

PS Form 3811, Jan. 1979

● **SENDER:** Complete items 1, 2, and 3.  
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)  
 Show to whom and date delivered.....¢  
 Show to whom, date and address of delivery.....¢  
 RESTRICTED DELIVERY  
 Show to whom and date delivered.....¢  
 RESTRICTED DELIVERY.  
 Show to whom, date, and address of delivery.\$\_\_\_\_  
 (CONSULT POSTMASTER FOR FEES)

2. **ARTICLE ADDRESSED TO:**  
 Mr. W. S. Parker  
 P. O. Box 2691  
 West Palm Beach, FL 33402

3. **ARTICLE DESCRIPTION:**

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	P408530334	

(Always obtain signature of addressee or agent)

I have received the article described above.  
 SIGNATURE  Addressee  Authorized agent

4. **DATE OF DELIVERY**  
 7-27-83

5. **ADDRESS (Complete only if requested)**

6. **UNABLE TO DELIVER BECAUSE:**

BEACH POSTMARK  
 JUL 27 1983  
 SFO CLERK'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆GPO : 1979-300-459

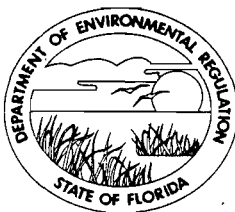
P 408 530 334  
 RECEIPT FOR CERTIFIED MAIL  
 NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

Sent to Mr. W. S. Parker	
Street and No. P. O. Box 2691	
P.O., State and ZIP Code West Palm Beach, FL	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
<b>TOTAL Postage and Fees</b>	\$
Postmark or Date  7/25/83	

PS Form 3800, Feb. 1982

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

July 22, 1983

Mr. W. S. Parker  
Vice President-Counsel  
United Technologies Corporation  
Pratt & Whitney Aircraft  
P. O. Box 2691  
West Palm Beach, Florida 33402

Dear Mr. Parker:

Enclosed is Permit Number AC 50-68727 dated July 21, 1983, to United Technologies Corporation, issued pursuant to Section 403, Florida Statutes.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement actions for violation of the conditions and requirements thereof.

Sincerely,

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

CHF/bjm

Enclosure

cc: Mr. Thomas E. Butler, United Technologies Corporation  
Mr. Roy Duke, Southeast Florida District  
Mr. Michael Martin, Palm Beach County Health Department

FINAL DETERMINATION

United Technologies  
Pratt & Whitney Aircraft  
Palm Beach County, Florida

Petroleum Liquid  
Fuel Storage

Permit Number  
AC 50-68727

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

July 11, 1983

## FINAL DETERMINATION

Pratt & Whitney Aircraft's application for permit to construct a jet fuel storage tank at their existing plant in Palm Beach County has been reviewed by the Bureau of Air Quality Management. Public Notice of the Department's intent to issue the permit was published in the Palm Beach Post on May 27, 1983.

The only comments received on the proposed permit were from the Southeast District Office. The District requested that specific conditions 3, 4, and 5 be revised. The proposed conditions, the District's recommendations, and the Bureau's response are discussed below.

Specific condition No. 3 limited the types of fuels that could be stored in the proposed tank to those requested by the applicant. The permit would have to be revised before other fuels could be stored in the tank. The District recommended that the permit limit the use of the tank to storage of fuels with low vapor pressure (at or below 1.50 psia). This would avoid having to revise the permit when the applicant wanted to use the tank for different low vapor pressure fuels other than the ones specified in the application for permit to construct. All petroleum liquids with vapor pressure below 1.50 psia are subject to the same state and federal regulations. Therefore, the Bureau has reworded specific condition No. 3 to limit the use of the new storage tank to petroleum liquids whose vapor pressures do not exceed 1.50 psia.

Specific condition 4 requires the applicant to repair leaks or order parts to repair leaks within 3 days. The District commented that three days, which is the required schedule to repair perchloroethylene dry cleaning systems listed in Chapter 17-2, FAC, was not appropriate for this storage tank because considerable damage could be done to the environment by a leak in three days. They did not recommend an alternate schedule. The proposed repair schedule was chosen because the regulations do not list a schedule for petroleum liquid storage tanks. In response to the District's comment, the Bureau has changed the wording of this condition to require leaks to be repaired as "expeditiously as is possible." This will allow the District personnel to evaluate the time required to repair each leak and to determine if the company acted promptly.

Specific condition 5 contains a Volatile Organic Compounds (VOC) emission limit based on formulas in the AP-42, Emission Estimate Manual, and requires the applicant to calculate emissions by the latest formulas in the manual and report this to the District annually.

The District objected to an emission standard based on a formula that could be revised in the future and contained weather factors that the applicant had no control over. They requested the emission limit be removed from the permit. Regulations for petroleum liquid storage tanks specify control technologies instead of emission limits. The Bureau has deleted the emission standard from the permit but left the requirement that the annual emissions from the tank be calculated and reported to the District. The specific condition also allows the District to require that the permit be modified if the emissions exceed 1.75 TPY of VOC.

The District also requested that any creditable changes in VOC emissions from the facility be reported until April 18, 1988. Specific condition No. 6, which requires an annual report for this source, has been reworded to include this requirement.

The final action of the Department will be to issue the permit to construct with the modifications requested by the District.

# THE 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 Joseph A. Ernst who on oath says that he is Class. Adv. Mgr. of The 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 Proposed agency action in the ----- Court, was published in said newspaper in the issues of May 27, 1983

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 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.

Joseph A. Ernst

Sworn to and subscribed before me this 27 day of May A.D. 19 83

Barbara M. McLeod

NOTARY PUBLIC STATE OF FLORIDA AT LARGE  
MY COMMISSION EXPIRES 9 1983  
BONDED ----- ----- -----

NO. 654025  
Notice of Proposed Agency Action  
The Department of Environmental Regulation gives notice of its intent to issue a permit to Pratt & Whitney Aircraft of West Palm Beach, Florida. The permit will allow the construction of a million gallon jet fuel storage tank at their existing facility on State Road 110 in Palm Beach County.

The tank will emit 1.75 TPY volatile organic compounds to the atmosphere. The impact of this emission on the ambient air quality in Palm Beach County is insignificant. A Best Available Control Technology determination was not required for this project.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapter 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within (14) days of publication this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

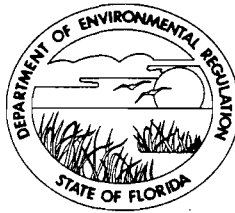
The Technical Evaluation and Preliminary Determination for the proposed projects is available for public inspection during normal business hours at the following locations:  
Department of Environmental Regulation  
BAQM

2600 Blair Stone Road  
Tallahassee, Florida 32301  
Department of Environmental Regulation  
Southeast Florida District  
3301 Gun Club Road  
West Palm Beach, Florida 33402  
Palm Beach County Health Department  
Division of Environmental Science  
and Engineering  
901 Evernia Street  
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 30 days of the publication of this notice will be considered in the Department's final determination.  
Publish: May 27, 1983

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

**PERMITTEE:**  
United Technologies  
Pratt & Whitney Aircraft  
P. O. Box 2691  
West Palm Beach, FL 33402

Permit Number: AC 50-68727  
Expiration Date: March 1, 1984  
County: Palm Beach  
Latitude/Longitude: 26° 54' 55"N/  
80° 21' 20"W  
Project: Jet A/JP-5  
Fuel Storage Tanks

This permit is issued under the provisions of Chapter(s) 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:

Construction of a 1,000,000 gallon fixed-roof fuel tank, 60 feet in diameter by 48 feet high, for the storage of Jet A and JP-5 fuels.

