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on June 12, 1987.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

R Bruce Mitchell — 6/12/87
Clerk — Date

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue permits to United Technologies Corporation-Pratt & Whitney, to install a paint spray booth (PSB-1-RTF), with an associated filtration system, and a sanding and planing work shop (DC-1-RTF), with an associated dust collection system (baghouse fabric filter), at their existing facility in West Palm Beach, Palm Beach County, Florida. A determination of best available control technology (BACT) or lowest achievable emission rate (LAER) was not required.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the proposed agency action. Therefore, persons who may not wish to file a petition may wish to intervene in the proceeding. A petition for intervention must be filed pursuant to Rule 28-5.207, Florida Administrative Code, at least five (5) days before the final hearing and be filed with the hearing officer if one has been assigned at the Division of Administrative Hearings, Department of Administration, 2009, Apalachee Parkway, Tallahassee, Florida 32301. If no hearing officer has been assigned, the petition is to be filed with the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation
Southeast District
1900 S. Congress Ave.,Suite A
West Palm Beach, Florida 33406

Palm Beach County Health Dept.
901 Evernia
West Palm Beach, Florida 33402

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

RULES OF THE ADMINISTRATIVE COMMISSION
MODEL RULES OF PROCEDURE
CHAPTER 28-5
DECISIONS DETERMINING SUBSTANTIAL INTERESTS

28-5.15 Requests for Formal and Informal Proceedings

(1) Requests for proceedings shall be made by petition to the agency involved. Each petition shall be printed, typewritten or otherwise duplicated in legible form on white paper of standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double spaced and indented.

(2) All petitions filed under these rules should contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name and address of the petitioner or petitioners;

(c) All disputed issues of material fact. If there are none, the petition must so indicate;

(d) A concise statement of the ultimate facts alleged, and the rules, regulations and constitutional provisions which entitle the petitioner to relief;

(e) A statement summarizing any informal action taken to resolve the issues, and the results of that action;

(f) A demand for the relief to which the petitioner deems himself entitled; and

(g) Such other information which the petitioner contends is material.

Technical Evaluation
and
Preliminary Determination

United Technologies Corporation
Pratt & Whitney

Palm Beach County
West Palm Beach, Florida

Permit Numbers:
AC 50-130042
AC 50-130043

Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

June 10, 1987

I. Project Description

A. Applicant

United Technologies Corporation
Pratt & Whitney
P. O. Box 109600
West Palm Beach, Florida 33410-9600

B. Project Description

The applicant proposes to construct a paint spray booth with an associated filtration system and a planing and sanding work shop with an associated dust collector system. The sources will be located at the Pratt & Whitney's existing facility in Palm Beach County. The spray booth (PSB-1-RTF) will be a source of VOC (volatile organic compounds) emissions and the work shop (DC-1-RTF) will be a source of PM (particulate matter) and visible emissions.

The hours of operation requested are 8 hrs/day, 5 days/week, and 52 weeks/year, which is equivalent to 2080 hours/year.

The existing facility is located in an area designated nonattainment for the pollutant ozone. The UTM coordinates are Zone 17, 565.6 km East and 2978.5 km North.

C. Process and Controls

The paint spray booth will serve development and test activities and will not be used for a production line process. The PSB-1-RTF will be a special Binks Model CA-528-T-LH dry Andreae filter type combination truck and automobile spray booth. A maximum of 240 subassemblies (1 ft. diameter x 1 ft. long) and 12 major assemblies (4 ft. diameter x 26 ft. long) will be painted in this booth per year.

The paint spray booth will have an associated filtration system to prevent PM emissions. The filters will be changed whenever the pressure reading approaches manufacturer's specifications. If the pressure reading exceed's manufacturer's specifications, the exhaust fan, breathing air and air supply for the paint spray gun will automatically shut down.

The sanding and planing work room will process test objects composed of any combination of wood, aluminum, plastics (urethanes, polyesters, epoxies), fiberglass and graphite (fibre). The objects will be of an elliptical cylindrical shape and sized as described previously (see paint spray booth discussion). The test objects will be sanded and planed and the PM emissions will be collected by a dust collection system. The dust collector will be a baghouse (fabric filter) type (TORIT

Model 140-15) with a motor operated shaker. The system will have a 15 h.p. fan motor, a filter area of 1200 square feet and a dust storage area of 75 cubic feet.

II. Rule Applicability

The proposed project is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code (FAC) Rules 17-2 and 17-4.

The application was complete April 17, 1987.

The existing facility is located in Palm Beach County, which is an area designated nonattainment for the pollutant ozone pursuant to FAC Rule 17-2.410(1)(e).

The existing facility is a major facility for the pollutant VOC (volatile organic compounds) in accordance with FAC Rule 17-2.100(110). VOC are considered precursors to ozone.

The following table will reflect the potential pollutant emissions for the proposed project:

Table 1

	Potential Pollutant Emissions				
	PM		VOC		
Source	lb/hr	TPY	lbs/hr	lbs/day	TPY
PSB-1-RTF: (Paint Spray Booth)			2.73	11.75	2.84
DC-1-RTF: (Work Room Control Sys)	0.21	0.22			

Note: Operating Times: 8 hrs/day, 5 days/wk, 52 wks/yr
Maximum Production Rates: 240 subassemblies/yr
12 major assemblies/yr

Since the potential pollutant emissions are not subject to new source review pursuant to FAC Rules 17-2.500 (Prevention of Significant Deterioration (PSD)) or 17-2.510 (Nonattainment Area), the emissions are subject to review pursuant to FAC Rule 17-2.520, Sources Not Subject to PSD or Nonattainment Review.

The proposed paint spray booth is exempt from the emissions limiting standards contained in FAC Rule 17-2.650, Reasonable Available Control Technology, in accordance with FAC Rule 17-2.650(1)(c)1., Exceptions. Therefore, the proposed paint spray booth shall be subject to FAC Rule 17-2.620, General Pollutant Emission Limiting Standards.

FAC Rule 17-2.620(1)(a) states that no person shall store, pump, handle, process, load, unload or use in any process or installation volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.

FAC Rule 17-2.620(2) states that no person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

The permittee shall maintain records such that the total VOC emissions can be verified on a daily (24-hr) basis. The annual amount of VOC emissions and the number of assemblies per type processed shall be provided in an annual operating report and submitted to the DER's Southeast Florida District.

EPA Method 24, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, or any other approved method by the Department, shall be required to determine the volatile matter content, water content, density, volume solids, and weight solids for each surface coating material. The paint should be tested as applied and testing should only be required again if the formula, as applied, changes.

The proposed work room and its associated baghouse control system is subject to the emission limiting standards pursuant to FAC Rule 17-2.610, General Particulate Emission Limiting Standards. In accordance with this section, the source shall have a PM emissions limit and a visible emissions (VE) limit established, each requiring a compliance test in accordance with FAC Rule 17-2.700. Since the source is equipped with a baghouse and to defer any mass (PM) emissions test requirement, the proposed work room's PM emissions standard shall be in accordance with FAC Rule 17-2.700(3)(d), which establishes a VE standard of 5% opacity (no visible emissions) for a minor particulate source equipped with a baghouse.

EPA Method 9, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, shall be used to demonstrate compliance with the VE standard.

All compliance tests, record keeping, and reporting shall be in accordance with FAC Rule 17-2.700. The permittee shall notify the DER's Southeast Florida District office in writing 15 days prior to testing and shall submit the test results within 45 days after the last test run.

III. Emission Limits and Air Quality Analysis

A. Emissions Limitations

The regulated pollutants from the proposed modification are VE, PM and VOC. The following table will reflect the allowable

pollutant emissions limits for the proposed paint spray booth and work room:

Table 2

Source	Pollutant Allowable Emissions Limit					
	VOC			PM*		VE
	lbs/hr	lbs/day	TPY	lb/hr	TPY	
PSB-1-RTF	2.73	11.75	2.84			
DC-1-RTF				0.21	0.22	5% opacity (no visible emissions)

Note:
- o Operating Times: 8 hrs/day, 5 days/wk, 52 wks/yr
- o Maximum Production Rates:
  240 subassemblies/yr
  12 major assemblies/yr
- * PM mass emissions test is deferred pursuant to FAC Rule 17-2.700(3)(d).
- o EPA Method 24 shall be required to validate a manufacturer's specification per coating type (40 CFR 60, Appendix A, and FAC Rule 17-2.700)

B. Air Quality Analysis

From a technical review of the application and supplementary material, the Department has determined that the proposed modification does not require an air quality analysis.

IV. Conclusion

The allowable emissions standards and limits for the proposed modification should not cause any violation to Florida's air quality standards nor interfere with reasonable further progress toward attaining ambient air quality standards.

The following table will reflect VOC emissions tracking pursuant to Table 500-2, Regulated Pollutants-Significant Emission Rates, and FAC Rule 17-2.510, Nonattainment Review:

Table 3

Source	VOC Potential Pollutant Emissions (TPY)
Previous Permits	7.35
PSB-1-RTF	2.84
	Total: 10.19

Note: New Source Review (NSR; FAC Rule 17-2.510(4)) will be triggered once a 40 TPY total of VOC emissions increases

have occurred. Also, a New Source Allowance percentage will be assigned to the project triggering the NSR.

The General and Specific Conditions listed in the proposed permits (attached) will assure compliance with all applicable requirements of FAC Rules 17-2 and 17-4.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
United Technologies Corp.
Pratt & Whitney
P. O. Box 109600
West Palm Beach, FL 33410-9600

Permit Number: AC 50-130042
Expiration Date: June 30, 1988
County: Palm Beach
Latitude/Longitude: 26° 55' 51" N
80° 20' 41" W
Project: Work Shop and Associated Baghouse Collection System: DC-1-RTF

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction/installation of a sanding and planing work shop that will process test objects composed of any combination of wood, aluminum, plastics (urethanes, polyesters, epoxies), fiberglass, and graphite (fibre). The particulate matter emissions will be collected, transported, and filtered by a baghouse (fabric filter) collection system (TORIT Model 140-15) with a motor operated shaker. The system will have a 15 hp fan motor, a filter area of 1200 square feet, and a dust storage area of 75 square feet.

The source will be constructed/installed at the permittee's existing facility on SR 710 approximately 20 miles NW of West Palm Beach. The UTM coordinates are Zone 17, 565.6 km East and 2978.5 km North.

The Standard Industrial Classification Codes are: Major Group 73: Business Services; Group No. 739: Miscellaneous Business Services; and, Industry No. 7397: Commercial Testing Laboratories.

Construction shall be in accordance with the permit application, plans, documents, amendments, and drawings, except as otherwise noted in the Specific Conditions.

Attachments to be Incorporated:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Mr. J. L. Seelinger's cover letter received January 28, 1987.
2. Mr. C. H. Fancy's letter dated February 27, 1987.
3. Mr. J. L. Seelinger's letter with attachments received April 17, 1987.

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130042
Expiration Date: June 30, 1988

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The operating times shall not exceed 8 hrs/day, 5 days/wk, and 52 wks/yr.

2. The maximum allowable particulate matter (PM) emissions shall not exceed 0.21 lb/hr and 0.22 TPY. EPA Method 5, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, shall be used to verify compliance. The mass (PM) emissions compliance test requirement shall be deferred pursuant to FAC Rule 17-2.700(3)(d).

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130042
Expiration Date: June 30, 1988

SPECIFIC CONDITIONS:

3. Visible emissions (VE) shall not exceed 5% opacity (no visible emissions) pursuant to FAC Rule 17-2.700(3)(d). EPA Method 9, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, shall be used to verify compliance. Failure to maintain the VE standard shall initiate the requirement for a mass (PM) emissions test pursuant to FAC Rule 17-2.700(3)(d).

4. The pollution abatement equipment shall be maintained, properly operated, and on at all times during operations.

5. Objectionable odors shall not be allowed off plant property.

6. The DER's Southeast Florida District office shall be notified in writing 15 days before testing. Test results shall be submitted to the District office 45 days after the last test run.

7. Testing and reporting shall be in accordance with FAC Rule 17-2.700.

8. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the Department's Southeast District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130042
Expiration Date: June 30, 1988

SPECIFIC CONDITIONS:

Issued this_____day of_____, 19___

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
United Technologies Corp.
Pratt & Whitney
P. O. Box 109600
West Palm Beach, FL 33410-9600

Permit Number: AC 50-130043
Expiration Date: June 30, 1988
County: Palm Beach
Latitude/Longitude: 26° 55' 51" N
80° 20' 41" W
Project: Paint Spray Booth:
PSB-1-RTF

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction/installation paint spray booth to serve development and test activities and will not be used for a production line process. The PSB-1-RTF will be special Binks Model CA-528-T-LH dry Andreae filter type combination truck and automobile spray booth. The source will process subassemblies (1 ft. diameter x 1 ft. long) and major assemblies (4 ft. diameter x 26 ft long). The PSB-1-RTF will have an associated filtration system to prevent particulate matter emissions.

The source will be constructed/installed at the permittee's existing facility on SR 710 approximately 20 miles NW of West Palm Beach. The UTM coordinates are Zone 17, 565.6 km East and 2978.5 km North.

The Standard Industrial Classification Codes are: Major Group 73: Business Services; Group No. 739: Miscellaneous Business Services; and, Industry No. 7397: Commercial Testing Laboratories.

Construction shall be in accordance with the permit application, plans, documents, amendments, and drawings, except as otherwise noted in the Specific Conditions.

Attachments to be Incorporated:

1. Application to Construct Air Pollution Sources, DER Form 17-1.202(1), and Mr. J. L. Seelinger's cover letter received January 28, 1987.
2. Mr. C. H. Fancy's letter dated February 27, 1987.
3. Mr. J. L. Seelinger's letter with attachments received April 17, 1987.

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130043
Expiration Date: June 30, 1988

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

GENERAL CONDITIONS:

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

a. a description of and cause of non-compliance; and

b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
( ) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIFIC CONDITIONS:

1. The operating times shall not exceed 8 hrs/day, 5 days/wk, and 52 wks/yr.

2. Total volatile organic compounds and organic solvents emissions shall not exceed 2.73 lbs/hr, 11.75 lbs/day, and 2.84 TPy, and shall be verifiable on a daily (24-hour) basis.

3. EPA Method 24, in accordance with 40 CFR 60, Appendix A, and FAC Rule 17-2.700, or any other method approved by the Department, shall be required to determine the volatile matter content, water content, density, volume solids, and weight solids for each surface coating material. The paint should be tested as applied and testing should only be required again if the formula, as applied, changes.

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130043
Expiration Date: June 30, 1988

SPECIFIC CONDITIONS:

4. The permittee shall notify the DER's Southeast District in writing 15 days prior to testing. Compliance test results shall be submitted to the District no later than 45 days after the final test run.

5. The permittee shall maintain accurate record-keeping of all paints and solvents used in operation of the spray booth. The permittee shall submit annual reports to the DER's Southeast District office as proof of compliance with permit VOC limits commencing one year after the operating permit is issued and annually thereafter.

6. During those times when the facility is being used for spray painting of other related activities where solvent emissions can escape to the atmosphere, the doors shall be closed. Additional precautions, such as covering of solvent containers when not in use, shall be taken to prevent escape of VOC fugitive emissions.

7. The paint spray booth shall not be operated unless the exhaust fan and abatement equipment are functioning properly.

8. Compliance with the conditions of the permit shall be determined through visual inspection by a Department representative and submittal of paint/solvent records as stated in Specific Condition No. 5.

9. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor pursuant to FAC Rule 17-2.620(2). Objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance pursuant to FAC Rule 17-2.100(130). Odor is defined as a sensation resulting from stimulation of the human olfactory organ pursuant to FAC Rule 17-2.100(131).

10. The permittee shall report any delays in construction and completion of this modification to the DER's Southeast Florida District office.

11. The construction shall reasonably conform to the plans and schedule submitted in the application. If the permittee is unable to complete construction on schedule, he must notify the Department in writing 60 days prior to the expiration of the construction permit and submit a new schedule and request for an extension of the construction permit. (FAC Rule 17-4.09)

PERMITTEE:
United Technologies Corp.

Permit Number: AC 50-130043
Expiration Date: June 30, 1988

SPECIFIC CONDITIONS:

To obtain a permit to operate, the permittee must demonstrate compliance with the conditions of the construction permit and submit a complete application for an operating permit, including the application fee, along with test results and Certificate of Completion, to the Department's Southeast District office 90 days prior to the expiration date of the construction permit. The permittee may continue to operate in compliance with all terms of the construction permit until its expiration date. Operation beyond the construction permit expiration date requires a valid permit to operate. (FAC Rules 17-4.22 and 17-4.23)

If the construction permit expires prior to the permittee requesting an extension or obtaining a permit to operate, then all activities at the project must cease and the permittee must apply for a new permit to construct which can take up to 90 days to process a complete application. (FAC Rule 17-4.10)

12. Upon obtaining an operating permit, the applicant will be required to submit periodic test reports on the actual operation and emissions of the facility, such as paint analyses obtained by using EPA Method 24, paint vendors specifications to show concurrence with paint analyses performed, and the annual operating report which contains the quantified and qualified actual pollutant emissions from the facility.

13. Testing and reporting shall be in accordance with FAC Rule 17-2.700.

14. The following exhibits the VOC emissions tracking:

Source	VOC Potential Pollutant Emissions (TPY)
Previous Permits	7.35
PSB-1-RTF	2.84
	Total: 10.19

Note: New Source Review (NSR; FAC Rule 17-2.510(4)) will be triggered once a 40 TPY total of VOC emissions increases have occurred. Also, a New Source Allowance percentage will be assigned to the project triggering the NSR.

Issued this_____day of_____, 19___

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

_____
Dale Twachtmann, Secretary

ATTACHMENT 1

UNITED TECHNOLOGIES
PRATT&WHITNEY

P. O. Box 2691
West Palm Beach, Florida 33402
305/840-2000

Government Products Division

January 19, 1987

Mr. C. H. Fancy
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32302-8241

Re: Air Pollution Construction Permit (Remote Test Facility Dust Collector and Paint Spray Booth)

Dear Mr. Fancy:

Enclosed are four (4) copies of DER Form 17-1.202(1) "Application to Operate/Construct Air Pollution Sources" for the above referenced air permit, along with the required check No. 221636 for $200 made payable to the Florida Department of Environmental Regulation.

The new paint spray booth and dust collector will be located at the Remote Test facility on site which is approximately four (4) miles northwest of the Pratt & Whitney Manufacturing/Office Area. Both sources will be used for the application of conductive coating to test objects.

Your efforts to have this permit issued will be greatly appreciated. Should you desire any further information, please let us know.