The fuel storage tank will be built at the east end of the fuel farm of Pratt & Whitney Aircraft's existing facility on State Road 710, 20 miles west of West Palm Beach. The UTM coordinates of the fuel tank will be 17-564.0 Km E, 2975.8 Km N.

Construction shall be in accordance with the application for permit to construct a 1,000,000 Gal. Jet A/JP-5 Fixed Roof Type Fuel Storage Tank that was signed by W. S. Parker, Vice President-Counsel, on April 14, 1983.

**PERMITTEE:**  
United Technologies  
Pratt & Whitney Aircraft  
West Palm Beach, FL 33402

**I. D. Number:**  
**Permit Number:** AC 50-68727  
**Expiration Date:** March 1, 1984

**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.



PERMITTEE:  
United Technologies  
Pratt & Whitney Aircraft  
West Palm Beach, FL 33402  
GENERAL CONDITIONS:

I. D. Number:  
Permit Number: AC 50-68727  
Expiration Date: March 1, 1984

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.

PERMITTEE:  
United Technologies  
Pratt & Whitney Aircraft  
West Palm Beach, FL 33402

I. D. Number:  
Permit Number: AC 50-68727  
Expiration Date: March 1, 1984

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.

PERMITTEE:  
United Technologies  
Pratt & Whitney Aircraft  
West Palm Beach, FL 33402  
GENERAL CONDITIONS:

I. D. Number:  
Permit Number: AC 50-68727  
Expiration Date: March 1, 1984

- 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. Nominal capacity of the fixed-roof storage tank shall be 1,000,000 gallons.
2. The roof and shell of the tank shall be painted white and the paint maintained in good condition.
3. The tank will be used for petroleum liquids with a vapor pressure, as stored, at or below 1.50 psia.

PERMITTEE:  
United Technologies  
Pratt & Whitney Aircraft  
P. O. Box 2691  
West Palm Beach, FL 33402

I. D. Number:  
Permit Number: AC 50-68727  
Expiration Date: March 1, 1984

**SPECIFIC CONDITIONS:**

4. Any fuel leaks from the storage tank or piping associated with it shall be repaired as expeditiously as possible.
5. Calculated volatile organic compound (VOC) emissions from the storage tank, using the latest formulas published by EPA in AP-42, must be reported annually to the Department's Southeast District. The District may require the permit for this tank to be modified if the calculated VOC emissions exceed 1.75 TPY.
6. Pratt & Whitney Aircraft shall submit an annual report to the Department's Southeast District showing all creditable changes in VOC emissions from the facility until April 18, 1988.

Issued this 21 day of July, 1983

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
VICTORIA J. TSCHINKEL, Secretary

\_\_\_ pages attached.

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Victoria J. Tschinkel

FROM: *J. George*  
for Clair Fancy

DATE: July 19, 1983

SUBJ: Approval of Attached Air Construction Permit

RECEIVED  
JUL 20 1983

Office of the Secretary

Attached for your approval and signature is one Air Construction Permit for which the applicant is United Technologies, Pratt & Whitney Aircraft. The proposed project is for the construction of a jet fuel storage tank at the applicant's existing facility in Palm Beach County, Florida.

Day 90, after which the permit would be issued by default, is August 8, 1983.

The Bureau recommends your approval and signature.

CF/pa

Attachment

Check Sheet

Company Name: United Technologies  
Permit Number: AC50-06872.7  
PSD Number: \_\_\_\_\_  
Permit Engineer: \_\_\_\_\_

**Application:**

- |  |                          |
|--|--------------------------|
| <input checked="" type="checkbox"/> Initial Application    | Cross References:        |
| <input checked="" type="checkbox"/> Incompleteness Letters | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Responses              | <input type="checkbox"/> |
| <input type="checkbox"/> Waiver of Department Action       | <input type="checkbox"/> |
| <input type="checkbox"/> Department Response               |                          |
| <input type="checkbox"/> Other                             |                          |

**Intent:**

- Intent to Issue
  - Notice of Intent to Issue
  - Technical Evaluation
  - BACT or LAER Determination
  - Unsigned Permit
- Correspondence with:
- EPA
  - Park Services
  - Other
- Proof of Publication
    - Petitions - (Related to extensions, hearings, etc.)
    - Waiver of Department Action
    - Other

**Final**

**Determination:**

- Final Determination
- Signed Permit
- BACT or LAER Determination
- Other

**Post Permit Correspondence:**

- Extensions/Amendments/Modifications
- Other

In the folder labeled as follows there are documents, listed below, which were not reproduced in this electronic file. That folder can be found in one of the file drawers labeled Supplementary Documents Drawer. Folders in that drawer are arranged alphabetically, then by permit number.

**Folder Name:** United Technologies - Pratt & Whitney

**Permit(s) Numbered:**

AC	50	-	068727
----	----	---	--------

Period during  
which document  
was received:

Detailed Description

Period during which document was received:		Detailed Description
APPLICATION 16 APR 1983	1.	17"×22" BLUEPRINT: P.B.W.A. SITE PLAN (DRAWING NUMBER: PE-10240 E)

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

# INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee			
To: _____	Loctn.: _____		
To: _____	Loctn.: _____		
To: _____	Loctn.: _____		
From: _____	Date: _____		
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]	
Date Due: _____	Date Due: _____		

TO: Clair Fancy  
FROM: *JW* Jim Williams/Roy *D* Duke  
DATE: June 6, 1983  
SUBJECT: Pratt & Whitney Aircraft (United Technologies Corp.)  
1,000,000 gal Jet Fuel Storage Tank

DER  
JUN 09 1983  
BAQM

We have reviewed the proposed permit for the construction of the subject air pollution source. While the technical evaluation readily admits that the source is insignificant, we feel that additional consideration should be given to District problems. The proposed specific conditions are at variance to the general policies we have been using. Our comments are as follows:

Specific Condition #3 specifies only two (2) allowable fuels and any others require permit modification. Our May 4, 1983 comments recommended that the fuel be limited by vapor pressure which would allow a set range of fuels. We have found numerous times where the applicant wants to switch fuels around in the tank farm. We see no reason to create the additional workload of future permit reviews and modifications when those problems can be foreseen at this time and avoided.

Specific Condition #4 specifies repair of leaks within three (3) days, etc. This condition may be appropriate for a dry cleaning operation which has 50+ gallons of solvent running around inside a building, but it is totally inappropriate for a 1,000,000 fuel storage tank. With the magnitude of our groundwater pollution problems in South Florida such a proviso would not lend much credibility to our having a handle on the problem.

Specific Condition #5 places an emission limit on the source based on estimated numbers, atmospheric conditions and future formulas. The applicant has no control over these items. While some safety factor was calculated into the estimated emissions by the applicant any violation of the 1.75 T/Yr. limit will only result in a higher (but still insignificant) limit being requested by the applicant. In addition we may be required to enforce a number which the technical review refers to as both estimated and insignificant. Either route results in the waste of additional manpower with no additional benefit for the environment. Most offices, this one included, do not have that additional manpower to waste. Further, Florida Administrative Rule 17-2.620 specifies that the Department may require control technologies and does not call for specific emission limits.