Sincerely,

J. L. Seelinger

J. L. Seelinger, Manager
Utilities Operations/Environmental Affairs

JLS/WJD/fo/4187
Attachments

cc: S. Benyon - DER-WPB
E. Sacco - PBCHD

AC 50-130042 (dust collector)
AC 50-43 & 43 (spray booth)

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

DER
JAN 15 1987
BAQM

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: One (1) Paint Spray Booth
One (1) Dust Collector System [X] New[1] [ ] Existing[1]

APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification

COMPANY NAME: United Technologies Corp.-Pratt & Whitney COUNTY: Palm Beach

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) PS-1-RTF DC-1-RTF

SOURCE LOCATION: Street SR 710 Beeline Highway City 20 Miles NW of West Palm Beach

UTM: East 17,565.6 North 2978.5

Latitude 26 ° 55 ' 51 "N Longitude 80 ° 20 ' 41 "W

APPLICANT NAME AND TITLE: United Technologies Corp. - Pratt & Whitney

APPLICANT ADDRESS: P.O. Box 109600 West Palm Beach, FL 33410-9600

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of United Technologies Corp. Pratt & Whitney

I certify that the statements made in this application for a construction air pollution permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: R H Henson

R. H. Henson, Manager - Plant Engineering
Name and Title (Please Type)

Date: 1/23/87 Telephone No. 305/840-5461

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Thomas E. Chechile 11/3/86

THOMAS E. CHECHILE
Name (Please Type)

United Technologies Corp. - Pratt & Whitney
Company Name (Please Type)

M/S 724-10, P.O. Box 109600, W.P.B, FLA 33410-9600
Mailing Address (Please Type)

Florida Registration No. 23213 Date: 10/29/86 Telephone No. (305) 840-1252

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

SEE ATTACHMENT A

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction PSB-1-RTF & DC-1-RTF upon issuance of permit Completion of Construction PSB-1-RTF & DC-1-RTF 30 days after issuance of permit

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

PSB-1-RTF - Approximately $15,742

DC-1-RTF - Approximately $15,113

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

No existing permits

E. Requested permitted equipment operating time: hrs/day 8 ; days/wk 5 ; wks/yr 52 ;

if power plant, hrs/yr _____; if seasonal, describe: _____

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? yes

   a. If yes, has "offset" been applied? no

   b. If yes, has "Lowest Achievable Emission Rate" been applied? no

   c. If yes, list non-attainment pollutants. ozone

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. no

3. Does the State "Prevention of Significant Deterioration" (PSD) requirement apply to this source? If yes, see Sections VI and VII. no

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? no

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? no

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? no

   a. If yes, for what pollutants? _____

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

Per chapter 17-2.650 (1)(c), Exceptions to Reasonable Available Control Technology (RACT) are sources whose emissions of volatile organic compounds are not more than 15 pounds (6.8 kilograms) in any one day and not more than 3 pounds (1.4 Kilograms) in any one hour. PSB-1-RTF will qualify for the exception (see attachment E-Emission Calculations).

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable: N/A

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): N/A

2. Product Weight (lbs/hr): N/A

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

See Attachment E

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
PSB-1-RTF				
DRY ANDREAE FILTER	PARTICULATE MATTER	94-96%		MANUFACTURER GUARANTEE
(SEE ATTACHMENT B)				
-1-RTF				
RIC FILTER	WOOD, ALUMINUM PLASTIC,	95-99%		MANUFACTURER GUARANTEE
(SEE ATTACHMENT C)	FIBERGLASS & GRAPHITE SHAVINGS & PARTICLES			

E. Fuels N/A

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average _____ Maximum _____ N/A

G. Indicate liquid or solid wastes generated and method of disposal.

N/A

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack): N/A

Stack Height: _____ ft. Stack Diameter: _____ ft.

Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.

Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION N/A

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diameter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
   N/A
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. See attachments B, C, & E. DER Method 9 is a proposed method to show proof of compliance for DC-1-RTF.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
   See material data safety sheets
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.) See Attachments B&C
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency). See Sec. III- D
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained. See Attachment F1, F2, F3, G1 & G2.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
   See Attachment H.
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
   See Attachment J.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY
(Not Applicable)

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION
(Not Applicable)

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO_2 _____ Wind spd/dir

Period of Monitoring _____/_____/_____ to _____/_____/_____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT A

This construction permit application is for one paint spray booth and one dust collector which will be constructed at the Remote Test Site Facility at Pratt & Whitney for the application of conductive coatings to electromagnetic susceptibility/compatibility test objects. The test objects are classified material.

The test objects are composed of any combination of wood, aluminum, plastics (urethanes, polyesters, epoxies), fiberglass and graphite (fibre). They are of an elliptical cylindrical shape ranging in size from 1 ft. dia. x 1 ft. long up to 4 ft. dia. x 26 ft. long. They will be planed and sanded on new work tables and the particles will be collected by the dust collector system (DC-1-RTF). Primer and conductive coatings will be applied to the test objects in the paint spray booth (PSB-1-RTF).

The PSB-1-RTF paint spray booth will be a special Binks Model CA-528-T-LH dry Andreae filter type combination truck and automobile spray booth. The inside dimension of the booth will be 14 feet wide by 12 feet high by 32' 6" deep (see attachment B). The booth will operate approximately 5 hrs. a day, 5 days a week and 52 weeks a year. A maximum of 1300 subassemblies (1' dia. x 1' lg) and 12 major assemblies (4' dia. x 26' lg) will be painted in booth PSB-1-RTF per year. For emission calculations see Attachment E.

The DC-1-RTF dust collection system will be used for the collection of wood, aluminum, plastic, fiberglass and graphite particles created by sanding and woodworking. The collection system will be a fabric filter type Torit Model #140-15 with a motor operated shaker (see attachment C). The system will have a 15 h.p. fan motor, a filter area of 1200 sq. feet and a dust storage area of 75 cubic feet. The dust collector will work approximately 5 hrs. a day, 5 days a week, 52 weeks a year. For emission calculations see Attachment E.

See general flow sheet (block diagram) of the test object prep operations (attachment D) which illustrates how the paint spray booth and dust collector system are used in this operation.

Acetone will be used to clean painting equipment such as spray guns, spray pots, fluid hoses, etc. Approximately 30% of the Acetone is emitted into the atmosphere and the remaining 70% is recovered into drums which are then managed relative to on site storage and offsite disposal as hazardous waste.

ATTACHMENT A
continued

The inside of the paint spray booth will be sprayed with strippable lacquer which will be stripped and resprayed periodically to prevent build up of paint in the booth. The strippings are placed in drums which are then managed relative to on site storage and off site disposal as hazardous waste. The filters for the paint spray booth will be changed whenever the pressure reading approaches manufacturer's specifications. If the pressure reading exceeds manufacturer's specifications, the exhaust fan, breathing air and air supply for paint spray gun will automatically shut down. Prior to painting each test object, the booth will be swept out. The trash and debris, such as dust, tape and paper from the sweeping operations, is collected and disposed of in trash receptacles.

The proposed equipment is for new operations at the plant. The new equipment will be used to paint test objects to satisfy new government testing requirements. There is currently no planned production increase at the plant as a result of the proposed equipment.

BINKS MANUFACTURING COMPANY
2191 S. PLATTE RIVER DRIVE, DENVER, CO 80223
PHONE: 303/936-7226
TLX: 45607

OFFICES IN ALL PRINCIPAL CITIES

BINKS

QUOTATION

Stearns Catalytic

PO Box 5888

Denver, Colorado 80217

DATE July 9, 1986

OUR NO. Denver 86-39

YOUR NO.

ATTENTION Mr. Don Biniasz

DESCRIPTION	PRICE	TOTAL

Per your request, we are pleased to submit the following quotation for your consideration:

ONE SPECIAL BINKS CA-528-T-LH DRY ANDREAE FILTER TYPE COMBINATION TRUCK AND AUTOMOBILE SPRAY BOOTH

Inside Booth Dimensions:
14' 0" . . . . . Wide
12' 0" . . . . . High
32' 6" . . . . . Depth Overall

Booth will be constructed of 18 gauge galvanized unpainted panels, each panel formed with companion flanges punched on 6" centers for bolted sembly. The booth will be furnished with rows of Andreae filters, ..ach 3'0" high. The media is made of special non-fire supporting paper and is formed into double accordian type folds with staggered holes to provide a highly efficient filter. A replacement set of filters will also be furnished.

The front of the booth will have (2) folding filter doors with a clearance of 9'8" wide x 12'0" high. Doors will be provided with (20) 20"x20"x3" filter cells, each cell containing (1) 20"x20"x1" tight seal air filter. At each side of the doors there will be a panel 2'2" wide x 12'0" high, each panel to have (2) 20"x20"x3" filter cells, each cell containing (1) 20"x20"x1" tight seal air filter. A 2'6" wide x 6'9" high access door will be provided for mounting on either side of the booth.

Booth will be furnished with a 290-551 draft gauge.

Booth to be arranged for top exhaust

1 - 30-4312, 34" diameter double ring exhaust fan

1 - 5 HP, Explosion Proof ball bearing motor, 230 volt, 60 cycle, 3 phase (Motor starter furnished by the customer)

Fan Capacity: 16,400 CFM @ ½" static pressure
Calculated Velocity: 100 FPM thru empty booth

20 - Inside access kits for light fixtures

20 - 29-1094, 4 tube, 40 watt, 120 volt, Class I, Division II, enclosed and gasketed fluorescent fixtures (less tubes)

20 - 29-450, 16"x54" R.S. Misco wire glass windows
(Light switches furnished by the customer)

(continued)

BINKS MANUFACTURING COMPANY
2191 S. PLATTE RIVER DRIVE, DENVER, CO 80223
PHONE: 303/936-7226
TELEX: 45607

ICES IN ALL PRINCIPAL CITIES

BINKS

QUOTATION

Stearns Catalytic

PO Box 5888

Denver, Colorado 80217

DATE July 9, 1986

OUR NO. Denver 86-39

YOUR NO.

ATTENTION Mr. Don Biniasz

DESCRIPTION	PRICE	TOTAL
1 - 29-845, 6'0" length, 34" diameter spiral exhaust stack with access door		
1 - 29-846, 6'0" length, 34" diameter plain spiral exhaust stack		
1 - 29-35, 34" diameter pitched type roof flange		
1 - 29-95, 34" diameter combination weather hood and automatic damper with attached connector ring.		
TOTAL NET PRICE, FOB OUR FACTORY, FRANKLIN PARK, ILLINOIS . . .		$15,742.21

Approximate shipping weight: 9,200 Pounds

elivery: Approximately 6 to 8 weeks from receipt of order or approved prints.

NOTE: The price quoted above is firm for 60 days from date of quotation.

(continued)

BINKS

COMBINATION TRUCK and AUTO SPRAY BOOTHS

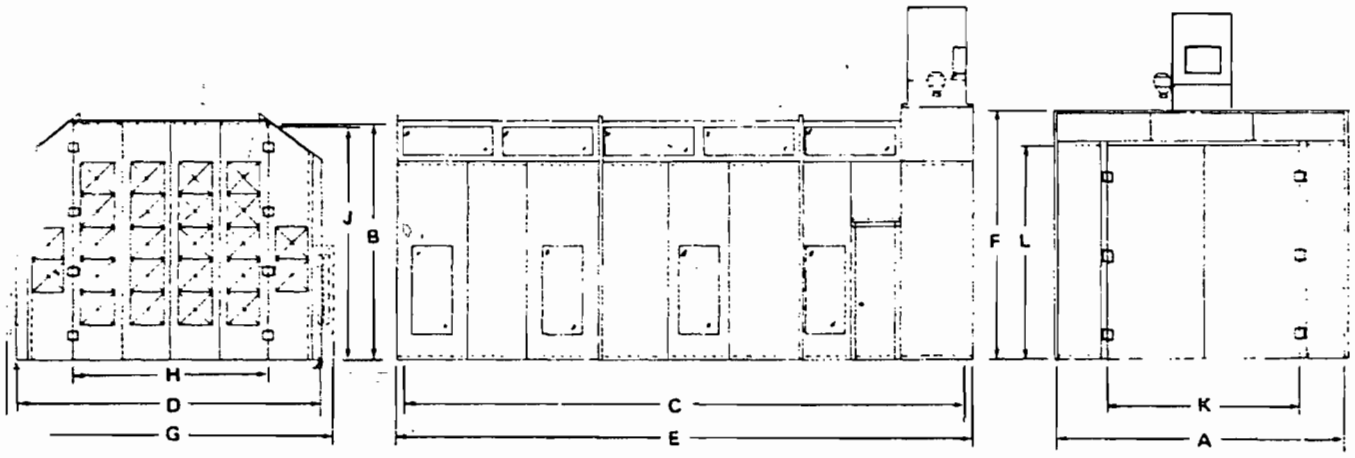
General Description of Combination Truck and Automotive Package Spray Booths

Except for booth dimensions and exhaust fan specification (see below), Combination Auto and Truck Spray Booths have the same features, construction details, and performance characteristics of the Truck Spray Booths described on pages 38 and 39.

Double Mounting Ring Exhaust Fan †

Model No. 30-4312
Capacity: 16,400 SCFM*, 100 FPM ★
Description: 34" dia., with 5 H.P. open-type, ball bearing motor, 230/460 V., 60 Hz., 3 Ph., (see table footnote 2 below).

† Other capacity fans optional.
* Air flow at 1/2" w.c. rated static pressure with clean filters and 25 ft. of exhaust duct length.
★ Air velocity through empty booth with clean filters and 25 ft. max. exhaust duct length.



(Booth clearances, all around, 3'-0" recommended)

100 FPM Min. Face Velocity at 1/2" w.c. static press. with empty booth, clean filters, 25 ft. max. exhaust duct length.

Model Numbers ◆ Andreae Filters	Model Numbers ◆ Paint Arrestor Filters	Work Dimensions A	Work Dimensions B	Work Dimensions C	Overall Dimensions D	Overall Dimensions F	Overall Dimensions E	Overall Dimensions G	Nominal Door Opening (see note below) Front J	Front H	Back L	Back K	Quantity Windows	Quantity Lights	Shpg. Wt. Lbs.
Solid Back															
CA-528-T	CF-528-T													0	6100
CA-528-T-LO	CF-528-T-LO	14'-0"	12'-0"	28'-4"	15'-1"	12'-8"	28'-6"	15'-6"	12'-0"	9'-8"	—	—	18	18	7000
CA-528-T-LH	CF-528-T-LH													18	7400
Drive Thru															
CA-628-T	CF-628-T													0	6800
CA-628-T-LO	CF-628-T-LO	14'-0"	12'-0"	28'-4"	15'-1"	12'-8"	28'-6"	15'-6"	12'-0"	9'-8"	10'-10"	9'-4"	18	18	7700
CA-628-T-LH	CF-628-T-LH													18	8100

◆ Model number suffixes LO and LH indicate open-type, Model 29-97, and Class I, Div. 2 hazard locations type, Model 29-900, fluorescent fixtures respectively. See page 55.

1. Fluorescent tubes not furnished. Purchase locally.
2. Explosion proof or totally enclosed motor, and motor starter, available at extra cost. See pages 50 and 51 for exhaust fan specifications.
3. Top exhaust standard. Back exhaust optional. Specify on order. Consult Binks representative if more than 25 ft. of exhaust duct are required.
4. Safety monitoring and control devices, as well as complete automatic systems, available at extra cost. Consult local codes and your Binks representative for the equipment most appropriate to your operation.
5. Observation windows, clear wire-glass, 24" x 24", and additional access doors available at extra cost. Specify quantity and location on order.
6. Special length booths available. Please consult your Binks representative.

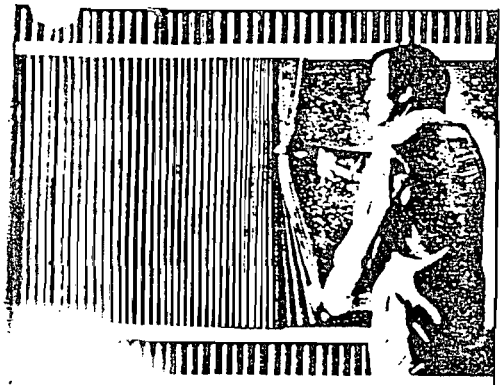
REALLY CLEAN Version

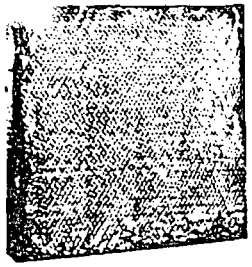
Solid Back Models may also be obtained in the "Really Clean" version (see pages 34 and 35). Please consult your Binks representative.

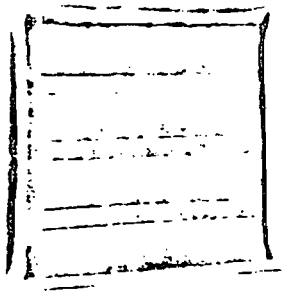
Note: For bifold doors, subtract 1'-6" for "pass-thru" width clearance.
For width of one-piece doors, and for all listed height openings, subtract 2" for "pass-thru" clearance.

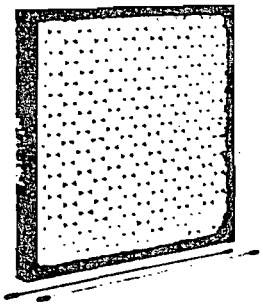
BINKS

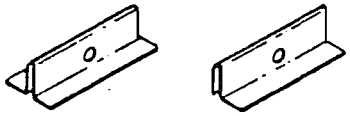
SUPPLY AIR AND EXHAUST AIR FILTERS FLAME RETARDANT PAPER

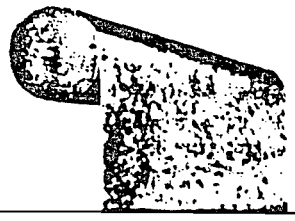












Andreae Exhaust Air Filter

The Binks Andreae filter provides a low resistance filtering system for all dry spray booths. A staggered hole pattern in the filter forces the spray-laden air to change direction 4 times in its passage through the system for extremely efficient separation of paint particles and exhaust air. Andreae filters outlast any other dry filter three to five times.

The media is made of special non-fire supporting paper formed into double accordian folds. It is collapsible for convenient storage.

Andreae Filters have a Class 2 listing by Underwriters' Laboratories and are Factory Mutual approved.

29-359, one pack, 3' high x 30' wide, shpg. wt. 20 lbs.

29-360, 6 packs, 3' high x 30' wide, shpg. wt. 120 lbs.

29-813, for Exhaust-O-Bench, one pack, 18" high x 30' wide, shpg. wt. 10 lbs.

Paint Arrestor Exhaust Air Filter

Binks Paint Arrestor filter is a specially treated fiber designed to remove paint particles efficiently from spray booth exhaust air. Class 2 listed by Underwriters' Laboratories.

Easily installed and removed, the filters are mounted two per frame.

29-102* 20" x 20" x 3" Filter Frame. Shpg. wt. 4 lbs.

29-106 20" x 25" x 3" Filter Frame. Shpg. wt. 6 lbs.

29-861† Filter Grid (single, pair not needed) for 20" x 20" x 3" filter frame. Holds two Model 29-893 Filters. Shpg. wt. 1 lb.

29-894† Filter Grid (single, pair not needed) for 20" x 25" x 3" frame. Shpg. wt. 2 lbs.

29-862† Filter Grid for 10" x 20" x 3" filter frame. Holds one Model 29-893 Filter (folded). Shpg. wt. 1 lb.

29-893 20" x 20" x 1" Filter Pads, carton of 36. Shpg. wt. 25 lbs.

29-897 20" x 25" x 1" Filter Pads, carton of 36. Shpg. wt. 30 lbs.

*Also usable for framing spun glass air intake filters, Model 29-105.
†See illustration page 22.

Tight-seal Supply Air Filter

For a cleaner paint job; to be used in filter doors or in the air supply plenum attached to the booth. Filter has a special tacky surface that traps and holds dust. Class 2 listed by Underwriters' Laboratories.

Each filter is one inch over size for better sealing and has internal wire reinforcing frame. Size 20" x 20" x 1".

29-486, one carton of 20 filters. Shpg. wt. 2 lbs.

Spun Glass Supply Air Filter

For use in spray booth or room filter doors. Provides economical, highly efficient filtering, and promotes uniform distribution of air over face of booth. Class 2 listed by Underwriters' Laboratories.

29-105 20" x 20" x 2" Filter Pads, carton of 12. Shpg. wt. 2 lbs.

29-286 Snap-in Grids (pair) for filters.

Retaining Clips for Supply Air Filters

Use two "single" clips per cell. Add one "double" clip for each additional "horizontally adjacent" filter cell.
27-1982 Single Clip **27-1983** Double Clip

Flame Retardant Paper (not shown)

Binks Flame-A-Guard is a highly absorbent, flame resistant, high wet strength paper (90 lb. basis weight) suitable as a protective floor, wall, and equipment cover while spraying.

29-834 36" x 300' roll. Shpg. wt. 30 lbs.

29-835 43½" x 300' roll. Shpg. wt. 36 lbs.

29-836 60" x 300' roll. Shpg. wt. 50 lbs.

29-898 72" x 300' roll. Shpg. wt. 64 lbs.