Clair Fancy  
Page 2 of 2  
June 6, 1983

We would recommend the Department require a control technology as specified in Specific Condition #2 and also require that estimated emissions from this source be included with any creditable changes in volatile organic compounds from the facility until April 18, 1988 in accordance with Florida Administrative Code Rule 17-2.510(2)(e) to determine when a significant increase subject to Florida Administrative Rule 17-2.510(2)(d)4.a is reached. When such an increase is reached additional review must be provided. The emission limit as specified should be deleted from this permit.

If you have any questions on the above please contact Jim Williams at Suncom 451-5005.

JW:rdj/33

cc: Bill Buzick  
Palm Beach County Health Department

# Internal Correspondence



Government Products Division

June 3, 1983

Ms. Patty Adams  
Bureau of Air Quality Management  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301 - 8241

DER

JUN 06 1983

BAQM

Re: Affidavit of Publication - United Technologies Corporation  
(Jet A/JP-5 Fuel Storage Tank)

Dear Ms. Adams:

In accordance with Mr. C. H. Fancy's May 12, 1983 letter to Mr. W. S. Parker of Pratt & Whitney Aircraft, we had the "Notice of Proposed Agency Action" your office provided published in the Palm Beach Post on May 27, 1983. Attached is an affidavit of publication as requested.

We did not receive the proof of publication from the newspaper until June 1, 1983. It is our understanding based on a telephone conversation of this date between Mr. C. H. Fancy and Mr. W. J. Dail of this office that mailing the proof of publication today is acceptable even though Mr. Fancy's May 12, 1983 letter indicated the proof of publication must be provided to your department within seven (7) days of the date the notice is published.

Should you have any questions, please let us know.

Sincerely,

A handwritten signature in cursive script that reads "James L. Seelinger".

James L. Seelinger, Manager  
Utilities Operations/Environmental Affairs

JLS/WJD/pt (0827)

Attachment

cc: J.C. Williams, DER Southeast District  
Michael Martin, Palm Beach County Health Department

# THE POST

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

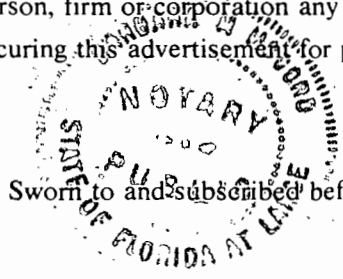
## PROOF OF PUBLICATION

STATE OF FLORIDA  
COUNTY OF PALM BEACH

Before the undersigned authority personally appeared . . . . Joseph A. Ernst . . . .  
who on oath says that he is . . . Class. Adv. Mgr. . . of The 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 . . . . Proposed agency action . . . .  
in the . . . . Court, was published in said newspaper in the  
issues of . . . . May 27, 1983 . . . .

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 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.

Sworn to and subscribed before me this . . . 27 . . . day of . . . May . . . A.D. 19 83



*Joseph A. Ernst*  
*Barbara M. McLeod*

NOTARY PUBLIC STATE OF FLORIDA AT LARGE  
MY COMMISSION EXPIRES SEP 9 1983  
CONDENSED WRITERS

NO. 654025

### Notice of Proposed Agency Action

The Department of Environmental Regulation gives notice of its intent to issue a permit to Pratt & Whitney Aircraft of West Palm Beach, Florida. The permit will allow the construction of a million gallon jet fuel storage tank at their existing facility on State Road 710 in Palm Beach County.

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BAQM  
2600 Blair Stone Road  
Tallahassee, Florida 32301
- Department of Environmental Regulation  
Southeast Florida District  
3301 Gun Club Road  
West Palm Beach, Florida 33402
- Palm Beach County Health Department  
Division of Environmental Science  
and Engineering  
901 Evernia Street  
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 30 days of the publication of this notice will be considered in the Department's final determination.  
Publish: May 27, 1983

No. **0157008**  
**RECEIPT FOR CERTIFIED MAIL**  
 NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

PS Form 3800, Apr. 1976

SENT TO Mr. W. S. Parker	
STREET AND NO.	
P.O., STATE AND ZIP CODE	
POSTAGE	\$
CERTIFIED FEE	\$
SPECIAL DELIVERY	\$
RESTRICTED DELIVERY	\$
OPTIONAL SERVICES	
RETURN RECEIPT SERVICE	
SHOW TO WHOM AND DATE DELIVERED	\$
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	\$
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	\$
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	\$
TOTAL POSTAGE AND FEES	\$
POSTMARK OR DATE	
5/17/83	

PS Form 3811, Jan. 1979

● SENDER: Complete items 1, 2, and 3.  
 Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)  
 Show to whom and date delivered. ....¢  
 Show to whom, date and address of delivery. ....¢  
 RESTRICTED DELIVERY  
 Show to whom and date delivered. ....¢  
 RESTRICTED DELIVERY.  
 Show to whom, date, and address of delivery. \$ \_\_\_\_\_  
 (CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:  
 Mr. W. S. Parker  
 P. O. Box 2691  
 West Palm Beach, FL 33402

3. ARTICLE DESCRIPTION:  
 REGISTERED NO. CERTIFIED NO. INSURED NO.  
 0157008  
 (Always obtain signature of addressee or agent)

I have received the article described above.  
 SIGNATURE  Addressee  Authorized agent  
*A. S. Parker*

4. DATE OF DELIVERY POSTMARK

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE: CLERK'S INITIALS

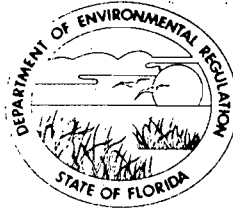
RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

☆GPO : 1979-300-459

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

May 12, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. W. S. Parker  
Vice President-Counsel  
United Technologies Corporation  
Pratt & Whitney Aircraft  
Post Office Box 2691  
West Palm Beach, Florida 33402

Dear Mr. Parker:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit for the construction of a million gallon jet fuel storage tank at your existing facility in Palm Beach County, Florida.

Before final action can be taken on your proposed permit, you are required by Florida Administrative Code Rule 17-1.62(3) to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Palm Beach County no later than fourteen days after receipt of this letter. The department must be provided with proof of publication within seven days of the date the notice is published. Failure to publish the notice will be grounds for denial of the permit.

The Preliminary Determination and proposed permit constitute a proposed action of the department and are subject to administrative hearing under the provisions of Chapter 120, Florida Statutes, if requested within fourteen days from receipt of this letter. Any petition for hearing must comply with the requirements of Florida Administrative Code Rule 28-5.201 and be filed with the Office of General Counsel, Florida Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to file a request for hearing within fourteen days shall constitute a waiver of your right to a hearing. Filing is deemed complete upon receipt by the Office of General Counsel.

Mr. W. S. Parker  
May 12, 1983  
Page Two

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

Sincerely,



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

CHF/pa

Attachment

cc: Mr. Thomas E. Butler, P.E., United Technologies Corp.  
Mr. J. C. Williams, DER Southeast District  
Mr. Michael Martin, Palm Beach County Health Department

Technical Evaluation  
and  
Preliminary Determination

United Technologies  
Pratt & Whitney Aircraft  
Palm Beach County, Florida

Jet A/JP-5 Fuel Storage Tank  
Proposed Permit Number AC 50-68727

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

May 12, 1983

## Notice of Proposed Agency Action

The Department of Environmental Regulation gives notice of its intent to issue a permit to Pratt & Whitney Aircraft of West Palm Beach, Florida. The permit will allow the construction of a million gallon jet fuel storage tank at their existing facility on State Road 710 in Palm Beach County.