Dispo Cloth Exhaust Air Filter

The Dispo filter is a flame-proofed, non-woven cloth of high paint loading capacity packaged especially for use in Binks Dispo spray booths (see pages 16 and 17). Cloth widths 20", 30", and 60" are supplied in 400 ft. rolls. Order from Dispo Spray Booths, Bartlett, Ill. 60103.

torit

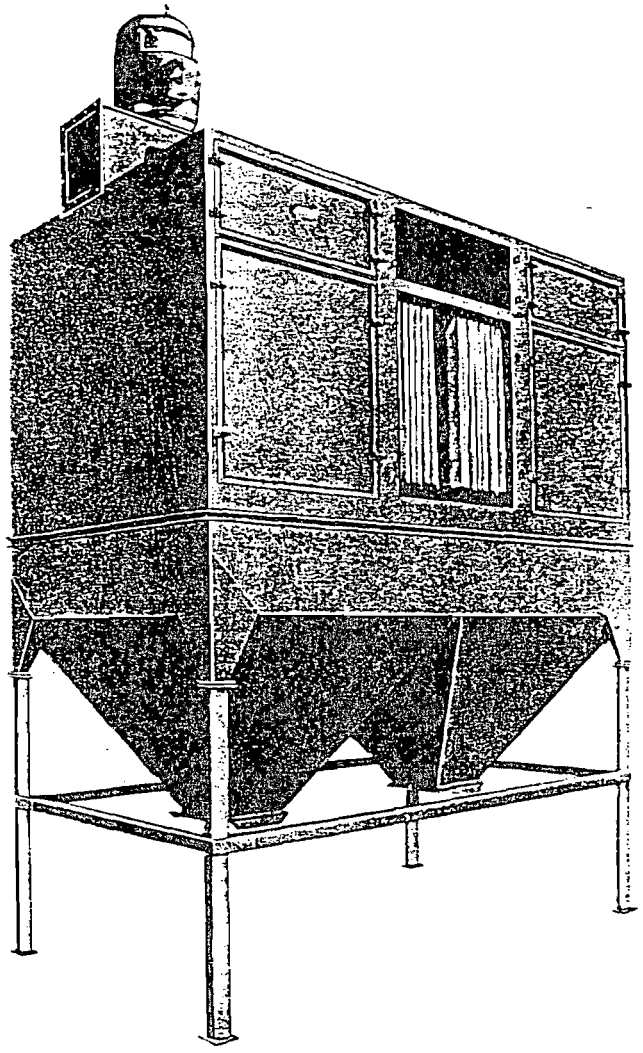
DUST COLLECTORS

CABINET MODEL

ATTACHMENT C

HIGHLY EFFICIENT FILTRATION

TORIT's Model 140 cabinet dust collector effectively pulls dust particles from the air, including those smaller than one micron. This is possible because this collector utilizes fabric filters possessing an extremely high collection efficiency. Overall efficiencies are rated at 99.9% +, even with high concentrations of small particles present. Most dust and collected materials settle into the hopper base as air is pulled into the collector. Smaller contaminants are trapped against the outside surface of the fabric filters as air is drawn through and discharged out of the collector. Activating the manual filter shaker dislodges these particles. With clean air able to be recirculated, where allowed, you save costly heated or cooled air because clean air is already at the proper room temperature.



CONSISTENT FAN PERFORMANCE

A constant and reliable performance is delivered by TORIT's fan. You get longer operation at lower cost because TORIT fans are on the clean air side. Grit, dust, chips, lint, shavings, tramp iron and other materials are deposited in the hopper or stopped by the filters before reaching it. This eliminates the risk of fan loading or breakage that could cost you repair time and money.

STRONG, DURABLE, COMPACT CONSTRUCTION

TORIT cabinets are solidly constructed of steel. Seams are spot-welded and sealed, and doors are felt-gasketed, to ensure an air-tight structure. Model 140 is shipped in two major assemblies. When set up, it takes up only 100" x 59" of floor space, while providing a fabric filtering area of 1200 square feet.

EASY-EMPTYING DUST HOPPER

Hopper bottom allows for easy emptying of dust and bulky materials. Standard hopper bottom has a 75-cubic-foot storage capacity and terminates in two heavy-duty 12" square slide gates.

continued

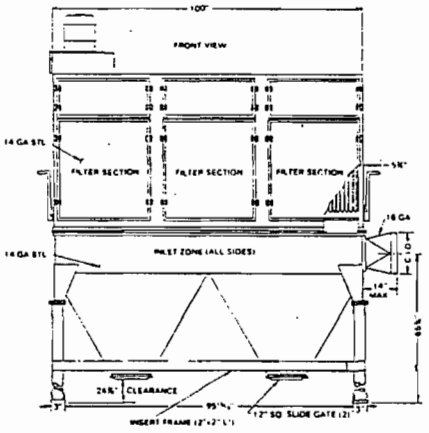
torit

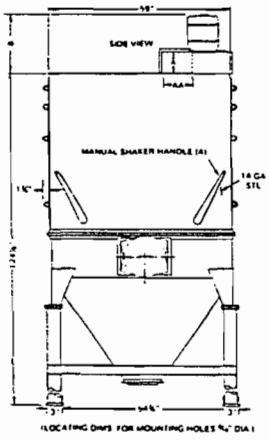
DUST COLLECTORS

CABINET MODEL 140

PERFORMANCE TESTED

Performance ratings and A-scale sound level readings are available for all TORIT dust collectors. Ratings are read and verified under standard test conditions in TORIT's laboratories.





TORIT district sales representatives are conveniently located throughout the United States and Canada. One will gladly work with you on your in-plant air pollution problems, and offer complete recommendations at no obligation to you. Check your Yellow Pages, under "Dust Collecting Systems", for local listing, or write.

MULTIPLE RATING TABLES

MODEL	C.F.M.	INLET VELOCITY (FPM)	EXTERNAL STATIC PRESSURE (W.G.)	PRESSURE DROP CLEAN FILTERS (W.G.)
140 — 15 3450 RPM	5400	6880	6.00″	0.70″
	5000	6370	7.60″	0.60″
	4600	5860	9.10″	0.60″
	4200	5350	10.60″	0.50″
	3800	4840	11.80″	0.40″
140 — 20 1725 RPM	8000	6500	7.00″	1.20″
	7600	6170	7.60″	1.10″
	7000	5690	8.40″	1.00″
	6200	5030	9.40″	0.90″
	5400	4390	10.40″	0.70″

SPECIFICATIONS

MODEL	140 — 15	140 — 20
Motor	15 HP, 3450 RPM, 230-460v/60/3	20 HP, 1725 RPM, 230-460v/60/3
Exhaust Outlet	8¾″ x 10⅛″	13″ x 14⅜″
Dust Storage Area	75 cu. ft.	75 cu. ft.
Floor Space	100″ x 59″	100″ x 59″
Fabric Filter Area	1200 sq. ft.	1200 sq. ft.
Height	151⅞″	157¼″
Shipping Weight	2300 lbs.	2300 lbs.
Optional Equipment	Motor-operated, automatically-timed filter shaker. Special HEPA filter.	
Standard Inlet Location	12″ on side.	15″ on side.

Specifications subject to change without notice.

torit

LEADERS IN CONTROL OF IN-PLANT AIR POLLUTION

TORIT DIVISION / DONALDSON COMPANY, INC. / BOX 1299 / MINNEAPOLIS, MINNESOTA 55440

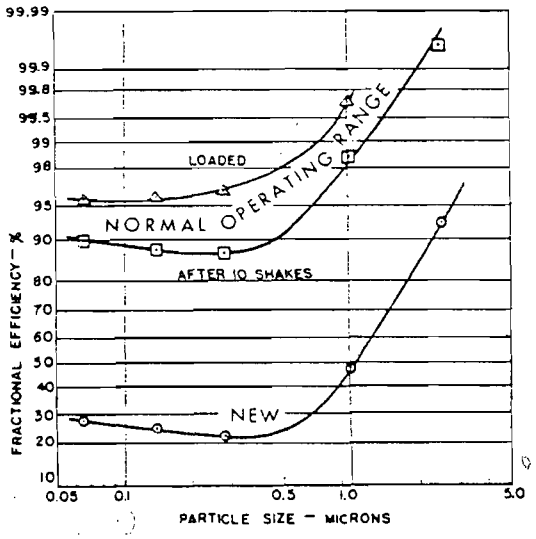
EFFICIENCIES OF TORIT DUST COLLECTORS IN REMOVAL OF AIRBORNE CONTAMINANTS

TORIT FABRIC FILTER TYPE DUST COLLECTORS–

Fabric filter type dust collectors are being widely used for removing all kinds of airborne contominating particles.

The particulate removal efficiency of fabric filters has ordinarily been determined on a simple weight basis. The weight efficiency test, using a dust containing a broad range of particle sizes, cannot provide needed accuracy; larger particles, accounting for most of the weight, are easily filtered out, thus indicating a high efficiency on a weight basis. For example, if two particles, one a ten micron particle and the other a one micron particle, are fed to a filter which stops the 10 micron (1 micron = 1/25,400 inch) particle but allows the 1 micron particle to poss through, the filter is rated 99.9 —% efficient by weight. If rated on basis of number of particles rather than weight, it would be only 50% efficient; that is, it only stopped one out of the two particles.

A truer measure of efficiency is obtained by testing the filter with o flow of oirborne particles of uniform size. The *fractional efficiency curve* obtained by meosuring the efficiency on a series of homogeneous airborne particles is much superior to the weight efficiency as an indicator of true filter efficiency. The special homogeneous particulate generotion equipment and measurement techniques used in testing Torit equipment were developed under the direction of Dr. Kenneth T. Whitby, world-recognized authority on airborne contamination, under auspices of the United States Public Health Service. The fractional efficiency curves for Torit equipment were determined in tests performed under supervision of Dr. Whitby ot the University of Minnesota Mechanicol Engineering Dept. (For greater detail write us for copy of "Fractional Efficiency Characteristics" technical report.)



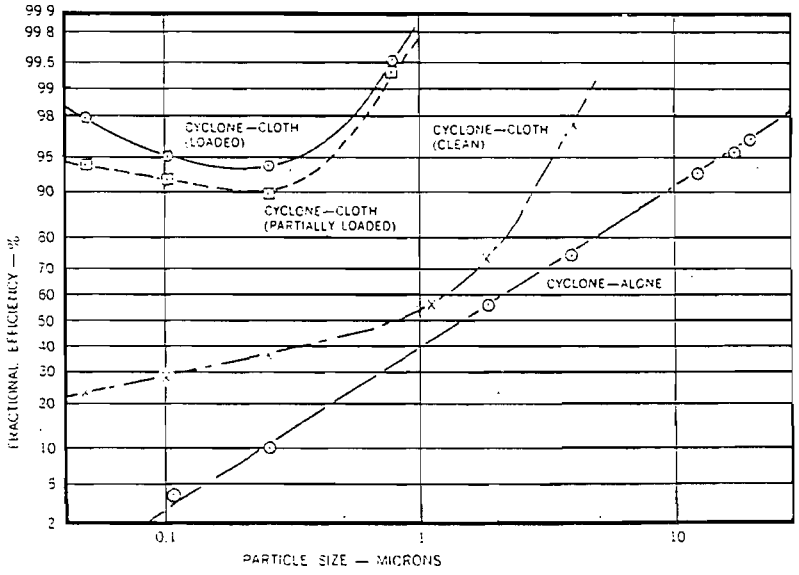
The fractional efficiency curve indicotes Torit Fabric Filter type Dust Collectors are 98.4—99.75% efficient in removing uniform flows of 1.0 micron particulate and virtually 100% efficient at 2.0 microns. These Fabric Filters are recognized as the most efficient practicol means known to man for removing fine particulate from industrial air or gas streams. The "new" curve is experienced only momentarily with brand-new filters. As soon as the permanent dust mat builds up on the filters, efficiencies reach the "normal operating ronge."

TORIT HIGH-EFFICIENCY CYCLONE-TYPE COLLECTORS

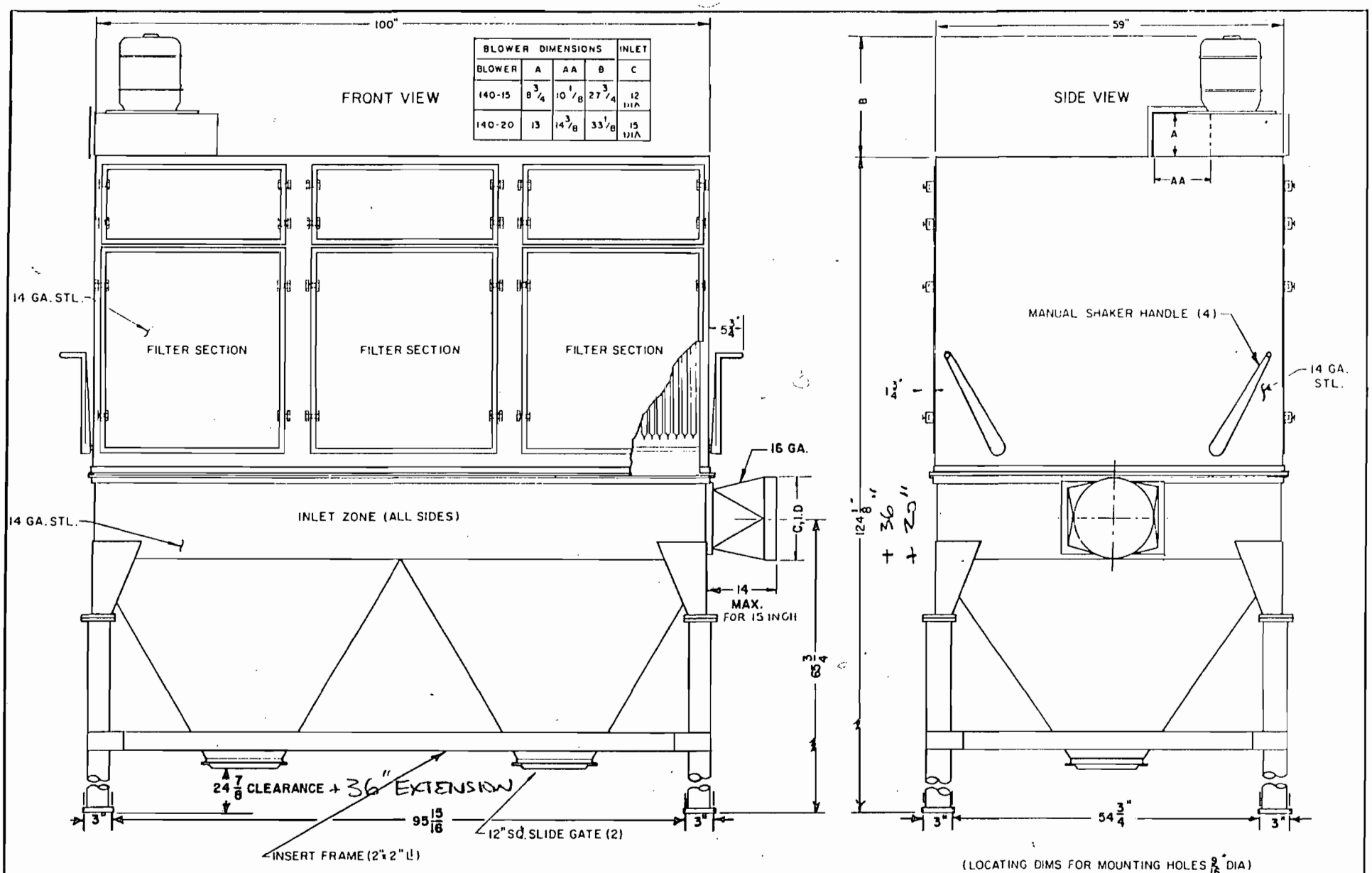
Froctional efficiency curves ore useful in measuring cyclone collection efficiencies, but are subject to more variable factors than when measuring fobric filter efficiencies. Cyclone efficiencies relate directly to the terminal velocity of the particle. Terminol velocity is defined as the oir velocity below which the particle will fall out of the air stream. Size of the particle is only one of the importont components of terminal velocity; hence, a comparison of particle sizes does not tell the whole story for cyclones.

Fractional efficiencies shown for fabric filters in chart 1 will apply to virtually any particle of the size indicated, regardless of the material involved. Fractional efficiencies shown for cyclones in chart 2 perrain directly only to particles of the material tested, fluorescent dye particles in this case, and are only approximations of cyclone efficiency on similar sized particles of other materials.

The Torit Engineering Labaratory will gladly analyze samples of any dust and report on expected cyclone efficiency for that material.



Fractional efficiency curves of cyclone-alone and cyclone with fabric after-filters (cyclone-cloth).



(LOCATING DIMS FOR MOUNTING HOLES 9/16" DIA)

MULTIPLE RATING TABLES

140-15 3600 RPM				140-20 1800 RPM			
CFM	VEL-FPM	EXT S.P	*	CFM	VEL-FPM	EXT. S.P.	*
5400	6880	6.0	0.7	8000	6500	7.0	1.2
5000	6370	7.6	0.6	7600	6170	7.6	1.1
4600	5860	9.1	0.6	7000	5690	8.4	1.0
4200	5350	10.6	0.5	6200	5030	9.4	0.9
3800	4840	11.8	0.4	5400	4390	10.4	0.7

*PRESSURE DROP CLEAN FILTERS (INCHES W.G.)

SPECIFICATIONS

1. FILTER SECTION CONSISTS OF 120 FILTERS, 24"x 30" FOR A TOTAL OF 1200 SQ. FT.
2. THIS DRAWING IS FOR A STANDARD 140-H (15 & 20 H.P.) DUST COLLECTOR. ANY DEPARTURE FROM THIS DESIGN SHALL REQUIRE SPECIAL FABRICATION AND AN INCREASE IN COST.
3. HOPPER CAPACITY - 75 CU FT.
4. CAB WT: NET 1300 SHIPPING WT. 1600
   BASE WT: NET 470 SHIPPING WT. 700

THIS DRAWING IS CERTIFIED TO BE CORRECT BY:

DATE

FOR THE TORIT CORPORATION ENGINEERING DEPARTMENT

TORIT DIVISION, DONALDSON COMPANY, INC.
P.O. BOX 1299 - MINNEAPOLIS, MINNESOTA 55440

SPECIFICATION CONTROL DRAWING
MODEL NO. 140-H (15 & 20 H.P.)
DUST COLLECTOR

DRAWN D. STENE

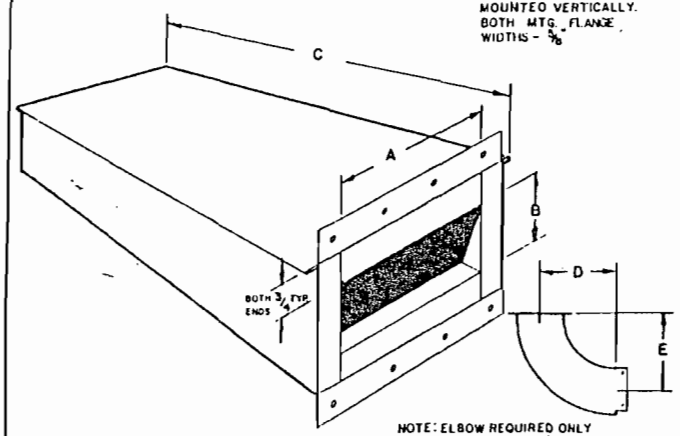
APP'D B. KUBIAK

DRAWING NO. 140-007 (REV D)

continued

CABINET
BOX TYPE SILENCER

NOTE: THESE SILENCERS ARE MOUNTED VERTICALLY. BOTH MTG. FLANGE WIDTHS - 5/8"

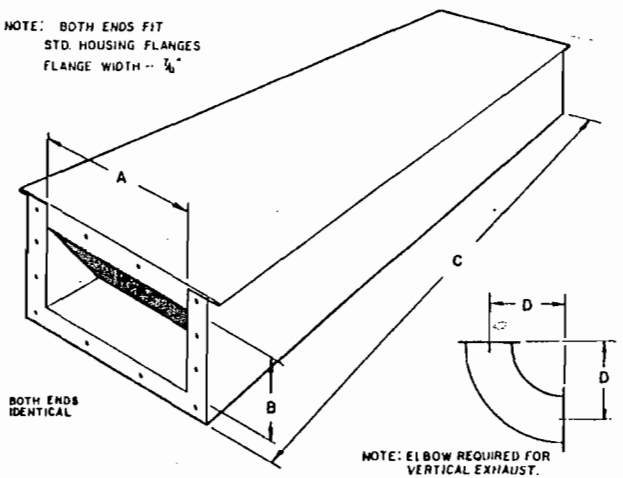


NOTE: ELBOW REQUIRED ONLY WHERE SPECIFIED.

SILENCER NO.	ELBOW NO.	A	B	C	D	E	UNIT
3EA000-11570-01		8	3 1/2	29 1/2			54,64,66,75
3EA000-11570-02		9 1/2	4 1/4	29 1/2			81,84
3EA000-11570-02	3EA000-11598-00	9 1/2	4 1/4	29 1/2	9 3/4	8 1/4	90
3EA000-11570-03		10 3/4	6 1/4	47 1/2			123,124
3EA000-11706-02	3EA000-11713-00	10 5/8	7 3/8	46 1/4	12	10 1/2	90-219-3

CYCLONE
BOX TYPE SILENCER

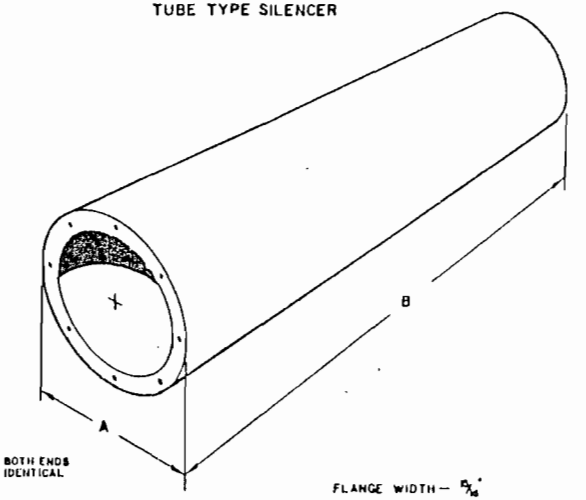
NOTE: BOTH ENDS FIT STD. HOUSING FLANGES
FLANGE WIDTH - 7/8"



NOTE: ELBOW REQUIRED FOR VERTICAL EXHAUST.

SILENCER NO.	ELBOW NO.	A	B	C	D		UNIT
3EA000-11706-02	3EA000-10706-00	10 5/8	7 3/8	46 1/4	12		20-3 8 5
3EA000-11706-03	3EA000-10319-00	10 5/8	8 7/8	46 1/4	13		24
3EA000-11706-04	3EA000-12903-00	12 1/2	9 5/8	46 1/4	14 1/2		30
3EA000-11706-05	3EA000-15804-00	13 1/2	14	68 1/4	20 5/8		36
3EA000-13925-00	4MA000-13932-00	16 1/4	16 7/8	70	38 1/2		44

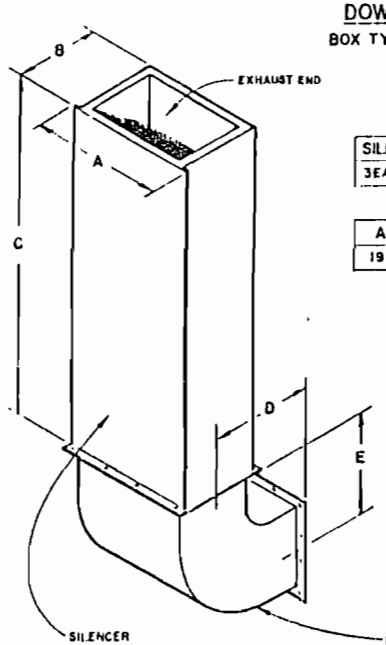
CYCLONE
TUBE TYPE SILENCER



FLANGE WIDTH - 5/16"

SILENCER NO.	A	B	UNIT
3EA000-11705-01	8 1/8	36 1/4	13
3EA000-11705-02	10 1/8	36 1/4	19

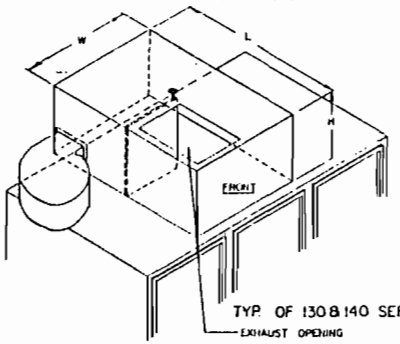
DOWN DRAFT
BOX TYPE SILENCER



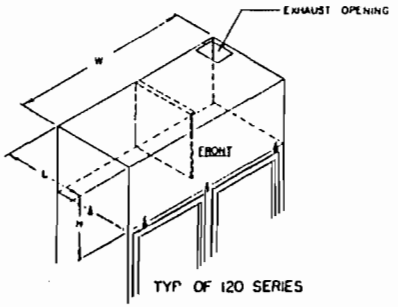
SILENCER NO.	ELBOW NO.
3EA000-11575-01	3EA000-11318-00

A	B	C	D	E
19	13 1/2	59 1/2	11 3/4	11 3/4

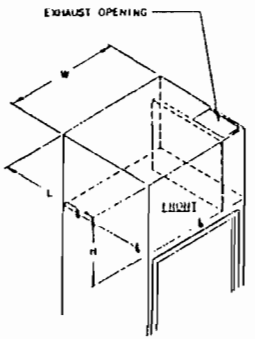
CABINET
TOP SILENCER (CHAMBER)



TYP. OF 130 & 140 SERIES



TYP. OF 120 SERIES



TYP. OF 50 THRU 90 SERIES

DUST COLLECTOR	EXHAUST OPENING	LENGTH L	WIDTH W	HEIGHT H	SILENCER PART NO.
50 SERIES	4 X 10	14 1/4	22 1/4	9 1/8	3EA-14098-00
60 & 75	4 X 9	19 1/4	22 1/4	9 1/4	3EA-14887-00
80 SERIES	6 X 12	19 1/4	28 1/2	12 1/8	3EA-14873-00
90 SERIES	7 1/2 x 13 1/4	36	40	25 1/4	3EA-11717-00
120 SERIES	8 X 10	29 1/2	64 1/8	23 1/8	3EA-12092-00
130 & 140	17 X 25	60 1/8	40 1/8	28 1/4	3EA-16143-00

NOTE:
ACOUSTICAL INSERTION LOSS DATA FOR THE SILENCING DEVICES DESCRIBED ON THIS PAGE AS APPLIED TO TORIT EQUIPMENT IS AVAILABLE.

TORIT DIVISION, DONALDSON COMPANY, INC.
P.O. BOX 1299 - MINNEAPOLIS, MINNESOTA 55440

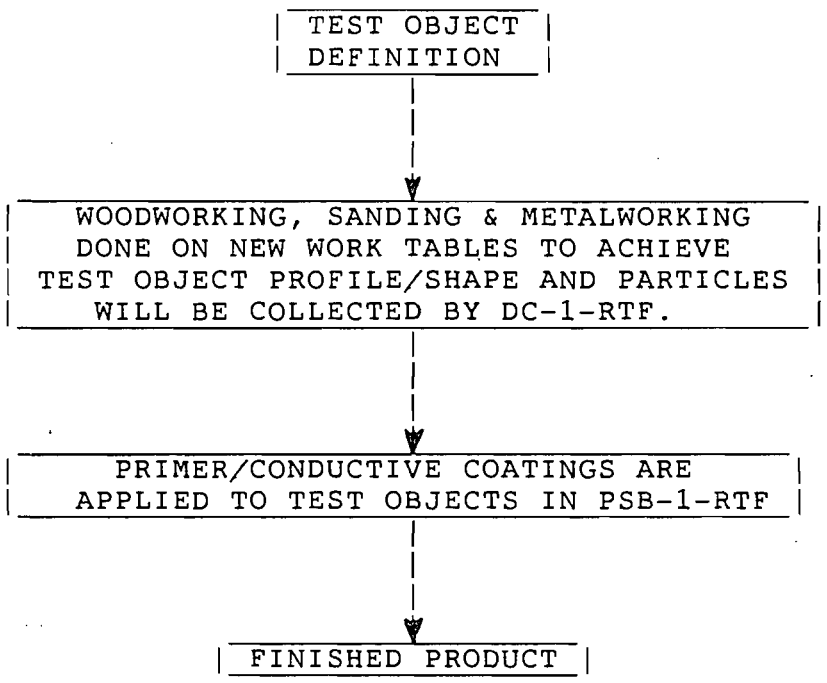
EXHAUST SILENCERS

REVISIONS
A: 8-30-68 DAN H
B: 2-18-71 T PLATTA
C: 3-29-71 M WEYERS

DWG NO: SD-3013

continued

ATTACHMENT D



ATTACHMENT E

EMISSION CALCULATIONS

PAINT SPRAY BOOTH (PSB-1-RTF)

- Estimate max. 0.5 gal/day of Acetone for cleaning paint equipment, minimum 2 hrs/day and a minimum of 16 days/month.
- Estimate max. 0.25 gal/day of Lacquer for primer, minimum 4 hrs/day and minimum of 16 days/month.
- Estimate max 0.625 gallons of coating per subassembly test object (1' dia. x 1' lg)
- Estimate a max. of twenty subassemblies will be painted per month.
- Estimate a max. of four subassemblies can be painted in any one day, therefore, all subassemblies could be painted in a minimum of 5 days/month.
- Estimate minimum time to paint one subassembly is 2 hours.
- Estimate max. 16 gallons of coating per major assembly test object (4' dia. x 26' lg)
- Estimate a maximum of one major assembly can be painted per month.
- Estimate minimum time to paint a major subassembly is 5 days/month.
- Estimate minimum time to paint major assembly each day is 5 hours.

MAXIMUM USAGE:

$$\frac{0.5\ \text{GAL}}{\text{DAY}} \times \frac{16\ \text{DAYS}}{\text{MONTH}} = \frac{8\ \text{GAL}}{\text{MONTH}} \quad \text{OF ACETONE FOR CLEANING}$$

$$\frac{0.25\ \text{GAL}}{\text{DAY}} \times \frac{16\ \text{DAYS}}{\text{MONTH}} = \frac{4\ \text{GAL}}{\text{MONTH}} \quad \text{OF LACQUER FOR PRIMING}$$

$$\frac{0.625\ \text{GAL}}{\text{SUBASSEMBLY}} \times \frac{20\ \text{SUBASSEMBLY}}{\text{MONTH}} = \frac{12.5\ \text{GAL}}{\text{MONTH}} \quad \text{OF COATING FOR SUBASSEMBLIES}$$

$$\frac{16\ \text{GAL}}{\text{MAJOR ASSEMBLY}} \times \frac{1\ \text{MAJOR ASSEMBLY}}{\text{MONTH}} = \frac{16\ \text{GAL}}{\text{MONTH}} \quad \text{OF COATING FOR MAJOR ASSEMBLIES}$$

ATTACHMENT E
continued

CLEANER

Acetone *(γ = 0.79) 100% Volatile
Max use 130 gal/yr
**assume 70% recovery

CALCULATIONS:

8 gal/mo. x 8.328 lb/gal x 0.79 x .30** = 15.8 lb/mo. V.O.C. Cleaner

* Specific gravities and percent volatile for cleaner, primer and coating obtained from material data safety sheets.

PRIMER

Lacquer (γ = 1.20) 65.7% Volatile
Max use 65 gal/yr

CALCULATIONS:

4 gal/mo. x 8.328 lb/gal x 1.20 x 0.657 = 26.3 lb/mo. V.O.C. Primer

COATINGS

35% Toluene (Thinner)	(γ = 0.87)	100% Volatile
35% Epoxy Resin	(γ = 1.48)	0.6% Volatile
24% Polyurethane Resin	(γ = 1.04)	1% Volatile
6% Polyester Resin	(γ = 1.09)	49% Volatile

MAX. USE FOR SUBASSEMBLIES:

$\frac{12.5 \text{ GAL}}{\text{MO.}} \times \frac{8.328\#}{\text{GAL}} \times 0.35 \times 0.87 = \frac{31.7\#}{\text{MO.}}$ TOLUENE

$\frac{12.5 \text{ GAL}}{\text{MO.}} \times \frac{8.328\#}{\text{GAL}} \times 0.35 \times 1.48 \times 0.006 = \frac{0.32\#}{\text{MO.}}$ EPOXY RESIN

$\frac{12.5 \text{ GAL}}{\text{MO.}} \times \frac{8.328\#}{\text{GAL}} \times 0.24 \times 1.04 \times 0.01 = \frac{0.26\#}{\text{MO.}}$ POLYURETHANE RESIN

$\frac{12.5 \text{ GAL}}{\text{MO.}} \times \frac{8.328\#}{\text{GAL}} \times 0.06 \times 1.09 \times 0.49 = \frac{3.34\#}{\text{MO.}}$ POLYESTER RESIN

TOTAL = $\frac{31.7\#}{\text{MO.}} + \frac{0.32\#}{\text{MO.}} + \frac{0.26\#}{\text{MO.}} + \frac{3.34\#}{\text{MO.}} = \frac{35.62\#}{\text{MO.}}$ V.O.C. COATING

ATTACHMENT E
continued

MAX. USE FOR MAJOR ASSEMBLY:

$$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.35 \times 0.87 = \frac{40.6\#}{MO.}\ \text{TOLUENE}$$

$$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.35 \times 1.48 \times 0.006 = \frac{0.42\#}{MO.}\ \text{EPOXY RESIN}$$

$$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.24 \times 1.04 \times 0.01 = \frac{0.33\#}{MO.}\ \text{POLYURETHANE}$$

$$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.06 \times 1.09 \times 0.49 = \frac{4.27\#}{MO.}\ \text{POLYESTER RESIN}$$

$$\text{TOTAL} = \frac{40.6\#}{MO.} + \frac{0.42\#}{MO.} + \frac{0.33\#}{MO.} + \frac{4.27\#}{MO.} = \frac{45.62\#}{MO.}\ \text{V.O.C COATING}$$

EMISSIONS PER DAY:

CLEANER:

$$\frac{15.8\#}{MO.} \times \frac{MO.}{16\ DAYS} = \frac{0.99\#}{DAY}$$

$$\frac{0.99\#}{DAY} \times \frac{DAY}{2\ HRS} = \frac{0.50\#}{HR.}$$

PRIMER:

$$\frac{26.3\#}{MO.} \times \frac{MO.}{16\ DAYS} = \frac{1.64\#}{DAY}$$

$$\frac{1.64}{DAY} \times \frac{DAY}{4\ HRS.} = \frac{0.41\#}{HR.}$$

COATINGS:

SUBASSEMBLIES:

$$\frac{35.62\#}{MO.} \times \frac{MO.}{5\ DAYS} = \frac{7.1\#}{DAY}$$

$$\frac{7.1\#}{DAY} \times \frac{DAY}{8\ HRS} = \frac{0.89\#}{HR.}$$

MAJOR ASSEMBLIES:

$$\frac{45.62\#}{MO.} \times \frac{MO.}{5\ DAYS} = \frac{9.12\#}{DAY}$$

$$\frac{9.12\#}{DAY} \times \frac{DAY}{5\ HRS} = \frac{1.82\#}{HR.}$$

ATTACHMENT E
continued

MAXIMUM TOTAL EMISSION FOR PSB-1-RTF

- PSB-1-RTF will never paint a major assembly and a subassembly on the same day.
- Therefore, there are two possible combinations for maximum total emissions:
  1. V.O.C. Cleaner + V.O.C. Primer + V.O.C. Subassembly
  2. V.O.C. Cleaner + V.O.C. Primer + V.O.C. Major Assembly

1. Subassembly

   a. $\frac{0.99\#}{DAY}$ (cleaner) + $\frac{1.64\#}{DAY}$ (primer) + $\frac{7.1\#}{DAY}$ (subassembly) = $\frac{9.73\#}{DAY}$

   b. $\frac{0.50\#}{HR.}$ (cleaner) + $\frac{0.41\#}{HR.}$ (primer) + $\frac{0.89\#}{HR.}$ (subassembly) = $\frac{1.80\#}{HR.}$

2. Major Assembly

   a. $\frac{0.99\#}{DAY}$ (cleaner) + $\frac{1.64\#}{DAY}$ (primer) + $\frac{9.12\#}{DAY}$ (major assembly) = $\frac{11.75\#}{DAY}$

   b. $\frac{0.50\#}{HR.}$ (cleaner) + $\frac{0.41\#}{HR.}$ (primer) + $\frac{1.82\#}{HR.}$ (major assembly) = $\frac{2.73\#}{HR.}$

MAX TOTAL EMISSION = 11.75#/DAY OR 2.73#/HR

DUST COLLECTOR SYSTEM (DC-1-RTF):

o Maximum of four (4) fifty-five (55) gallon drums filled per month or forty-eight (48) drums per year

o Assume particles and shavings weigh 15 lb/ft3

o Assume efficiency of filter = 95%

o Dust collector will operate approximately 5 hours a day, 5 days a week, and 52 weeks a year.

CALCULATIONS:

$$55 \text{ gal/drum} \times \frac{\text{ft3}}{7.48 \text{ gal}} \times \frac{15 \text{ lb}}{\text{ft3}} \times 48 \text{ drums/year} = 5294 \text{ lb/yr}$$

$$5294 \text{ lb/yr} \times \frac{\text{yr}}{1300 \text{ hrs}} = 4.07 \text{ lb/hr collected in drums}$$

CONSIDER EFFICIENCY:

Total dust generated x efficiency = Total dust collected in drums

$$\text{Total dust generated} = \frac{\text{Total dust collected in drums}}{\text{efficiency}}$$

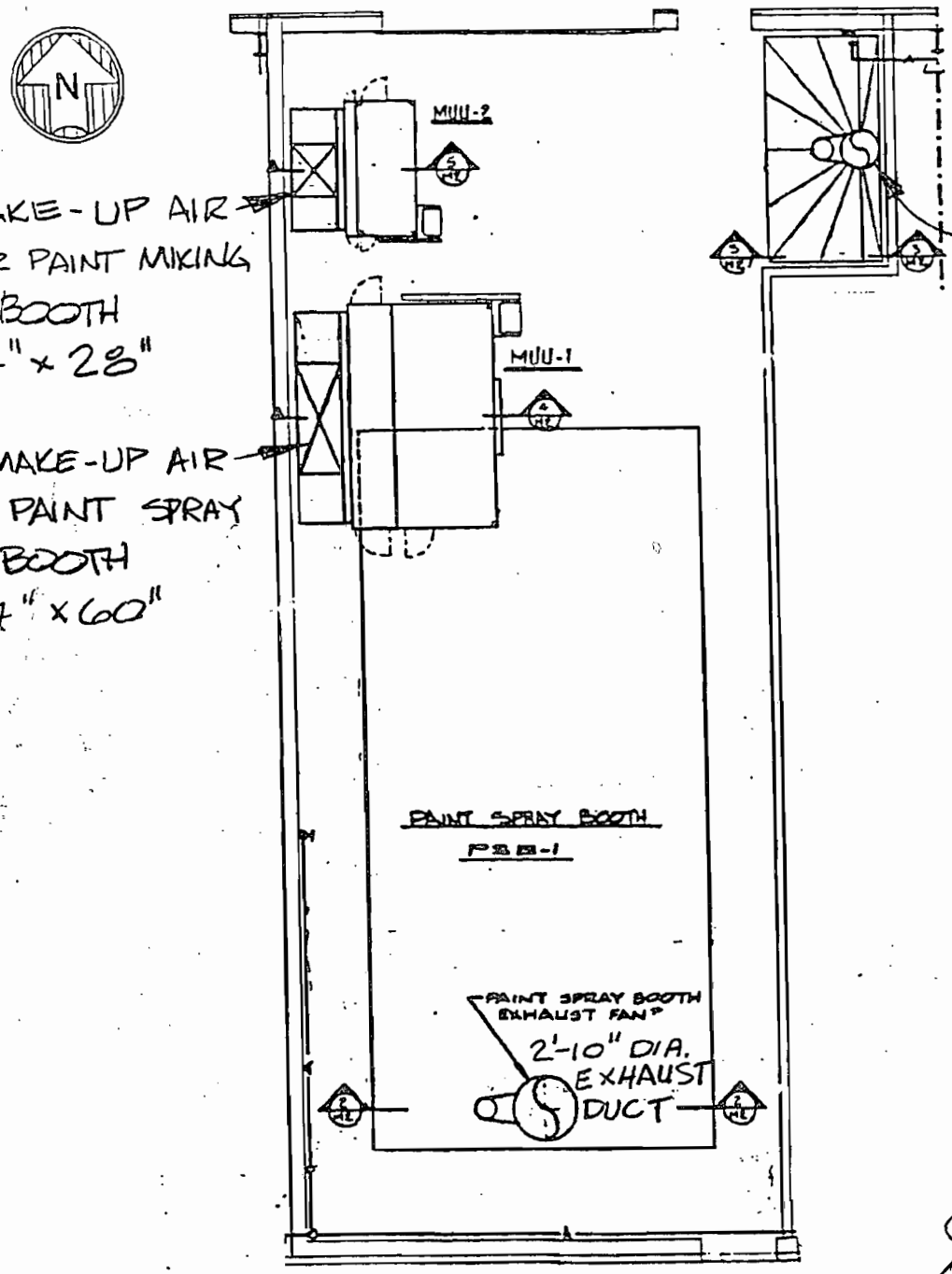
$$\frac{4.07 \text{ lb/hr}}{0.95} = 4.28 \text{ lb/hr}$$

Total dust generated - total dust collected = total dust emitted

4.28 lb/hr - 4.07 lb/hr = 0.21 lb/hr.