The tank will emit 1.75 TPY volatile organic compounds to the atmosphere. The impact of this emission on the ambient air quality in Palm Beach County is insignificant. A Best Available Control Technology determination was not required for this project.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapter 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within (14) days of publication this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to requests a hearing under Section 120.57, Florida Statutes.

The Technical Evaluation and Preliminary Determination for the proposed projects is available for public inspection during normal business hours at the following locations:

Department of Environmental Regulation  
BAQM  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Department of Environmental Regulation  
Southeast Florida District  
3301 Gun Club Road  
West Palm Beach, Florida 33402

Palm Beach County Health Department  
Division of Environmental Science  
and Engineering  
901 Evernia Street  
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 30 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

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	B. Draft State Permit	

## I. PROJECT DESCRIPTION

### A. Applicant

United Technologies, Pratt & Whitney Aircraft  
Post Office Box 2691  
West Palm Beach, Florida 33402

### B. Project and Location

The applicant proposes to construct a million gallon Jet A/JP-5 fixed roof fuel storage tank, 60 feet in diameter by 48 feet high, at its existing facility located 20 miles west of West Palm Beach on State Road 710. Approximately seven million gallons of jet fuel will pass through the tank each year.

### C. Air Pollution Control

Because of the low vapor pressure of Jet A/JP-5 fuel, air pollution control equipment will not be required for the proposed tank. To minimize evaporation from the new tank, the Department will require it to be painted white to reflect solar radiation and for the applicant to inspect and repair all petroleum leaks promptly.

## II. RULE APPLICABILITY

### A. State Regulations

The proposed project, construction of a jet fuel storage tank, is subject to preconstruction review under the provisions of Chapter 403, FS, and Chapter 17-2, FAC.

The plant site is in an area designated nonattainment for ozone (17-2.410), and attainment for all other criteria pollutants (17-2.420).

The plant is a major emitting facility for particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide and volatile organic compounds because the sources at the existing facility discharge more than 100 TPY of each of these pollutants (17-2.100(95)).

The proposed jet fuel storage tank will be a minor source of VOC, the only criteria pollutant discharged by the tank, because its emissions will be less than 100 TPY (17-2.100(101)). The project is not subject to review under 17-2.500, PSD, because Palm Beach County is nonattainment for ozone.

The project is not subject to review under 17-2.510, New Source Review for Nonattainment Area, because the net emission increase of VOC from the proposed storage tank is not significant (17-2.510(2)(d)4).

The storage tanks shall be permitted under 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, and must limit emission to that required by 17-2.620, General Pollutant Emission Limiting Standards.

#### B. Federal Regulations

This project is not subject to federal PSD regulations, 40 CFR 52.21, because the modification to the major facility affects the emission of VOC only and the area is designated nonattainment for ozone. NSPS, Subparts K and Ka, are not applicable to the proposed source because the storage tank will handle turbine fuel oils only.

### III. SUMMARY OF EMISSIONS

#### A. Emission Estimate

Formulas given in the Environmental Protection Agency's AP-42 manual, Supplement No. 12, were used to estimate the emissions from the proposed storage tank. Breathing losses are estimated to be 0.23 lbs/hr VOC or 0.99 TPY. Fixed roof working losses were estimated to be 0.76 TPY VOC. Total loss will be 1.75 TPY VOC from the tank.

### IV. CONCLUSIONS

Based on a review of the data submitted by Pratt & Whitney, FDER concludes that the Company can construct and operate a new one million gallon fixed roof storage tank for Jet A/JP-5 fuel in compliance with all applicable state regulations. The general and specific conditions listed in proposed permit AC 50-68727 (attached) will assure compliance of the source with all applicable air pollution control regulations.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

**PERMITTEE:**  
United Technologies  
Pratt & Whitney Aircraft  
P. O. Box 2691  
West Palm Beach, FL 33402

**Permit Number:** AC 50-68727  
**Expiration Date:** March 1, 1984  
**County:** Palm Beach  
**Latitude/Longitude:** 26° 54' 55"N/  
80° 21' 20"W  
**Project:** Jet A/JP-5  
**Fuel Storage Tanks**

This permit is issued under the provisions of Chapter(s) 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:

Construction of a 1,000,000 gallon fixed-roof fuel tank, 60 feet in diameter by 48 feet high, for the storage of Jet A and JP-5 fuels.

The fuel storage tank will be built at the east end of the fuel farm of Pratt & Whitney Aircraft's existing facility on State Road 710, 20 miles west of West Palm Beach. The UTM coordinates of the fuel tank will be 17-564.0 Km E, 2975.8 Km N.

Construction shall be in accordance with the application for permit to construct a 1,000,000 Gal. Jet A/JP-5 Fixed Roof Type Fuel Storage Tank that was signed by W. S. Parker, Vice President-Counsel, on April 14, 1983.

**PERMITTEE:**  
United Technologies  
Pratt & Whitney Aircraft  
West Palm Beach, FL 33402

**I. D. Number:**  
**Permit Number:** AC 50-68727  
**Expiration Date:** March 1, 1984

**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.

**PERMITTEE:**  
**United Technologies**  
**Pratt & Whitney Aircraft**  
**West Palm Beach, FL 33402**  
**GENERAL CONDITIONS:**

**I. D. Number:**  
**Permit Number: AC 50-68727**  
**Expiration Date: March 1, 1984**

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.

**PERMITTEE:**  
United Technologies  
Pratt & Whitney Aircraft  
West Palm Beach, FL 33402

**I. D. Number:**  
**Permit Number:** AC 50-68727  
**Expiration Date:** March 1, 1984

**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.



**PERMITTEE:**  
United Technologies  
Pratt & Whitney Aircraft  
West Palm Beach, FL 33402  
**GENERAL CONDITIONS:**

**I. D. Number:**  
**Permit Number:** AC 50-68727  
**Expiration Date:** March 1, 1984

- 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. Nominal capacity of the fixed-roof storage tank shall be 1,000,000 gallons.
2. The roof and shell of the tank shall be painted white and the paint maintained in good condition.
3. The tank will be used to store Jet A and JP-5 fuels only. Other liquids will not be stored in the tank unless the applicable permit for it is modified by the Department.

**PERMITTEE:**  
United Technologies  
Pratt & Whitney Aircraft  
P. O. Box 2691  
West Palm Beach, FL 33402

**I. D. Number:**  
**Permit Number:** AC 50-68727  
**Expiration Date:** March 1, 1984

**SPECIFIC CONDITIONS:**

4. Any fuel leaks from the storage tank or piping associated with it shall be fixed or the parts ordered for repair within three days of the discovery of the leak.

5. Calculated volatile organic compounds (VOC) emission from the storage tank, using the latest formulas published by EPA in their AP-42 manual shall not exceed 1.75 tons per calendar year or other 12 month period as agreed to by the Department's Southeast District.

6. Pratt & Whitney Aircraft shall submit an annual report to the Department's Southeast District for this storage tank showing all data, calculation and results of the VOC emissions.