BEST AVAILABLE COPY

ATTACHMENT F1



11/3/86

UNITED TECHNOLOGIES PRATT&WHITNEY

LET	ALTERATIONS	BY	APPD	DATE
DRAWN BY R	DATE 9.29.86	APPROVED BY		DATE
CHECKED BY	DATE			

SCALE	FSO	CHARGE
NONE	C8119	C811921

THERE IS NO SUBSTITUTE FOR QUALITY

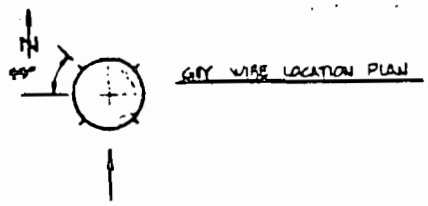
PSB-1-RTF & PAINT MIXING HOOD EMISSION LOCATIONS

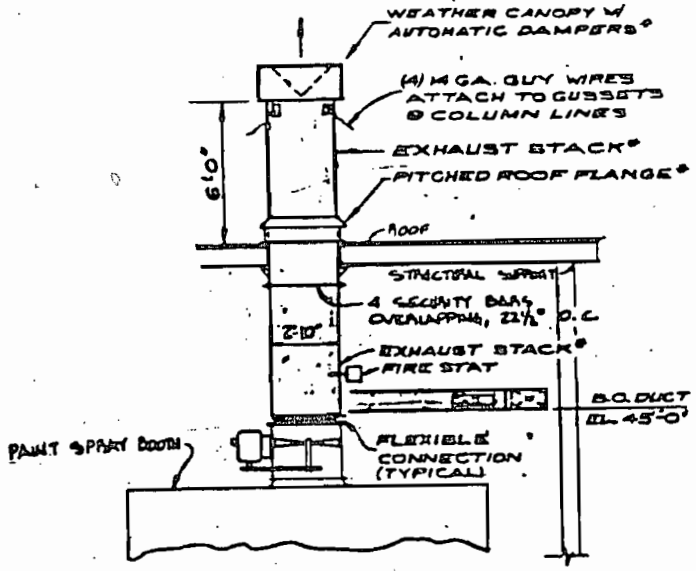
DRAWING NO. AX-77607

SHT 1 OF 3

* In accordance with an October 8, 1986 telephone conversation with J. Goldman, DER, the paint mixing booth is excluded