Issued this \_\_\_ day of \_\_\_\_\_, 1983

**STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION**

---

VICTORIA J. TSCHINKEL, Secretary

\_\_\_ pages attached.



**UNITED  
TECHNOLOGIES  
PRATT & WHITNEY  
AIRCRAFT**

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

Government Products Division

April 15, 1983

DER  
APR 18 1983  
BAQM

*Pratt*  
Mr. C. H. Fancy, P.E.  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

RE: 1,000,000 Gallon Fuel Tank - (Air Permit)

Dear Mr. Fancy:

Enclosed are four (4) copies of DER Form 17-1.122(16) "Application to Operate/Construct Air Pollution Sources" for the above referenced air permit, along with the required check (No. 900613) for \$100 made payable to the Florida Department of Environmental Regulation.

The new 1,000,000 gallon fuel tank will be located at the east end of our existing fuel farm as shown on Pratt & Whitney drawing PE-10240E attached. The tank will be a fixed-roof type structure and in accordance with our permit application will only store non-volatile Jet "A"/JP5 fuel.

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

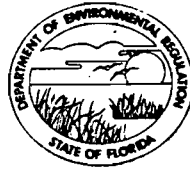
Sincerely yours,

*R H Henon/FOR*  
J. L. Seelinger, Manager  
Utilities Operations/Environmental Affairs

ja (1120)

Attachments

cc: E. J. Sacco (PBCHD)  
M. J. Martin (PBCHD)  
J. C. Williams (DER)



STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
APPLICATION TO OPERATE/CONSTRUCT  
AIR POLLUTION SOURCES

SOURCE TYPE: Jet A/JP-5 Fuel Tank [] New<sup>1</sup> [ ] Existing<sup>1</sup>

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

COMPANY NAME: United Technologies Corporation, Pratt & Whitney Aircraft COUNTY: Palm Beach

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) 1,000,000 Gal. Jet A/JP-5 Fixed Roof Type Fuel Storage Tank

SOURCE LOCATION: Street Beeline Highway - State Road 710 City 20 miles west of West Palm Beach  
UTM: East 564 000 North 2975 760  
Latitude 26 ° 54 ' 55 "N Longitude 80 ° 21 ' 20 "W

APPLICANT NAME AND TITLE: United Technologies Corporation, Pratt & Whitney Aircraft, Government Products Division  
APPLICANT ADDRESS: P.O. Box 2691, West Palm Beach, Florida 33402

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

United Technologies Corporation  
Pratt & Whitney Aircraft  
Government Products Division

I am the undersigned owner or authorized representative\* of \_\_\_\_\_

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: [Signature]  
W. S. Parker, Vice President-Counsel  
Name and Title (Please Type)  
Date: 4-14-83 Telephone No. (305)840-2419

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 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: [Signature]  
Thomas E. Butler  
Name (Please Type)  
United Technologies Corp., Pratt & Whitney Aircraft, Company Name (Please Type) Government Products Division  
P.O. Box 2691, West Palm Beach, Florida 33402  
Mailing Address (Please Type)

(Affix Seal)

Date: 4/15/83 Telephone No. (305) 840-2419

<sup>1</sup>See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

**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 I)

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

Start of Construction June 1983 Completion of Construction December 1983

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.)

None Required

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

Permit No. A0 50-30558 issued 12/9/80 and expires 12/9/85

Permit No. A0 50-37862 issued 12/30/80 and expires 12/30/85

Permit No. AC 50-64043 issued 03/09/83 and expires 12/31/83

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code?  Yes  No

F. Normal equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr \_\_\_\_\_; if seasonal, describe: \_\_\_\_\_

Not Applicable

G. 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) requirements 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

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

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

A. Raw Materials and Chemicals Used in your Process, if applicable: Not Applicable

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:

LB

LW

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission <sup>2</sup> Rate per Ch. 17-2, F.A.C.	Allowable <sup>3</sup> Emission lbs/hr	Potential Emission <sup>4</sup>		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Hydrocarbons:							
Breathing Loss	0.226	0.989					
Working Loss	0.173	0.756					
TOTAL	0.399	1.745		100	0.399	1.745	

D. Control Devices: (See Section V, Item 4) Not Applicable

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles <sup>5</sup> Size Collected (in microns)	Basis for Efficiency (Sec. V, It <sup>5</sup> )

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

<sup>3</sup>Calculated from operating rate and applicable standard

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3)

<sup>5</sup>If Applicable

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Jet A/JP-5 Aircraft Engine			
Fuel - This emission source will be utilized for storage only; therefore, will not represent a consumption of fuel.			

\*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, lbs/hr - Not Applicable (Fuel Storage Only)

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 N/A 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):  
 Stack Height: N/A ft Stack Diameter: N/A ft  
 Gas Flow Rate: N/A ACFM Gas Exit Temperature: N/A °F  
 Water Vapor Content: N/A % Velocity: N/A FPS

**SECTION IV: INCINERATOR INFORMATION**

Not Applicable

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste \_\_\_\_\_  
 Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_  
 Approximate Number of Hours of Operation per day \_\_\_\_\_ days/week \_\_\_\_\_  
 Manufacturer \_\_\_\_\_  
 Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

2	Volume (ft) <sup>3</sup>	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: \_\_\_\_\_

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

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### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

- Total process input rate and product weight – show derivation. Not Applicable
- 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 Attached Calculations (Attachment I)
- Attach basis of potential discharge (e.g., emission factor, that is, AP42 test). (Same As Above)
- 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, etc.). Not Applicable
- 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). Not Applicable
- An 8½" 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. Not Applicable
- An 8½" 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 Attached P&WA Drawing PE 10240E (Attachment II) & PL-772A (Attachment III)
- An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram. Not Applicable



- 9. An application fee of \$20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation. In accordance with new DER permit fee schedule effective July 8, 1982, a check for \$100 is attached.
- 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 - Jet A/JP-5 fuel has a true vapor pressure less than 1.5 psia)

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:\*
5. Useful Life:
7. Energy:
9. Emissions:

4. Capital Costs:
6. Operating Costs:
8. Maintenance Cost:

Contaminant	Rate or Concentration

\*Explain method of determining D 3 above.

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\*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy\*:
- 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\*:
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy\*\*:
- h. Maintenance Costs:
- 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:

\*Explain method of determining efficiency.

\*\*Energy to be reported in units of electrical power — KWH design rate.

3.

- a. Control Device:
- b. Operating Principles:
  
- c. Efficiency\*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- h. Maintenance Cost:

\*Explain method of determining efficiency above.

- 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\*:
- d. Capital Cost:
- e. Life:
- f. Operating Cost:
- g. Energy:
- 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\*:
- 3. Capital Cost:
- 4. Life:
- 5. Operating Cost:
- 6. Energy:-
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:

a.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:
- (5) Environmental Manager:
- (6) Telephone No.:

\*Explain method of determining efficiency above.

(7) Emissions\*:

Contaminant	Rate or Concentration

(8) Process Rate\*:

b.