ATTACHMENT F2





PAINT SPRAY BOOTH

* INDICATES ITEMS FURNISHED BY PAINT SPRAY BOOTH MANUFACTURER. INSTALLED UNDER THIS CONTRACT

Thomas E. Chiebolo 11/3/86

UNITED TECHNOLOGIES PRATT & WHITNEY

LET	ALTERATIONS	BY	APPD	DATE
DRAWN BY R	DATE 5.29.86	APPROVED BY		DATE
CHECKED BY	DATE			

SCALE NONE | FSO C8119 | DRAWING C811921

THERE IS NO SUBSTITUTE FOR QUALITY

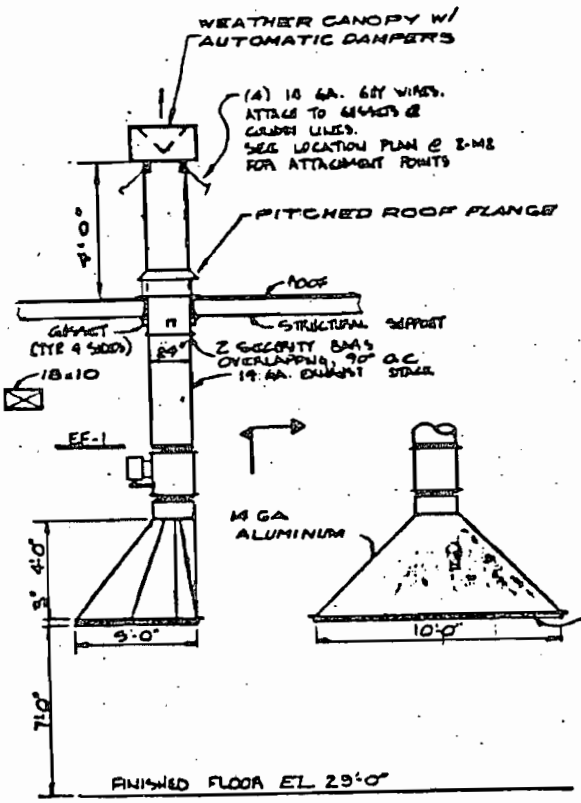
PSB-1-RTF & PAINT MIXING HOOD DETAILS

DRAWING NO. AX-77607

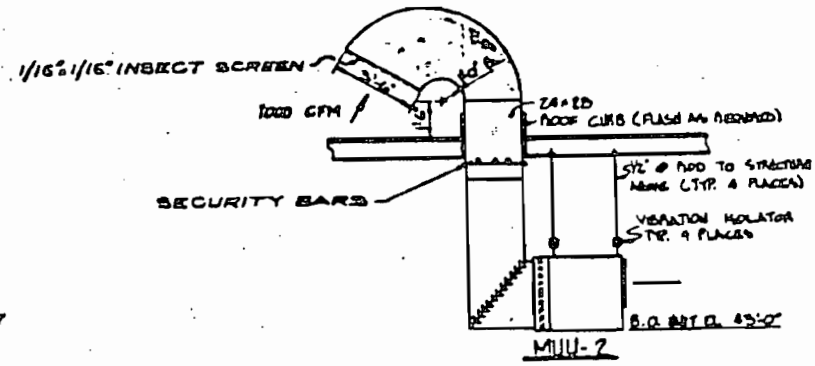
SHT 2 OF 3

ATTACHMENT F3

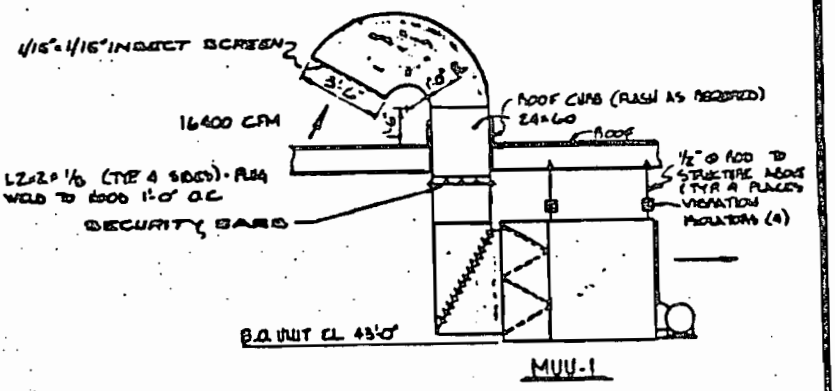
Thomas C. Chevallo
11/3/86



5 M2 PAINT MIXING HOOD



5 M1 MAKE-UP AIR FOR PAINT MIXING BOOTH



4 M1 MAKE-UP AIR FOR PAINT SPRAY BOOTH

UNITED TECHNOLOGIES PRATT & WHITNEY

LET	ALTERATIONS	BY	APPD	DATE
DRAWN BY JR	DATE 9.29.86	APPROVED BY		DATE
CHECKED BY	DATE			

SCALE NONE | FOG C8119 | CHARGE C811921

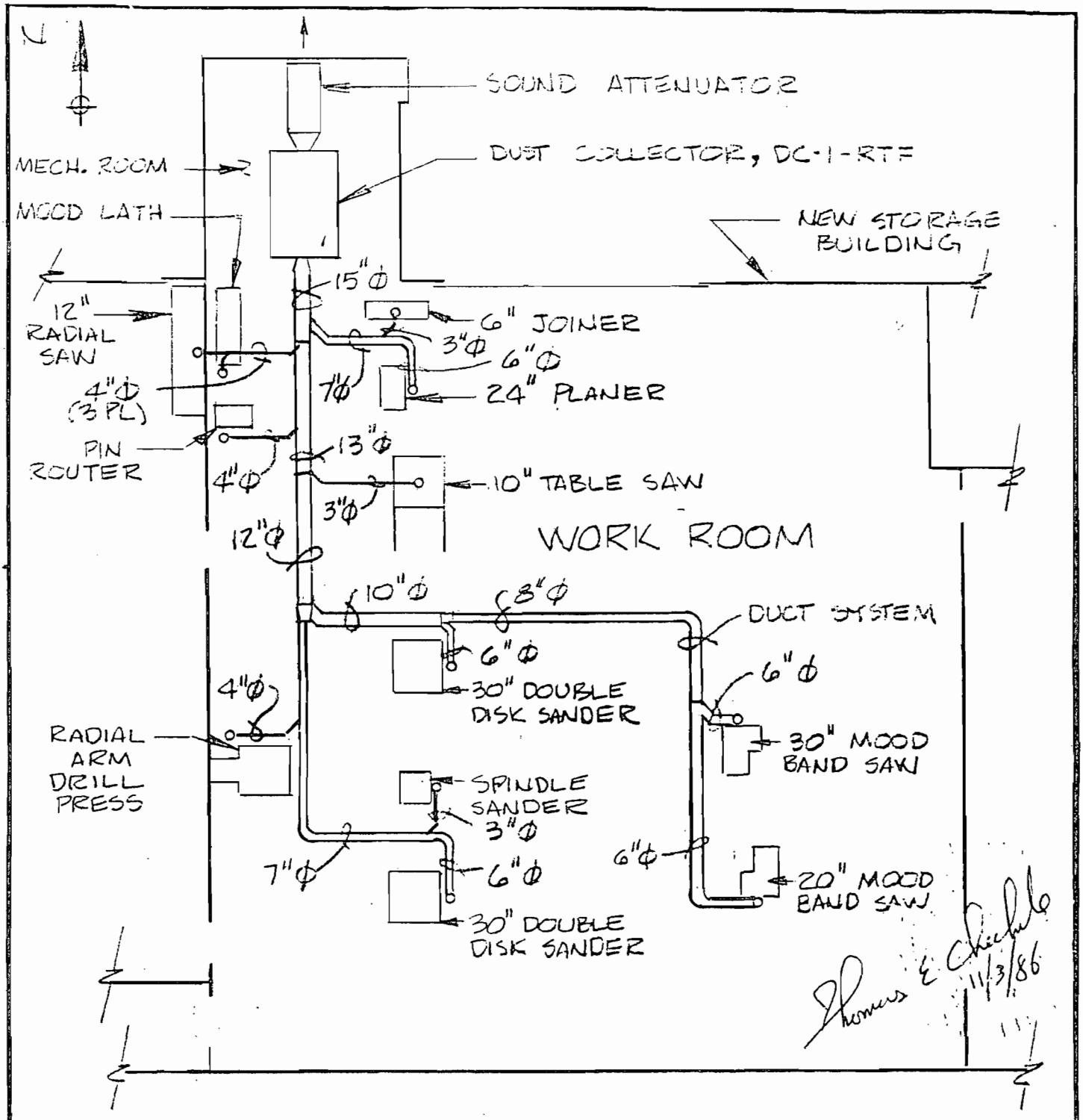
THERE IS NO SUBSTITUTE FOR QUALITY

PSB-1-RTF & PAINT MIXING HOOD DETAILS

DRAWING NO. AX-77607

SHT 3 OF 3

ATTACHMENT S1



UNITED TECHNOLOGIES PRATT&WHITNEY

LET	ALTERATIONS	BY	APPD	DATE
DRAWN BY	DATE	APPROVED BY	DATE	
JR	9-25-86			
CHECKED BY	DATE			

SCALE NONE | JOB 2819 | CHARGE 23-332-1

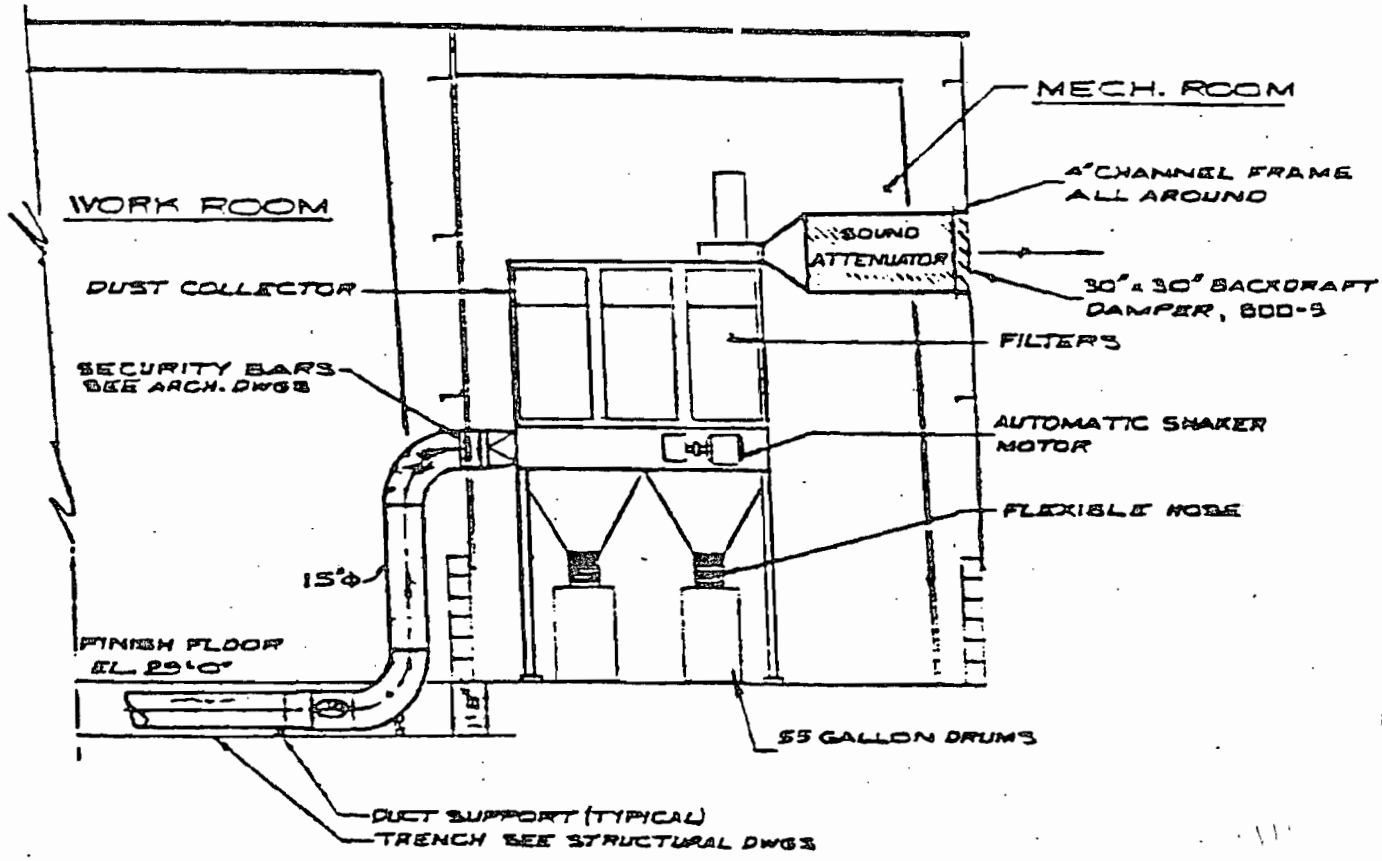
THERE IS NO SUBSTITUTE FOR QUALITY

RTF WORK ROOM
DUST COLLECTOR SYSTEM

DRAWING NO. AX-77608

SHT 1 OF 2

ATTACHMENT G2



DC-1-RTF

Thomas E Chehule 11/3/86

LET	ALTERATIONS	BY	APPD	DATE
DRAWN BY R	DATE 9.26.86	APPROVED BY		DATE
CHECKED BY	DATE			

UNITED TECHNOLOGIES PRATT&WHITNEY

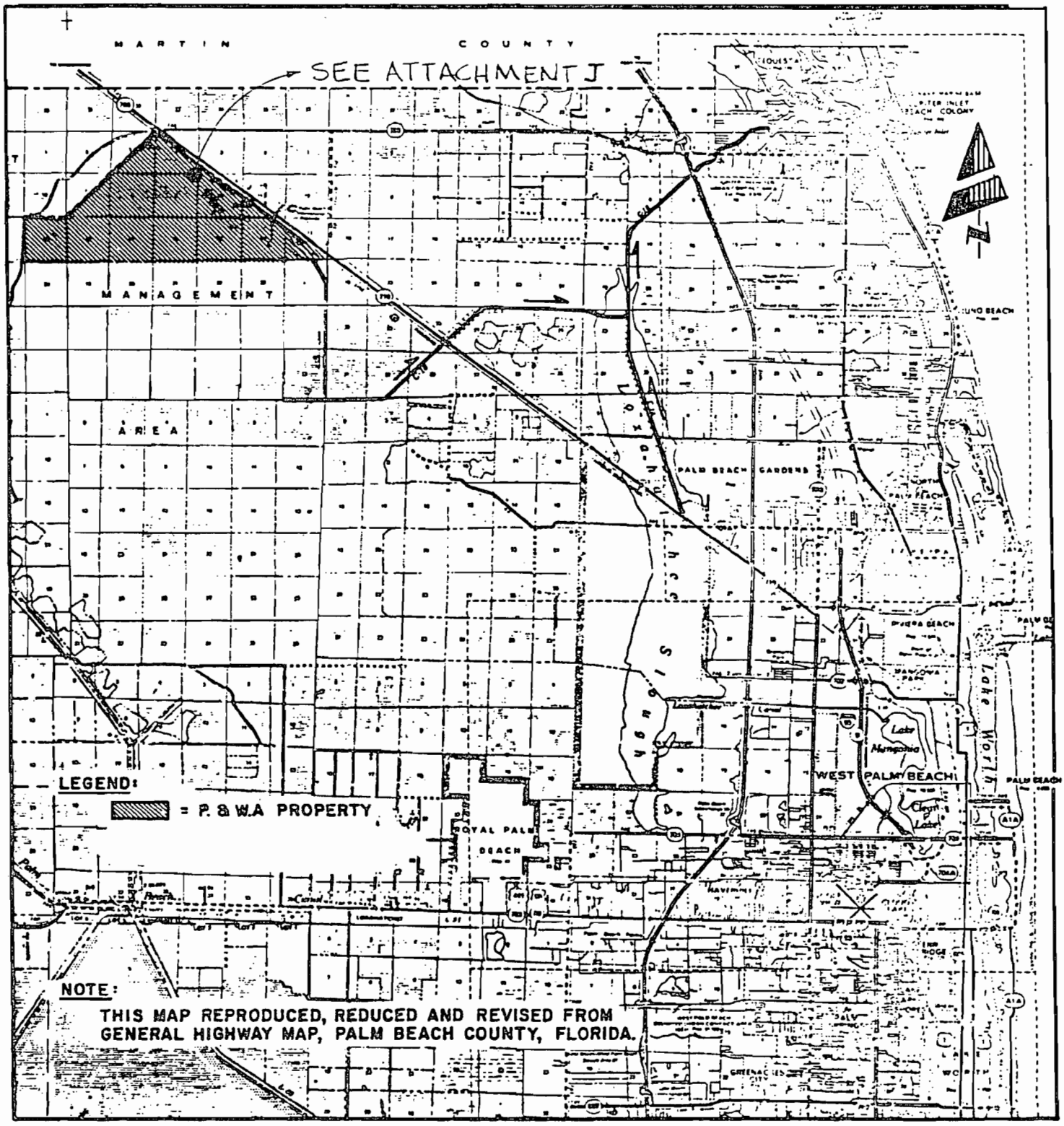
SCALE NONE	JOB C8119	CHARGE C811921	THERE IS NO SUBSTITUTE FOR QUALITY

DUST COLLECTOR DETAIL

DRAWING NO. AX-77608

SHT 2 OF 2

ATTACHMENT H



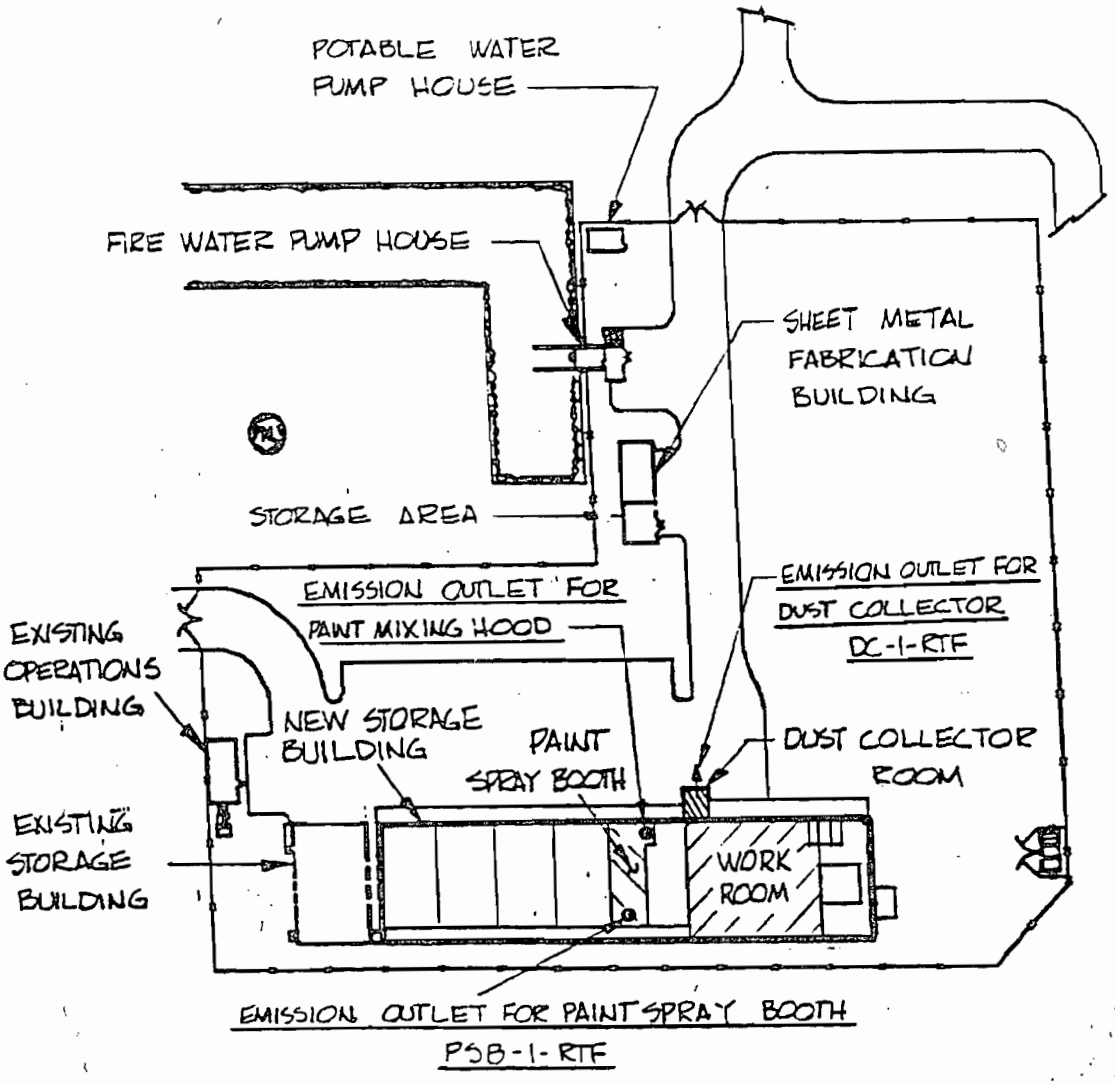
PL-772 A
7/18/81

SITE LOCATION MAP
FOR PRATT & WHITNEY AIRCRAFT PROPERTY
PALM BEACH COUNTY, FLORIDA

0 1 2 3 4 MILES
SCALE

Thomas E Chechile
11/3/86

ATTACHMENT J



REMOTE TEST SITE

Thomas E Cheeble 11/3/86

UNITED TECHNOLOGIES PRATT & WHITNEY	LET	ALTERATIONS	BY	APPD	DATE	
	DRAWN BY R	DATE 9.26.86	APPROVED BY		DATE	
	ENGINEER BY	DATE				
SCALE NONE	PDS C8119	CHARGE C811921	THERE IS NO SUBSTITUTE FOR QUALITY			

EMISSION OUTLETS LOCATION MAP

DRAWING NO. AX-77609

SHT 1 OF 1

0040b APR 25 1983 C VMC 9008-1

EXXON CHEMICALS

MATERIAL SAFETY DATA SHEET

(Approved by U.S. Department of Labor as "essentially similar" to Form LSB-005-4)

EXXON CHEMICAL AMERICAS • P.O. BOX 3272, HOUSTON, TEXAS 77001
A division of EXXON CHEMICAL COMPANY, a division of EXXON CORPORATION

Acetone
PRODUCT

SECTION I – IDENTIFICATION OF PRODUCT

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
EXXON CHEMICAL AMERICAS	713 - 870-6000
ADDRESS (Number, Street, City, State and ZIP Code)	
P. O. BOX 3272, HOUSTON, TEXAS 77001	

2 TRADE NAME	3 CHEMICAL NAME
Acetone	2-propanone
4 CHEMICAL FAMILY	5 CHEMICAL FORMULA
Ketone	CH_3COCH_3

SECTION II – HAZARDOUS COMPONENTS OF MIXTURES

6 The precise composition of this product is proprietary information. A more detailed disclosure will be provided by Exxon Medical or Industrial Hygiene personnel to qualified Medical or Industrial Hygiene personnel as privileged information upon request in case of need for specific treatment.

Not Applicable to Pure Chemicals.

RECEIVED
JAN 25 1985
SAFETY
ENGINEERING

SECTION III – TYPICAL PHYSICAL DATA

7 APPEARANCE	8 ODOR
Clear, colorless liquid.	Sweet pungent odor.
9 BOILING POINT (°F/°C)	10 SPECIFIC GRAVITY/ 060°/60°F (15.5/15.5°C)
56°C (133°F)	0.792 at 20/20°C (68/68°F)
11 VAPOR PRESSURE (mm Hg @ 100°F/38°C)	12 PERCENT VOLATILE (BY VOLUME) COMPONENTS WITH B.P. EQUAL TO OR LESS THAN 212°F/100°C
380 mm Hg at 38°C (100°F)	100%
13 VAPOR DENSITY (AIR = 1)	14 EVAPORATION RATE (N-BUTYL ACETATE = 1)
2.0	11.6
15 SOLUBILITY IN WATER	16
Complete	

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

17 FLASH POINT (°F/°C SETA CC - ASTM D3278)	18 FLAMMABLE LIMITS (PERCENT BY VOLUME)	LEL	UEL
Tag closed cup - 18°C (0°F)		2.6	13.0

20 FIRE EXTINGUISHING MEDIA

Dry chemical or alcohol-type foam. Waterspray may be ineffective.

21 SPECIAL FIRE FIGHTING PROCEDURES

Use waterspray to cool fire-exposed surfaces and to protect personnel.

22 UNUSUAL FIRE AND EXPLOSION HAZARDS

DANGER! This product is EXTREMELY FLAMMABLE. May cause flash fire. Respiratory protection required for fire fight personnel. Stay upwind, if possible. Cool exposed tanks with water.

23 HAZARDOUS PRODUCTS OF COMBUSTION

No unusual products of combustion.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer any warranty against patent infringement.

(over)

SECTION V – HEALTH HAZARD DATA

	OSHA	ACGIH - 1982	OTHER
THRESHOLD LIMIT VALUE(S)	1000 ppm	750 ppm	

EFFECTS OF OVEREXPOSURE

ACUTE: Vapor irritates eyes, nose & throat. Liquid may cause eye injury.

CHRONIC: Liquid is irritating to skin, causing dermatitis.

EMERGENCY AND FIRST AID PROCEDURES If overcome by vapors, remove to fresh air and if breathing stopped, give artificial respiration. Keep individual calm. Call a physician. If skin contact occurs, wash affected parts thoroughly with soap & water; launder clothing before re-use. If eye contact occurs, flush with water for at least 15 minutes and call a physician.

SECTION VI – ACTIVITY DATA

STABILITY			CONDITIONS TO AVOID
	UNSTABLE		Not Applicable.
	STABLE	X	

INCOMPATIBILITY (MATERIALS TO AVOID FOR PURPOSES OF TRANSPORT, HANDLING & STORAGE ONLY)
Inorganic acids, caustic, amines, alkanolamines, oxygen, halogens, aldehydes, ammonia, oxidizing agents, chlorinated compounds.

HAZARDOUS DECOMPOSITION PRODUCTS
NONE

SECTION VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Keep public away. Shut off source if possible to do so without hazard. Eliminate sources of ignition. Warn occupants of downwind areas of explosion hazard. Prevent liquid from entering sewers, watercourses or low areas.

WASTE DISPOSAL (INSURE CONFORMITY WITH LOCAL DISPOSAL REGULATIONS)
Contain spilled liquid with sand or earth. Dilute contained spill with water. Recover free liquid by pumping or with a suitable absorbant. Consult a disposal expert and ensure conformity to local regulation.

SECTION VIII – PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION
Use approved respiratory protection such as air-supplied mask if used in enclosed spaces.

VENTILATION	LOCAL EXHAUST	SPECIAL
	Face velocity > 60 fpm in confined space.	
	MECHANICAL (General)	OTHER
	Explosion-proof ventilation equipment.	No smoking or open lights

PROTECTIVE GLOVES	EYE PROTECTION
Chemically resistant gloves.	Chemical splash goggles or face shield.

OTHER PROTECTIVE EQUIPMENT
Usually not needed.

SECTION IX – HANDLING AND STORAGE PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Keep container closed when not in use. Do not handle or store near flame, heat or strong oxidants. Adequate ventilation required. Containers of this material may be hazardous when emptied. Emptied containers retain product residues (vapor, liquid, etc.). Observe all Hazard Precautions outlined in this sheet.

OTHER PRECAUTIONS
All handling equipment should be electrically grounded.

DATE OF ISSUE	REVIEWED BY
July, 1982	Richard [illegible]
☐ NEW ☒ REVISED: SUPERSEDES 8/81	Industrial Hygiene Coordinator

MATERIAL SAFETY DATA SHEET

#13

NFPA 1-7

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

E

DATE PREP. 4-14-80

Section I

MANUFACTURER'S NAME THE SHERWIN-WILLIAMS COMPANY 00888

STREET ADDRESS 101 Prospect Avenue CITY, STATE, AND ZIP CODE Cleveland, Ohio 44101

EMERGENCY TELEPHONE NO. (216) 566-2917 or (216) 566-2630

PRODUCT CLASS Lacquer MANUFACTURERS CODE IDENTIFICATION P61 A 1

OPEX® Primer Surfacer Grey

Section II — HAZARDOUS INGREDIENTS

EDIENT	PERCENT by weight	TLV PPM	TLV mg/M³	LEL	VAPOR PRESSURE mm Hg
V. M & P Naphtha	< 5	300	1350	0.9	12.0
Aliphatic Hydrocarbon	< 5	100	364	1.0	53.0
Isobutyl Alcohol	<5	50	150	1.2	8.7
Isobutyl Acetate	10	150	700	1.3	12.0
Isopropyl Alcohol	5	400	980	2.0	33.0
n-Butyl Alcohol	< 5	50	150	1.4	5.5
Toluene	10	100	375	1.0	22.0
Ethyl Alcohol	< 5	1000	1900	3.3	43.0
Amyl Acetate	< 5	100	525	1.1	4.0
Methyl Ethyl Ketone	< 5	200	590	1.8	70.0

Section III — PHYSICAL DATA

BOILING RANGE 170-401°F VAPOR DENSITY [X] HEAVIER, [ ] LIGHTER, THAN AIR

EVAPORATION RATE [ ] FASTER [X] SLOWER, THAN ETHER PERCENT VOLATILE BY VOLUME 65.7% WEIGHT PER GALLON 9.96 lb.

Section IV — FIRE AND EXPLOSION HAZARD DATA

DOT CATEGORY Red Label, Flammable, Flash Below 100°F FLASH POINT 21°F PMCC LEL 0.9

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Water spray may be ineffective. Water should be used to keep fire exposed containers cool.

SPECIAL FIRE FIGHTING PROCEDURES

Keep containers isolated from heat, sparks, and open flame.

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE SEE HAZARDOUS INGREDIENTS SECTION II

EFFECTS OF OVEREXPOSURE

In a confined area vapors in high concentration are anesthetic. Irritan skin and upper respiratory system. Over-exposure may result in lightheadedness and staggering gait.

EMERGENCY AND FIRST AID PROCEDURES

Remove from exposure. Restore breathing. Keep warm and quiet. If contact with eyes is made, flush with copious quantities of water for 15 minutes. Wash affected area with water. Remove contaminated clothing and wash before reuse.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE CONDITIONS TO AVOID

INCOMPATABILITY (*Materials to avoid*)

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen.

HAZARDOUS POLYMERIZATION ☐ MAY OCCUR ☒ WILL NOT OCCUR

CONDITIONS TO AVOID

Section VII — SPILL OR LEAK PROCEDURES

PS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

move all sources of ignition. Ventilate and remove with inert absorbent.

WASTE DISPOSAL METHOD Incinerate in approved facility. Do not incinerate closed container. Dispose in accordance with Federal, State, and Local regulations regarding pollution.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

If engineering and administrative controls of air contaminants are not feasible, use respiratory devices approved by NIOSH/MESA for protection against spray mist and vapors.

VENTILATION Local exhaust preferable. Mechanical (general) exhaust acceptable. Special ventilation required to keep below TLV and LEL.

PROTECTIVE GLOVES Required for prolonged or repeated contact.

EYE PROTECTION Safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Contents are flammable.

OTHER PRECAUTIONS Keep away from heat, sparks, and open flame. During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after us Keep container closed when not in use. Do not transfer contents to other containers for storage. Do not take internally. Keep out of the reach of children. Consult NFPA Code. approved Bonding and Grounding procedures. Use only with adequate ventilation.

EXXON COMPANY, U.S.A.
A DIVISION OF EXXON CORPORATION

DATE ISSUED 4/1986

MATERIAL SAFETY DATA SHEET

EXXON COMPANY, U.S.A. P.O. BOX 2180 HOUSTON, TX 77252-2180

A. IDENTIFICATION AND EMERGENCY INFORMATION

PRODUCT NAME
TOLUENE 86305

PRODUCT CODE
132010 - 00650

CHEMICAL NAME
Petroleum Solvent

CAS NUMBER
108-88-3

PRODUCT APPEARANCE AND ODOR
Clear water-white liquid
Aromatic hydrocarbon odor

EMERGENCY TELEPHONE NUMBER
(713) 656-3424

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS	CAS NO. OF COMPONENTS	APPROXIMATE CONCENTRATION
This product can be defined as: Toluene	108-88-3	100%

See Section E for Health and Hazard Information

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health	Flammability	Reactivity	BASIS
1	3	0	Recommended by Exxon

EXPOSURE LIMIT FOR TOTAL PRODUCT
100 ppm (375 mg/m3) for an 8-hour workday

BASIS
Recommended by the American Conference of Governmental Industrial Hygienists (ACGIH)

C. EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT
If splashed into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN CONTACT
In case of skin contact, remove any contaminated clothing and wash skin thoroughly with soap and water.

INHALATION
If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available.

INGESTION
If ingested, DO NOT induce vomiting; call a physician immediately.

D. FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (MINIMUM)
7°C (45°F)

AUTOIGNITION TEMPERATURE
Greater than 538°C (1000°F)

ASTM D 56, Tag Closed Cup ASTM D 2155

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) - HAZARD IDENTIFICATION

Health	Flammability	Reactivity	BASIS
2	3	0	Recommended by the National Fire Protection Association

HANDLING PRECAUTIONS
Keep product away from heat, sparks, pilot lights, static electricity, and open flame.

FLAMMABLE OR EXPLOSIVE LIMITS (APPROXIMATE PERCENT BY VOLUME IN AIR)
Estimated values: Lower Flammable Limit 1% Upper Flammable Limit 7.1%

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES
Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", Eighth Edition (1984):

Use dry chemical, foam or carbon dioxide. Water may be ineffective, but water should be used to keep fire-exposed containers cool. If a leak or spill has ignited, use water spray to disperse the vapors and to protect men attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

NOTE: The inclusion of the phrase "water may be ineffective" is to indicate that although water can be used to cool and protect exposed material, water may not extinguish the fire unless used under favorable conditions by experienced fire fighters trained in fighting all types of flammable liquid fires.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS
Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, in the case of incomplete combustion.

"EMPTY" CONTAINER WARNING
"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

E. HEALTH AND HAZARD INFORMATION

VARIABILITY AMONG INDIVIDUALS
Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

EFFECTS OF OVEREXPOSURE (Signs and symptoms of exposure)
High vapor concentrations (greater than approximately 1000 ppm) are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic, and may have other central nervous system effects.

NATURE OF HAZARD AND TOXICITY INFORMATION
Prolonged or repeated skin contact with this product tends to remove skin oils possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant"

by OSHA criteria.

Product contacting the eyes may cause eye irritation.

Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion may cause mild to severe pulmonary injury and possibly death.

This product is judged to have an acute oral LD50 (rat) greater than 5 g/kg of body weight, and an acute dermal LD50 (rabbit) greater than 3.16 g/kg of body weight.

F. PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

BOILING RANGE
110.2-111.0°C (230.4-231.8°F)

SPECIFIC GRAVITY (15.6 C/15.6 C)
0.87

MOLECULAR WEIGHT
92

pH
Essentially neutral

POUR, CONGEALING OR MELTING POINT
Less than -18°C (0°F)
Pour Point by ASTM D 97

VISCOSITY
0.57 cP @ 25°C ASTM D 445

VAPOR PRESSURE
Approximately 54 mm Hg @ 25°C
ASTM D 2879

VAPOR DENSITY (AIR = 1)
Approximately 3.2

PERCENT VOLATILE BY VOLUME
100 @ 1 atm. and 25°C (77°F)

EVAPORATION RATE @ 1 ATM. AND 25 C (77 F)
(n-BUTYL ACETATE = 1)
1.8

SOLUBILITY IN WATER @ 1 ATM. AND 25 C (77 F)
Negligible; less than 0.1%

G. REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite or calcium hypochlorite.

H. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas.
Assure conformity with applicable governmental regulations. Continue to observe precautions for volatile, flammable vapors from absorbed material.

REPORTABLE QUANTITY (RQ), EPA REGULATION 40 CFR 302
RQ for toluene (1,000 pounds): 1,000 pounds of product or 454 kg or 138 gallons.

I. PROTECTION AND PRECAUTIONS

VENTILATION
Use only with ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air. Use explosion-proof equipment. No smoking or open lights.

RESPIRATORY PROTECTION
Use supplied-air respiratory protection in confined or enclosed spaces, if needed.

PROTECTIVE GLOVES
Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION
Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT
Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES / ENGINEERING CONTROLS
Keep containers and storage containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants. To prevent fire or explosion risk from static accumulation and discharge, effectively ground product transfer system in accordance with the National Fire Protection Association standard for petroleum products.

ERSONAL HYGIENE
Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Remove contaminated shoes and thoroughly clean and dry before reuse. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

J. TRANSPORTATION INFORMATION

TRANSPORTATION INCIDENT INFORMATION
For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

DOT IDENTIFICATION NUMBER
UN 1255

The information and recommendations contained herein are, to the best of Exxon's knowledge and belief, accurate and reliable as of the date issued. Exxon does not warrant or guarantee their accuracy or reliability, and Exxon shall not be liable for any loss or damage arising out of the use thereof.

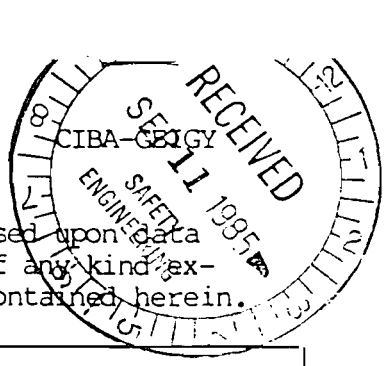
The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.

The Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) ratings have been included by Exxon Company, U.S.A. in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Exxon's interpretation of the available data.

FOR ADDITIONAL INFORMATION ON HEALTH EFFECTS CONTACT:
DIRECTOR OF INDUSTRIAL HYGIENE
EXXON COMPANY, U.S.A.
P. O. BOX 2180 ROOM 2737
HOUSTON, TX 77252-2180
(713) 656-2443

FOR OTHER PRODUCT INFORMATION CONTACT:
MANAGER, MARKETING TECHNICAL SERVICES
EXXON COMPANY, U.S.A.
P. O. BOX 2180 ROOM 2455
HOUSTON, TX 77252-2180
(713) 656-5949

4917 Dawn Avenue
sing, Michigan 48823



SAFETY DATA SHEET

This information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein.

SECTION I.	
TRADE NAME RP-1710 Resin	PRODUCT TYPE Laminating System
CHEMICAL FAMILY Epoxy Resin	EMERGENCY TELEPHONE NUMBER (914) 478-3131

SECTION II. HAZARDOUS INGREDIENTS					
INGREDIENT	%	TLV (UNITS)	INGREDIENT	%	TLV (UNITS)
Nuisance Dusts	30-40	10mg/m^3			
Fumed Silica (Dust Hazard)	< 1	6mg/m^3			

SECTION III. PHYSICAL DATA			
BOILING POINT (°F)	N/A	SOLUBILITY IN WATER	Negligible
MELTING POINT (°F)	N/A	SPECIFIC GRAVITY (H_2O = 1	1.47-1.50
VAPOR PRESSURE (mm Hg.) @ 25°C	0.19	PERCENT VOLATILE BY VOLUME (%)	0.6 max.
VAPOR DENSITY (AIR = 1)	1.0	EVAPORATION RATE (=1)	nil
APPEARANCE AND ODOR White opaque liquid, very slight mild odor.			

SECTION IV. FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (°F) (Method Used) 293°F PM-CC	FLAMMABLE LIMITS IN AIR Unknown	LEL	UEL
EXTINGUISHING MEDIA Dry chemical, carbon dioxide, foam, water			
SPECIAL FIRE FIGHTING PROCEDURES Use self-contained breathing apparatus.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Decomposition and combustion products may be toxic.			

SECTION V. REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID Excessive heat for prolonged period of time.
	STABLE	X	
INCOMPATIBILITY (Materials to Avoid) Strong oxidizing agents, metal-organic compounds.			
HAZARDOUS DECOMPOSITION PRODUCTS - Combustion may form toxic material, including carbon dioxide and carbon monoxide.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VI. HEALTH HAZARD DATA

ORAL: LD_{50}
(Major ingredient) 3310 mg/kg (rat)

DERMAL: LD_{50}
(Major ingredient) > 4000 mg/kg (rabbit)

IRRITATION: SKIN - (Major ingredient) Mild SPI CLASS 4
EYE - (Major ingredient) - not an irritant (rabbit)

SENSITIZATION
Strong sensitizer.

THRESHOLD LIMIT VALUE
Not established. See "Hazardous Ingredients"

RESPIRATORY
May cause sensitization.

EFFECTS OF OVEREXPOSURE
Prolonged or repeated exposure may cause irritation and sensitization.

EMERGENCY & FIRST AID PROCEDURES:

INHALATION Remove to fresh air. Administer oxygen or artificial respiration if necessary.

INGESTION If conscious, give plenty of water to drink. Induce vomiting by touching back of throat with finger. Call a physician.

SKIN Wash with soap and water. Remove contaminated clothing and launder before reuse.

EYES Immediately flush with water for at least 15 minutes. Call a physician.

OTHER Referral to a physician is recommended if there is any question about the seriousness of any injury.

SECTION VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove spillage by absorbing in absorbent material. Avoid contact.

WASTE DISPOSAL METHOD Consult qualified local or corporate personnel for method that will comply with local, state, and federal health and environmental regulations.

SECTION VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify Type)
NIOSH-approved organic vapor respirator, if TLV is exceeded.

PROTECTIVE CLOTHING
Impermeable gloves.

EYE PROTECTION
Splash-proof chemical goggles.

VENTILATION
According to ACGIH design recommendation.

SECTION IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING, STORING, ETC.
WARNING! May cause skin sensitization or other allergic responses. Avoid inhalation of vapor. Use good ventilation particularly if heated or sprayed. Prevent all contact with skin and eyes. Wash thoroughly after handling. Store in original sealed container.

DATE: 8-8-84 SIGNATURE: W Geraghty

PRC

MATERIAL SAFETY DATA SHEET

00625

SECTION I

PRODUCT NAME:	PR-1660-L
DESCRIPTION:	Polyurethane molding and sealing compound
MANUFACTURER:	Products Research & Chemical Corporation 5430 San Fernando Road, P.O. Box 1800, Glendale, CA 91209
EMERGENCY TELEPHONE:	(818) 240-2060

SECTION II - HAZARDOUS INGREDIENTS

		% BY WT.	TLV
Pigments:	N/A	--	--
Catalyst:	Reactive polyamine	10	5 ppm
Vehicle:	Cycloaliphatic diisocyanate terminated urethane polymer	90	*
Solvents:	Methyl ethyl ketone	10	200
Additives:	N/A	--	--

* The TLV of pure, monomeric diisocyanate is 0.02 ppm.

SECTION III - PHYSICAL DATA

Boiling Point (°F):	N/A	Specific Gravity:	1.04
Vapor Pressure (mm Hg):	N/A	% Volatiles, by Vol:	1% Max.
Vapor Density:	N/A	Evaporation Rate:	N/A
Solubility in Water:	Insol.		
Appearance and Odor:	Liquid;; pungent odor.		

SECTION IV - FIRE AND EXPLOSION DATA

Flash Point:	23°F (PMCC)
Flammable Limits:	N/A.
Extinguishing Media:	Use any extinguisher approved for Cl. B fires.
Spec. Fire Fighting Proc:	N/A
Unusual Fire Hazards:	Emission of potentially toxic vapors.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:	See Section II.
Effects of Overexposure:	Irritation to eyes, skin and mucous membranes.
First Aid Procedures:	SKIN: Wash thoroughly with soap and water. EYES: Wash out immediately with large amount of water; see a physician. INHALATION: Remove to fresh air.

SECTION VI - REACTIVITY DATA

Stability:	Stable.
Incompatability:	N/A
Decomposition Products:	Fragments of aromatic amines, isocyanates and unsaturated compounds.
Hazardous Polymerization:	Will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

Release or Spillage:	Wipe up excess with paper towels or rags; clean area with a methyl ethyl ketone.
Waste Disposal:	Dispose of cured material in normal trash.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection:	NIOSH organic vapor cartridge respirator recommended for sensitive individuals.
Ventilation:	Adequate to minimize vapors.
Skin Protection:	Poly gloves or protective hand cream.
Eye Protection:	Chemical goggles or safety glasses.

SECTION IX - SPECIAL PRECAUTIONS

Tightly closed containers in dry area below 80°F.
Avoid prolonged or repeated contact with skin.

MATERIAL SAFETY DATA SHEET

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

Reichhold Chemicals, Inc.
525 North Broadway, White Plains, N.Y. 10603
INFORMATION TELEPHONE NO. (914) 682-5700

REVISION DATE: 11/83

REICHHOLD®
PERFORMANCE TECHNOLOGY

EMERGENCY PHONE NUMBER • **800-423-3003 / 800-442-4844** (in continental U.S. — except N.Y.) / (in N.Y. State) • These numbers are available days, nights, weekends, and holidays.

Section I — IDENTIFICATION

PRODUCT NAME	CHEMICAL NAME OR FAMILY
POLYLITE® 33-031	Unsaturated Polyester Resin in Monomer
FORMULA: Complex	TRADENAME:
DOT NAME: Resin Solution - UN1866	DOT HAZARD CLASS: Flammable Liquid

Section II — IMPORTANT COMPONENTS

	PERMISSABLE EXPOSURE CONCENTRATION
Greater than 50% Unsaturated Polyester Resin	Not determined
Less than 50% Styrene Monomer	100 ppm

Section III — PHYSICAL DATA

BOILING POINT (°F): 145°F	SPECIFIC GRAVITY (H_2O = 1): 1.08-1.10
VAPOR PRESSURE (mm Hg.): Not determined	PERCENT VOLATILE BY VOLUME (%): Less than 50%
VAPOR DENSITY (AIR = 1): 3.6 (Styrene)	EVAPORATION RATE: 1.0 (Ether =1)

SOLUBILITY IN WATER: Negligible

APPEARANCE AND ODOR: Pink-blue liquid. Pungent odor.

Section IV — FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: Class 1B | FLASH POINT: 89°F (SFCC) | LEL: 1.1

EXTINGUISHING MEDIA
Foam, carbon dioxide or dry chemical

UNUSUAL FIRE AND EXPLOSION HAZARDS
Styrene will polymerize readily at elevated temperatues of fire conditions. If this occurs in a closed container, there is a possibility of violent rupture.

SPECIAL FIRE FIGHTING PROCEDURES
None known. However, firefighters should wear self-contained breathing apparatus to avoid innalation of smoke or vapors.

Section V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II. Styrene 100 ppm.

EFFECTS OF OVEREXPOSURE
Styrene at 400 ppm or in strong concentration is irritating to all parts of the respiratory tract and eyes. May be fatal at 10,000 ppm. Somewhat anesthetic. Styrene vapor generation of polyester resins rarely exceeds 200 ppm.

EMERGENCY AND FIRST AID PROCEDURES
Remove victim to well ventilated area. Make comfortably warm but not not. Use oxygen or artificial respiration as required. In cases of eye contact, flush promptly with copius amounts of water for fifteen minutes and seek medical attention.

Section VI — REACTIVITY DATA

STABILITY ☐ UNSTABLE ☒ STABLE
CONDITIONS TO AVOID Heat and direct sunlight.
INCOMPATIBILITY (*Materials to avoid*) Strong acids and oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide, carbon dioxide, low molecular weight hydrocarbons and organic acids.

HAZARDOUS POLYMERIZATION ☒ MAY OCCUR ☐ WILL NOT OCCUR
CONDITIONS TO AVOID Sunlight, open flame and contamination.

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove saturated clothing promptly and wash affected areas with soap and water. Remove all sources of ignition. Ventilate area. Absorb with inert materials such as vermiculite or sand and place in a closed container.

WASTE DISPOSAL METHOD
Incinerate in an approved incinerator or dispose of in a chemical dump in accordance with local, state and federal regulations.

Section VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION
Must be worn to prevent inhalation of heated vapors, spray mists or if TLV is exceeded.

VENTILATION
Provide general dilution or local exhaust ventilation to comply with Sections II and IV.

PROTECTIVE GLOVES Chemical resistant plastic or rubber gloves required.
EYE PROTECTION Wear face shield or chemical goggles.
OTHER PROTECTIVE EQUIPMENT Safety shower and eye wash stations should be available.

Section IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Avoid storage about 100°F. Avoid prolonged or repeated skin contact and inhalation of heated vapors or spray mists.

OTHER PRECAUTIONS
Avoid improper addition or promoter and/or catalyst. A promoter and catalyst used with this product should always be mixed separately with the product and must never be mixed directly together.

ATTACHMENT 2

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

February 27, 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. R. H. Henson
Plant Engineering
United Technologies Corporation
P. O. Box 109600
West Palm Beach, Florida 33410-9600

Dear Mr. Henson:

Re: Completeness Review for AC 50-130042 and AC 50-130043
Construction Permit Applications to Construct Air
Pollution Sources

The department has received and reviewed the above referenced documents and deems them to be incomplete. The following information, including all assumptions, reference documents and calculations, shall be submitted to the department in order to, once again, ascertain the status of the proposals:

1) In Attachment E, Emission Calculations, there are several references to an estimated "minimum". The potential pollutant emissions are to be based on a "maximum" hourly, daily, and monthly basis. Therefore, recalculate the potential pollutant emissions based on a "maximum" for both sources.

2) The estimate of time to paint 4 subassemblies in a day is in discrepancy with the maximum daily use of the paint spray booth. The maximum hourly use requested is 5 hours/day. If you can paint 4 subassemblies per day (sa/day) and it takes 2 hours minimum/sa to paint, this is equivalent to 8 hours/day. Therefore, the maximum potential pollutant emissions are to be recalculated such that the assumptions you present do not conflict.

3) Explain the assumption that only 30% of the Acetone is evaporated during the clean-up process. Also submit a description of the clean-up process requirements.

4) What is the maximum amount of time that it takes to clean up using Acetone in hours/day and the maximum days/month that clean-up will be required?

5) What are the maximum hours/day and days/month that the Lacquer for primer will be used.

6) What is the maximum time in hours required to paint one subassembly.

7) What is the maximum time in hours required to paint one major assembly?

8) What is the basis for assuming the dust collection total from the dust collector system?

9. What is the construction permit number(s) of all modifications that have occurred at the existing facility in the last 5 years.

10) What are the maximum operational times that the two proposed sources will operate in hours/day, days/week, and weeks/year?

11) Attachment A, Paragraph 3, states that a maximum of 1300 sa/yr will be processed. At a minimum of 2 hrs/sa required to paint 1 sa, then a least 2600 hrs/year will be dedicated to processing subassemblies, not to mention the time necessary to process major assemblies. Please explain the discrepancies in the annual operational time that is proposed (underestimated by a factor of at least 2) from that that will be required, based on the information given?

If there are any questions, please call Bruce Mitchell at (904)488-1344 or write to me at the above address.

Sincerely,

for C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/BM/s

cc: S. Brooks
J. Costas
T. E. Chechile
G. Sacco

ATTACHMENT 3

UNITED TECHNOLOGIES
PRATT&WHITNEY

P. O. Box 2691
West Palm Beach, Florida 33402
305/840-2000

Government Products Division

4-15-87
West Palm Beach, FL

File Copy

April 14, 1987

DER
APR 17 1987
BAQM

Mr. Clair Fancy
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Remote Test Site - Air Pollution Construction Permits -
File Numbers AC 50-130042 and AC 50-130043

Dear Mr. Fancy:

Attached are our responses to your letter of February 27, 1987 for the above referenced permits. On April 1, 1987 Jim Dail and Lisa Hill of this office telephoned your Bruce Mitchell and explained that the paint spray booth which we are seeking to permit will serve development and test activities and will not be used for a production line process. In the original permit application submitted on January 19, 1987, in Attachment E, "Emission Calculations," we showed what the maximum volatile organic compound (VOC) lbs/hr and lbs/day emissions would occur by dividing the maximum paint usage (in pounds) by the minimum amount of time (per hour and per day) in which the booth would be used to paint the test objects. In your letter of February 27, 1987, you requested that we recalculate the potential pollutant emissions based on "maximum" hourly and daily basis. When we do this, our lb/hr and lb/day VOC emissions actually decrease because we are dividing the same amount of paint usage over a longer period of time (per hour and per day). The same applies to the dust collector calculations. When we divide the same amount of dust collected over a longer period of time, the emission rate decreases.

In order to simplify this submittal, we have attached 4 separate enclosures. Enclosure 1 contains our responses to your letter of February 27, 1987. Enclosure 2 is a revision of attachment A of the permit application. Enclosure 3 is a copy of our original emission calculations which were submitted on January 19, 1987. Enclosure 4 summarizes the maximum emission rates and maximum operating times we are requesting the permit to cover.

If you should have any questions, please call Jim Dail at 305/840-2448.

Sincerely,

J. L. Seelinger

J. L. Seelinger, Manager
Utilities Operations/Environmental Affairs

JLS/LKH/fo/6039
Attachments

cc: M. Brainard
R. Henson

Gene Sacco 4-17-87 RAL
Isidore Goldman

1. The operation of the paint spray booth (PSB-1-RTF) and the dust collector system (DC-1-RTF) serves development and test activities and not production activities. This means the emissions will be sporadic in nature with short term peaks. In Attachment E, Emission Calculations, we represented the "worst case" emissions (maximum anticipated emission rate per hour and per day) which will be caused by peak test activities. In our case, calculations based on the minimum amount of time to paint one test object produces the maximum output of emissions. Emissions based on a maximum amount of time to paint one test object does not reflect the maximum output of emissions.

Example: sub-assembly - min. time to paint = 2 hrs.
test object - max. time to paint = 4 hrs.

paint required - 0.625 gal/subassembly test object

$\frac{0.625 \text{ gal}}{2 \text{ hrs.}} = \frac{0.31 \text{ gal}}{\text{hr.}}$ maximum output using minimum time

$\frac{0.625 \text{ gal}}{4 \text{ hrs.}} = \frac{0.15 \text{ gal}}{\text{hr.}}$ minimum output using maximum time

Below are the potential pollutant emissions from Attachment E, Emission Calculations, based on a "maximum" hourly, daily and monthly basis. These calculations are presented to answer questions from your letter dated February 27, 1987. The original application contains the "worst case" emissions (lb/hr., lb/day) which we still seek to permit.

Paint Spray Booth (PSB-1-RTF)

- Estimate maximum use of Acetone is. 0.5 gal/day at 4 hrs/day, for 23 days/month

$$\frac{0.5 \text{ gal}}{\text{day}} \times \frac{23 \text{ days}}{\text{mo.}} = \frac{11.5 \text{ gal}}{\text{mo.}}$$

- Estimate maximum use of Lacquer is 0.25 gal/day at 6 hrs/day, for 23 days/month.

$$\frac{0.25 \text{ gal}}{\text{day}} \times \frac{23 \text{ days}}{\text{mo.}} = \frac{5.75 \text{ gal}}{\text{mo.}}$$

Acetone:
($\gamma = 0.79$) 100% Volatile
** Assume 70% recovery

11.5 gal/mo. x 8.328#/gal x 0.79 x 0.30** = 22.70#/mo.

$$\frac{22.70\#}{\text{mo.}} \times \frac{\text{mo.}}{23 \text{ days}[*1]} = \frac{0.99\#}{\text{day}}$$

$$\frac{0.99\#}{\text{day}} \times \frac{\text{day}}{4 \text{ hrs}[*2]} = \frac{0.25\#}{\text{hr.}}$$

NOTE: [* See Footnotes]

Primer:
(γ = 1.20) 65.7% Volatile

5.75 gal/mo. x 8.328#/gal x 1.20 x 0.657 = 37.75#/mo.

$$\frac{37.75\#}{\text{mo.}} \times \frac{\text{mo.}}{23\ \text{days[*3]}} = \frac{1.64\#}{\text{day}}$$

$$\frac{1.64\#}{\text{day}} \times \frac{\text{day}}{6\ \text{hrs[*4]}} = \frac{0.27\#}{\text{hr.}}$$

Coatings:

ıbassembly:

$$\frac{35.62\#}{\text{mo.}} * \times \frac{\text{mo.}}{20\ \text{days[*5]}} = \frac{1.78\#}{\text{day}}$$

*Reference Attachment E, Max. Use For Subassembly

$$\frac{1.78\#}{\text{day}} \times \frac{\text{day}}{4\ \text{hrs[*6]}} = \frac{0.45\#}{\text{hr.}}$$

Major Assembly:

$$\frac{46.62\#}{\text{mo.}} ** \times \frac{\text{mo.}}{20\ \text{days[*7]}} = \frac{2.33\#}{\text{day}}$$

**Reference Attachment E Max. Use For Major Assembly

$$\frac{2.33\#}{\text{day}} \times \frac{\text{day}}{6\ \text{hrs[*8]}} = \frac{0.39\#}{\text{hr.}}$$

FOOTNOTES:

[*1] Max. days/mo. using Acetone for clean-up (ref. question #4)

[*2] Max. hrs/day using Acetone for clean-up (req. question #4)

[*3] Max. days/mo. using Lacquer for primer (ref. question #5)

[*4] Max. hrs/day using Lacquer for primer (ref. question #5)

[*5] Max. days/mo. to paint subassemblies

[*6] Max. time in hours required to paint one subassembly (ref. question #6)

[*7] Max. days/mo. to paint one major assembly

[*8] Max. hours/day to paint one major assembly (ref. question #7)

Max Total Emission for PSB-1-RTF

1. Subassembly:

   a. $\frac{0.99\#(\text{cleaner})}{\text{day}} + \frac{1.64\#(\text{primer})}{\text{day}} + \frac{1.78\#(\text{sub})}{\text{day}} = \frac{4.41\#}{\text{day}}$

   b. $\frac{0.25\#(\text{cleaner})}{\text{hr.}} + \frac{0.27\#(\text{primer})}{\text{hr.}} + \frac{0.45\#(\text{sub})}{\text{hr.}} = \frac{0.97\#}{\text{hr.}}$

2. Major Assembly:

   a. $\frac{0.99\#(\text{cleaner})}{\text{day}} + \frac{1.64\#(\text{primer})}{\text{day}} + \frac{2.33\#(\text{major})}{\text{day}} = \frac{4.96\#}{\text{day}}$

   b. $\frac{0.25\#(\text{cleaner})}{\text{hr.}} + \frac{0.27\#(\text{primer})}{\text{hr.}} + \frac{0.39\#(\text{major})}{\text{hr.}} = \frac{0.91\#}{\text{hr.}}$

PSB-1-RTF will never paint a major assembly and a subassembly on the same day (Ref Attachment E, Max. Total Emission For PSB-1-RTF).

Max. total emission = 4.96#/day or 0.97#/hr.

The maximum total emissions based on a maximum amount of time is considerably less than the maximum total emissions shown in Attachment E, Emission Calculations.

DUST COLLECTOR SYSTEM (DC-1-RTF)

- Maximum of four (4) fifty-five (55) gallon drums filled per month or forty-eight (48) drums per year
- Particles and shavings weigh 15 lb/cu. ft., reference in use dust collector.
- Efficiency of filter = 95% per manufacturer's specifications.
- For calculations, assume the dust collector will operate a maximum of 8 hours a day, 5 days a week, and 52 weeks a year.

Below are the potential pollutant emissions from Attachment E, Emissions Calculations, based on a maximum hourly, daily, and monthly basis. These calculations are presented to answer questions from your letter dated February 27, 1987. The original application contains the "worst case" emissions which we still seek to permit.

CALCULATIONS:

$$55 \text{ gal/drum} \times \frac{\text{ft3}}{7.48 \text{ gal}} \times \frac{15 \text{ lb}}{\text{cu. ft.}} \times 48 \text{ drums/year} = 5294 \text{ lb/yr}$$

$$5294 \text{ lb/yr} \times \frac{\text{yr}}{2080 \text{ hrs}} = 2.55 \text{ lb/hr collected in drums}$$

CONSIDER EFFICIENCY:

Total dust generated x efficiency = Total dust collected in drums

$$\text{Total dust generated} = \frac{\text{Total dust collected in drums}}{\text{efficiency}}$$

$$\frac{2.55 \text{ lb/hr}}{0.95} = 2.68 \text{ lb/hr}$$

Total dust generated - total dust collected = total dust emitted

2.68 lb/hr - 2.55 lb/hr = 0.13 lb/hr.

2. The maximum hourly use of the paint spray booth requested in Attachment A, paragraphs three and four, of 5 hrs/day is incorrect. Attachment A has been corrected to reflect a permitting time of 8 hrs/day as requested in Sec. II (E) of the Operate/Construct Air Pollution Sources Application. However, the original application contains the worst case emissions which we still seek to permit.

3. The assumption that only 30% of the Acetone is evaporated during the clean-up process is based on actual observations. The clean-up process requirements are as follows. Acetone is used to clean spray guns, spray pots, fluid hoses, paint brushes, etc. The paint brushes are cleaned in a flame proof sealed container specifically designed for cleaning paint brushes and containing volatiles, Eagle Mfg. Co. P/N B-602. The spray gun, spray pots, fluid hoses, etc. are cleaned in a collection container, McMaster Carr P/N 3139 K31. After the clean-up process has been completed, the remaining acetone is transferred to a sealed container. This remaining Acetone is re-used upon the next cleaning opportunity. When the Acetone can no longer be re-used for cleaning, it will be collected into drums which are then managed relative to onsite storage and offsite disposal as hazardous waste.

4. The maximum amount of time that it takes to clean up using Acetone is 4 hrs/day and 23 days/month.

5. The maximum amount of time that the primer will be used is 6 hrs/day and 23 days/month.

6. The maximum time to paint one subassembly is 4 hours.

7. The maximum time to paint one major assembly is 120 hrs. which is 6 hrs/day for 20 days/month.

8. Calculations from other permitted dust collector systems on the plant site are the basis for assuming the dust collection total for dust collector DC-1-RTF. The assumption of the number of drums collected per month is very conservative.

9. The following is a list of construction permits issued for the United Technologies - West Palm Beach facility in the last 5 years.

    1. Sikorsky Floor Type Spray Booth - AC 50-113559.
    2. Sikorsky Auto Spray Booth - AC 50-113784.
    3. Sikorsky Work Table - AC 50-113785.
    4. Petroleum Liquid Fuel Storage Tank (1,000,000 gal) - AC 50-68727.
    5. Test Area "E" Boiler - AC 50-64043.

10. The maximum operational time of the two proposed sources will be 8 hrs/day, 5 days/week, and 52 weeks/yr.

11. The maximum number of 1300 subassemblies/year shown in Attachment A, paragraph 3, is incorrect. Attachment A has been corrected to show that a maximum number of 240 subassemblies will be painted per year.

ENCLOSURE 2

(ATTACHMENT A REVISED)

ATTACHMENT A

This construction permit application is for one paint spray booth and one dust collector which will be constructed at the Remote Test Site Facility at Pratt & Whitney for the application of conductive coatings to electromagnetic susceptibility/compatibility test objects. The test objects are classified material.

The test objects are composed of any combination of wood, aluminum, plastics (urethanes, polyesters, epoxies), fiberglass and graphite (fibre). They are of an elliptical cylindrical shape ranging in size from 1 ft. dia. x 1 ft. long up to 4 ft. dia. x 26 ft. long. They will be planed and sanded on new work tables and the particles will be collected by the dust collector system (DC-1-RTF). Primer and conductive coatings will be applied to the test objects in the paint spray booth (PSB-1-RTF).

The PSB-1-RTF paint spray booth will be a special Binks Model CA-528-T-LH dry Andreae filter type combination truck and automobile spray booth. The inside dimension of the booth will be 14 feet wide by 12 feet high by 32' 6" deep (see attachment B). The booth will operate approximately 8 hrs. a day, 5 days a week and 52 weeks a year. A maximum of 240 subassemblies (1' dia. x 1' lg) and 12 major assemblies (4' dia. x 26' lg) will be painted in booth PSB-1-RTF per year. For emission calculations see Attachment E.

The DC-1-RTF dust collection system will be used for the collection of wood, aluminum, plastic, fiberglass and graphite particles created by sanding and woodworking. The collection system will be a fabric filter type Torit Model #140-15 with a motor operated shaker (see attachment C). The system will have a 15 h.p. fan motor, a filter area of 1200 sq. feet and a dust storage area of 75 cubic feet. The dust collector will work approximately 8 hrs. a day, 5 days a week, 52 weeks a year. For emission calculations see Attachment E.

See general flow sheet (block diagram) of the test object prep operations (attachment D) which illustrates how the paint spray booth and dust collector system are used in this operation.

Acetone will be used to clean painting equipment such as spray guns, spray pots, fluid hoses, etc. Approximately 30% of the Acetone is emitted into the atmosphere and the remaining 70% is recovered into drums which are then managed relative to on site storage and offsite disposal as hazardous waste.

ATTACHMENT A
continued

The inside of the paint spray booth will be sprayed with strippable lacquer which will be stripped and resprayed periodically to prevent build up of paint in the booth. The strippings are placed in drums which are then managed relative to on site storage and off site disposal as hazardous waste. The filters for the paint spray booth will be changed whenever the pressure reading approaches manufacturer's specifications. If the pressure reading exceeds manufacturer's specifications, the exhaust fan, breathing air and air supply for paint spray gun will automatically shut down. Prior to painting each test object, the booth will be swept clean. The trash and debris, such as dust, tape and paper from the sweeping operations, is collected and disposed of in trash receptacles.

The proposed equipment is for new operations at the plant. The new equipment will be used to paint test objects to satisfy new government testing requirements. There is currently no planned production increase at the plant as a result of the proposed equipment.

ENCLOSURE 3

ATTACHMENT E

EMISSION CALCULATIONS

PAINT SPRAY BOOTH (PSB-1-RTF)

- Estimate max. 0.5 gal/day of Acetone for cleaning paint equipment, minimum 2 hrs/day and a minimum of 16 days/month.
- Estimate max. 0.25 gal/day of Lacquer for primer, minimum 4 hrs/day and minimum of 16 days/month.
- Estimate max 0.625 gallons of coating per subassembly test object (1' dia. x 1' lg)
- Estimate a max. of twenty subassemblies will be painted per month.
- Estimate a max. of four subassemblies can be painted in any one day, therefore, all subassemblies could be painted in a minimum of 5 days/month.
- Estimate minimum time to paint one subassembly is 2 hours.
- Estimate max. 16 gallons of coating per major assembly test object (4' dia. x 26' lg)
- Estimate a maximum of one major assembly can be painted per month.
- Estimate minimum time to paint a major assembly is 5 days/month.
- Estimate minimum time to paint major assembly each day is 5 hours.

MAXIMUM USAGE:

$$\frac{0.5\ \text{GAL}}{\text{DAY}} \times \frac{16\ \text{DAYS}}{\text{MONTH}} = \frac{8\ \text{GAL}}{\text{MONTH}} \quad \text{OF ACETONE FOR CLEANING}$$

$$\frac{0.25\ \text{GAL}}{\text{DAY}} \times \frac{16\ \text{DAYS}}{\text{MONTH}} = \frac{4\ \text{GAL}}{\text{MONTH}} \quad \text{OF LACQUER FOR PRIMING}$$

$$\frac{0.625\ \text{GAL}}{\text{SUBASSEMBLY}} \times \frac{20\ \text{SUBASSEMBLY}}{\text{MONTH}} = \frac{12.5\ \text{GAL}}{\text{MONTH}} \quad \text{OF COATING FOR SUBASSEMBLIES}$$

$$\frac{16\ \text{GAL}}{\text{MAJOR ASSEMBLY}} \times \frac{1\ \text{MAJOR ASSEMBLY}}{\text{MONTH}} = \frac{16\ \text{GAL}}{\text{MONTH}} \quad \text{OF COATING FOR MAJOR ASSEMBLIES}$$

ATTACHMENT E
continued

CLEANER

Acetone *(γ = 0.79) 100% Volatile
Max use 130 gal/yr
**assume 70% recovery

CALCULATIONS:

8 gal/mo. x 8.328 lb/gal x 0.79 x .30** = 15.8 lb/mo. V.O.C. Cleaner

* Specific gravities and percent volatile for cleaner, primer and coating obtained from material data safety sheets.

PRIMER

Lacquer (γ = 1.20) 65.7% Volatile
Max use 65 gal/yr

CALCULATIONS:

4 gal/mo. x 8.328 lb/gal x 1.20 x 0.657 = 26.3 lb/mo. V.O.C. Primer

COATINGS

35% Toluene (Thinner)	(γ = 0.87)	100% Volatile
35% Epoxy Resin	(γ = 1.48)	0.6% Volatile
24% Polyurethane Resin	(γ = 1.04)	1% Volatile
6% Polyester Resin	(γ = 1.09)	49% Volatile

MAX. USE FOR SUBASSEMBLIES:

$\frac{12.5\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.35 \times 0.87 = \frac{31.7\#}{MO.}$ TOLUENE

$\frac{12.5\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.35 \times 1.48 \times 0.006 = \frac{0.32\#}{MO.}$ EPOXY RESIN

$\frac{12.5\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.24 \times 1.04 \times 0.01 = \frac{0.26\#}{MO.}$ POLYURETHANE RESIN

$\frac{12.5\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.06 \times 1.09 \times 0.49 = \frac{3.34\#}{MO.}$ POLYESTER RESIN

TOTAL = $\frac{31.7\#}{MO.} + \frac{0.32\#}{MO.} + \frac{0.26\#}{MO.} + \frac{3.34\#}{MO.} = \frac{35.62\#}{MO.}$ V.O.C. COATING

ATTACHMENT E
continued

MAX. USE FOR MAJOR ASSEMBLY:

$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.35 \times 0.87 = \frac{40.6\#}{MO.}$ TOLUENE

$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.35 \times 1.48 \times 0.006 = \frac{0.42\#}{MO.}$ EPOXY RESIN

$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.24 \times 1.04 \times 0.01 = \frac{0.33\#}{MO.}$ POLYURETHANE

$\frac{16\ GAL}{MO.} \times \frac{8.328\#}{GAL} \times 0.06 \times 1.09 \times 0.49 = \frac{4.27\#}{MO.}$ POLYESTER RESIN

TOTAL $= \frac{40.6\#}{MO.} + \frac{0.42\#}{MO.} + \frac{0.33\#}{MO.} + \frac{4.27\#}{MO.} = \frac{45.62\#}{MO.}$ V.O.C COATING

EMISSIONS PER DAY:

CLEANER:

$$\frac{15.8\#}{MO.} \times \frac{MO.}{16\ DAYS} = \frac{0.99\#}{DAY}$$

$$\frac{0.99\#}{DAY} \times \frac{DAY}{2\ HRS} = \frac{0.50\#}{HR.}$$

PRIMER:

$$\frac{26.3\#}{MO.} \times \frac{MO.}{16\ DAYS} = \frac{1.64\#}{DAY}$$

$$\frac{1.64}{DAY} \times \frac{DAY}{4\ HRS.} = \frac{0.41\#}{HR.}$$

COATINGS:

SUBASSEMBLIES:

$$\frac{35.62\#}{MO.} \times \frac{MO.}{5\ DAYS} = \frac{7.1\#}{DAY}$$

$$\frac{7.1\#}{DAY} \times \frac{DAY}{8\ HRS} = \frac{0.89\#}{HR.}$$

MAJOR ASSEMBLIES:

$$\frac{45.62\#}{MO.} \times \frac{MO.}{5\ DAYS} = \frac{9.12\#}{DAY}$$

$$\frac{9.12\#}{DAY} \times \frac{DAY}{5\ HRS} = \frac{1.82\#}{HR.}$$

ATTACHMENT E
continued

MAXIMUM TOTAL EMISSION FOR PSB-1-RTF

- PSB-1-RTF will never paint a major assembly and a subassembly on the same day.
- Therefore, there are two possible combinations for maximum total emissions:

  1. V.O.C. Cleaner + V.O.C. Primer + V.O.C. Subassembly
  2. V.O.C. Cleaner + V.O.C. Primer + V.O.C. Major Assembly

1. Subassembly

   a. $\frac{0.99\#}{DAY}$ (cleaner) + $\frac{1.64\#}{DAY}$ (primer) + $\frac{7.1\#}{DAY}$ (subassembly) = $\frac{9.73\#}{DAY}$

   b. $\frac{0.50\#}{HR.}$ (cleaner) + $\frac{0.41\#}{HR.}$ (primer) + $\frac{0.89\#}{HR.}$ (subassembly) = $\frac{1.80\#}{HR.}$

2. Major Assembly

   a. $\frac{0.99\#}{DAY}$ (cleaner) + $\frac{1.64\#}{DAY}$ (primer) + $\frac{9.12\#}{DAY}$ (major assembly) = $\frac{11.75\#}{DAY}$

   b. $\frac{0.50\#}{HR.}$ (cleaner) + $\frac{0.41\#}{HR.}$ (primer) + $\frac{1.82\#}{HR.}$ (major assembly) = $\frac{2.73\#}{HR.}$

MAX TOTAL EMISSION = 11.75#/DAY OR 2.73#/HR

ATTACHMENT E
continued

DUST COLLECTOR SYSTEM (DC-1-RTF):

- Maximum of four (4) fifty-five (55) gallon drums filled per month or forty-eight (48) drums per year
- Assume particles and shavings weigh 15 lb/ft3

  Assume efficiency of filter = 95%
- Dust collector will operate approximately 5 hours a day, 5 days a week, and 52 weeks a year.

CALCULATIONS:

$$55 \text{ gal drum} \times \frac{\text{ft3}}{7.48 \text{ gal}} \times \frac{15 \text{ lb}}{\text{ft3}} \times 48 \text{ drums/year} = 5294 \text{ lb/yr}$$

$$5294 \text{ lb/yr} \times \frac{\text{yr}}{1300 \text{ hrs}} = 4.07 \text{ lb/hr collected in drums}$$

CONSIDER EFFICIENCY:

Total dust generated x efficiency = Total dust collected in drums

$$\text{Total dust generated} = \frac{\text{Total dust collected in drums}}{\text{efficiency}}$$

$$\frac{4.07 \text{ lb/hr}}{0.95} = 4.28 \text{ lb/hr}$$

Total dust generated - total dust collected = total dust emitted

4.28 lb/hr - 4.07 lb/hr = 0.21 lb/hr.

ENCLOSURE 4

SUMMARY OF MAXIMUM EMISSION RATES AND MAXIMUM OPERATING TIME

Operating Times

PSB-1-RTF: 8 hrs/day - 5 days/wk - 52 wks/yr

DC-1-RTF: 8 hrs/day - 5 days/wk - 52 wks/yr

Emissions:

PSB-1-RTF: 11.75 lbs of VOC/day - 2.73 lbs. of VOC/hr

DC-1-RTF: 0.21 lbs of particulate matter/hr