- (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions\*:

Contaminant	Rate or Concentration
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

(8) Process Rate\*:

10. Reason for selection and description of systems:

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

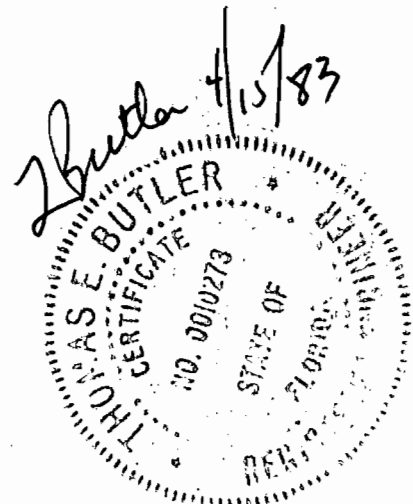


ATTACHMENT I

UNITED TECHNOLOGIES CORPORATION  
PRATT & WHITNEY AIRCRAFT  
WEST PALM BEACH  
FLORIDA

PROPOSAL TO INSTALL A 1,000,000 GALLON  
FIXED ROOF STORAGE TANK TO STORE  
JET A/JP-5 FUEL

APRIL 12, 1983



SUMMARY

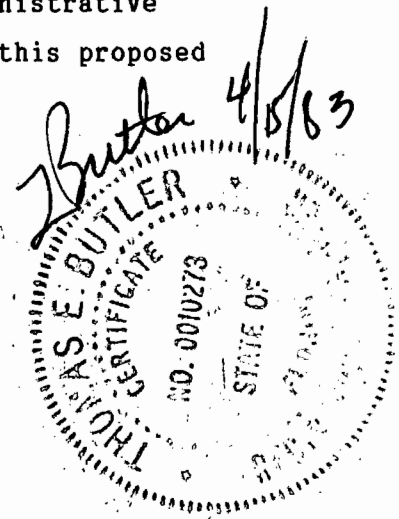
United Technologies Corporation, Pratt & Whitney Aircraft, West Palm Beach, Florida, proposes to install a fixed roof fuel storage tank to store Jet A/JP-5 fuel on the plant site located off Beeline Highway, State Road 710.

The cylindrical tank will be sixty (60) feet in diameter, forty-eight (48) feet high and will be designed to store 1,000,000 gallons of Jet A/JP-5 fuel. The average throughput for the tank is estimated to be 7,000,000 gallons per year.

Calculations were performed to determine the emission losses in tons per year for the tank. Using worse case conditions in the formulae to determine maximum total emissions from both breathing and working losses from the tank, it was determined that the maximum total emissions from the tank would be 1.745 tons per year. The formulae used in the calculations were taken directly from the Environmental Protection Agency AP-42, Supplement No. 12 publication.

Attached are the supporting calculations, vapor pressure chart, isometric pictorial and site location map which comprise the supporting backup for this proposed addition.

Pratt & Whitney Aircraft proposes to obtain the Florida Department of Environmental Regulations' (DER) concurrence that this tank meets the requirements of Chapter 17-2 Florida Administrative Code and that the construction permit can be issued for this proposed source as designed.



**CALCULATIONS**

BY M. K. Lewis DATE 2/15/83 SUBJECT Summary Calculations SHEET NO. 1 OF       
 CHKD. BY      DATE      1 M Gallon FUEL TANK JOB NO.       
 DEPT.     

FIXED ROOF CALCULATIONS : Jet "A" / JP-5

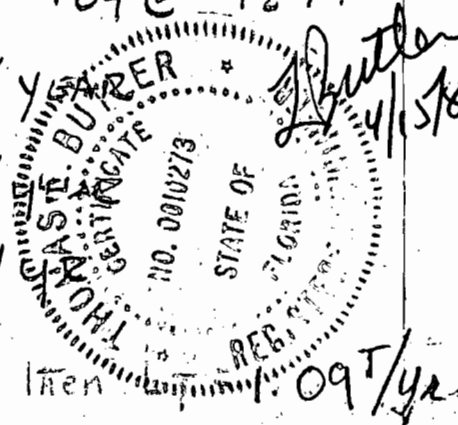
• Molecular Wgt USED WAS 150 LB/LB MOLE. THIS IS THE LOW END OF OUR FUEL LAB RANGE (150-180), BUT HIGHER THAN EPA'S 130 FOR JET "A".

IF 130 HAD BEEN USED THEN THE TOTAL EMISSIONS (LT) WOULD HAVE BEEN 1.5 TONS/YEAR VS. 1.745 T/YR. NOT A BIG DIFFERENCE.

• TRUE VAPOR PRESSURE WAS TAKEN FROM P+WA DESIGN MANUAL CHART AT AN AMBIENT TEMP. OF 100°F. THIS IS ON THE HIGH SIDE. FUEL FARM RECORDS SHOW HIGHEST RECORDED @ ~ 92°F. CHARTS V. P<sub>SS</sub> = .06 @ 100°F  
 .04 @ 92°F.

Using .04 then  $L_w = .504 \text{ T / YEAR}$   
 $L_B = .751 \text{ T / YEAR}$   
1.255 T / YEAR

• IF BOTH  $M = 130$  &  $P = .04$  WERE USED THEN 0.9 T / yr.





2/15/83

BREATHING LOSSES

Fixed Roof Tank Breathing Losses (60' dia. tank)

JET "A"/JP-5

$$L_B = 2.26 \times 10^{-2} M \left( \frac{P}{14.7-P} \right)^{.68} D^{1.73} H^{0.51} AT^{.5} F_P C K_C$$

$L_B = \text{\#/yr}$

$M = 150 \text{ lb/lb mole (Molecular wt)}$

$P = .06 \text{ psia at } 100^\circ\text{F (true vapor press)}$

$D = 60' \text{ tank dia.}$

$H = 20' \text{ Avg. vapor space height}$

$AT = 20^\circ\text{F Avg. diurnal temp.}$

$F_P = 1.0 \text{ Paint factor}$

$C = 1.0 \text{ ADJ factor for small dia. tanks}$

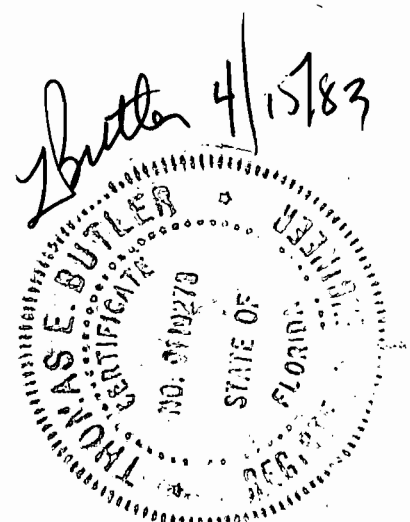
$K_C = 1.0 \text{ Product factor}$

$$L_B = 2.26 \times 10^{-2} \times 150 \times \left( \frac{.06}{14.7-.06} \right)^{.68} \times 60^{1.73} \times 20^{.51} \times 20^{.5} \times 1 \times 1 \times 1$$

$$= 2.26 \times 10^{-2} \times 150 \times .0237 \times 1191.79 \times 4.60 \times 4.47 \times 1 \times 1 \times 1$$

$L_B = \underline{1977 \text{ \#/yr.}} \text{ OR } \underline{0.9885 \text{ TONS/YEAR}}$

$L_B = \frac{1977}{365 \times 24} = \underline{.226 \text{ \#/Hr.}} < 5 \text{ \#/HR}$



2/15/83

WORKING LOSSES

Fixed Roof Tank Working Losses (60' dia. tank)

JET "A"/JP-5

$$LW = 2.40 \times 10^{-2} M P K_n K_c$$

$$LW = \#/10^3 \text{ Gal.}$$

M = 150 lb/lb mole (molecular wgt)

P = .06 psia True Vapor Press @ 100°F

$K_n$  = 1.0 Turnover Factor

$K_c$  = 1.0 Product Factor

$$LW = .024 \times 150 \times .06 \times 1 \times 1$$

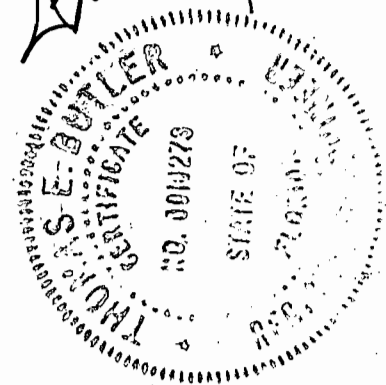
$$LW = 0.216 \#/10^3 \text{ gal.} = .000216 \#/\text{gal. throughput}$$

Throughput = 7,000,000 gallons

$$LW = \frac{(.000216)(7 \times 10^6)}{2000} = \frac{1512 \#/\text{year}}{2000} = 0.756 \text{ tons/year}$$

$$LT = LW + L_B = 1512 + 1977 = \underline{3489 \#/\text{yr. or } 1.745 \text{ T/yr}}$$

*Butler 2/15/83*



DESIGN MANUAL

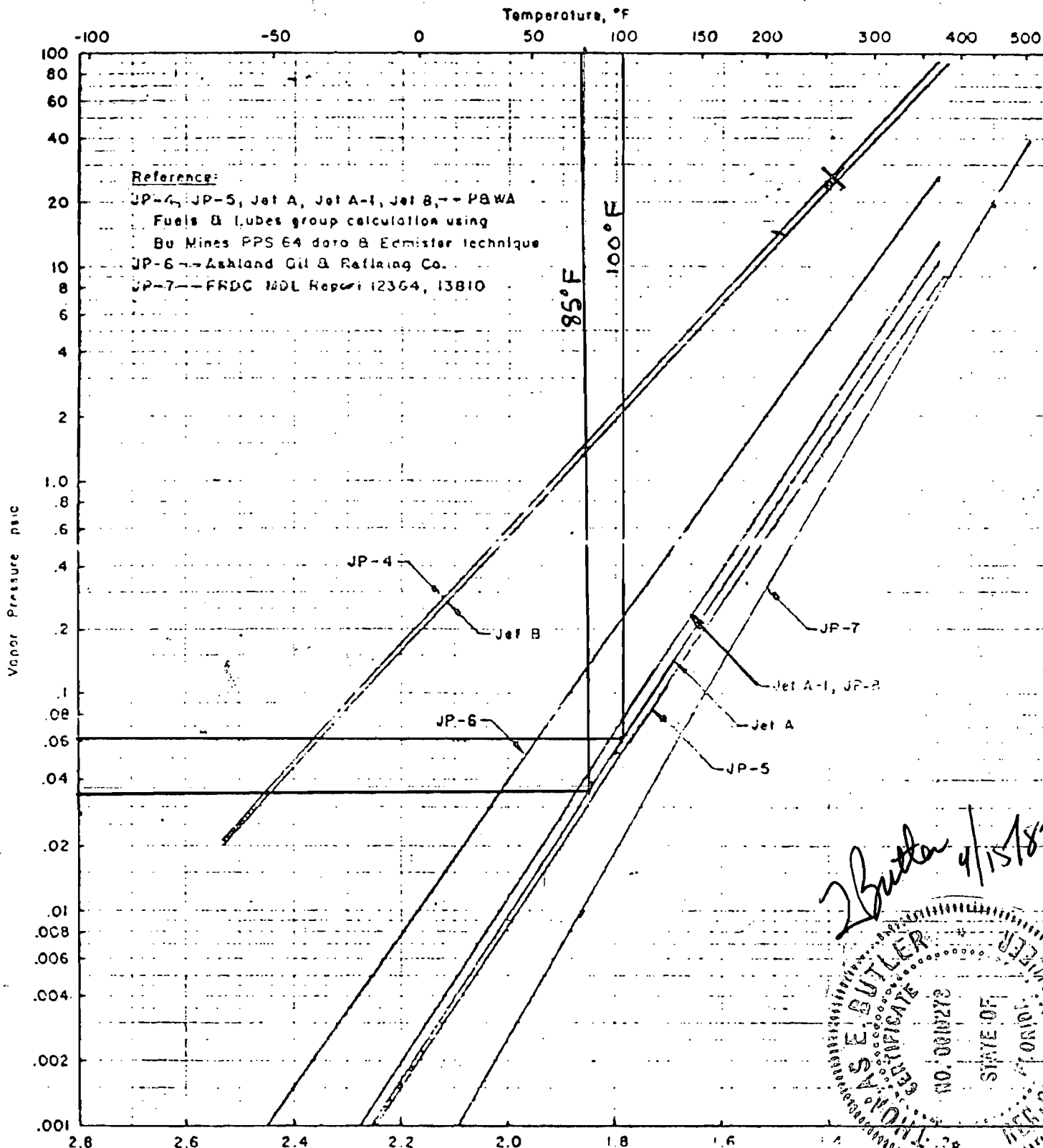
PROPERTIES OF LUBRICANTS AND FUELS  
 (continued)

APPROVED			

Pratt & Whitney Aircraft

PRATT & WHITNEY AIRCRAFT  
 CONNECTICUT

This document is the property of United Aircraft Corporation and is delivered in the exercise of a license. It is to be used only for the purpose for which it is issued and no part of it is to be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without its written consent, and that no right is granted to disclose or to use any information contained in this document. This text does not limit the right to use information obtained from another source.

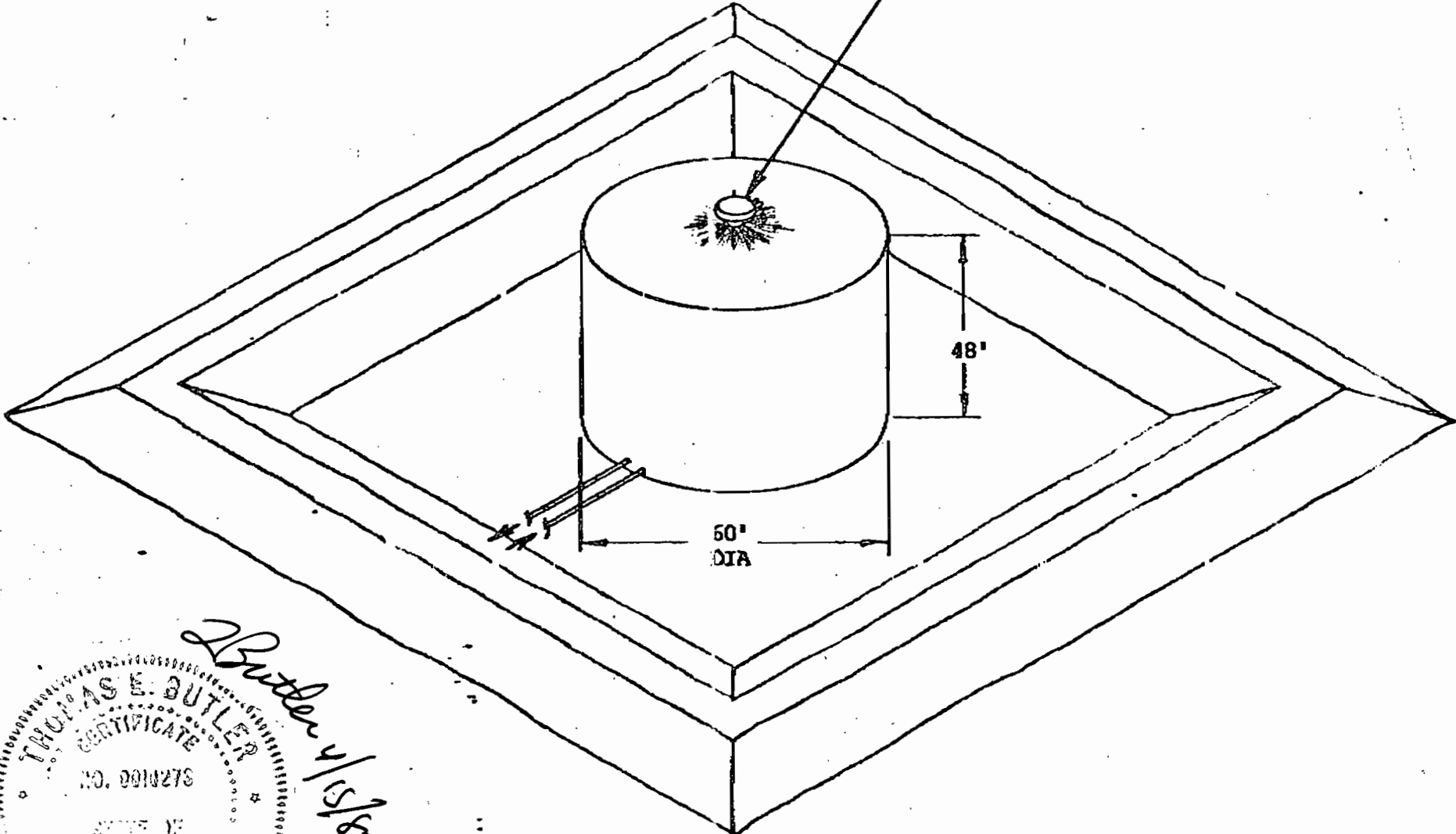


Typical Vapor Pressure of Turbine Engine Fuels

FIGURE 5

9-7-71 EDD

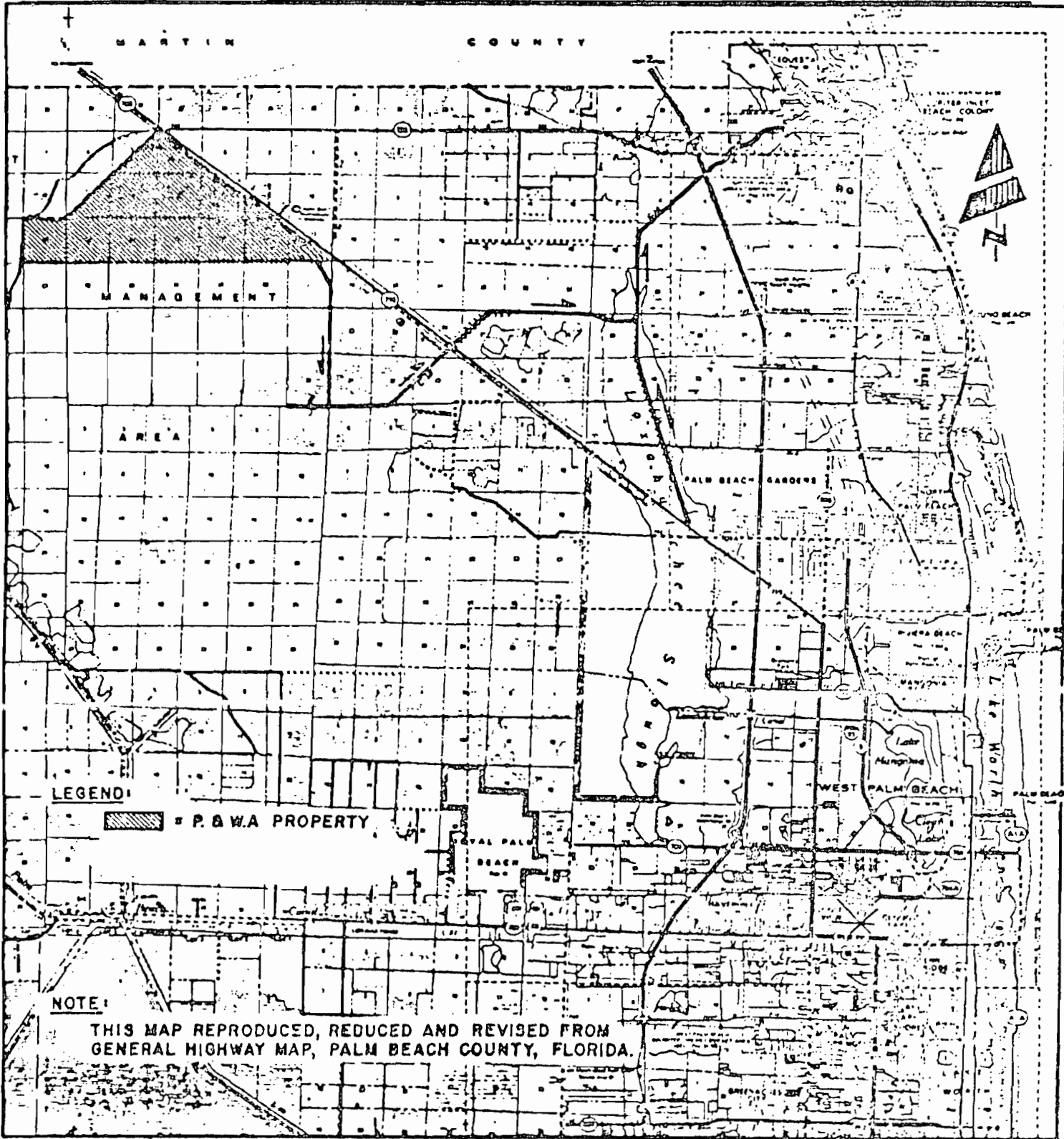
Vent opening to be provided for approximately 159,500 cu. ft. of free air per hour.



*Butler 4/15/83*

THOMAS E. BUTLER  
CERTIFICATE  
NO. 0010275  
MADE IN  
U.S.A.

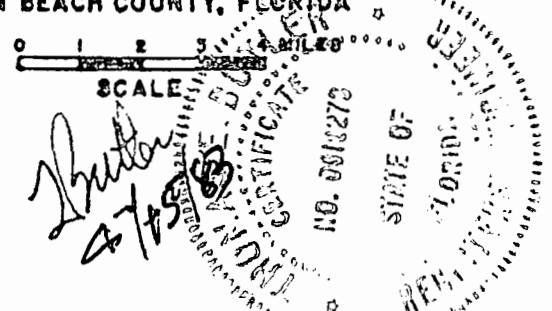
One Million Gallon Jet "A" Fuel Storage Tank - Government Products Division,  
West Palm Beach, Florida

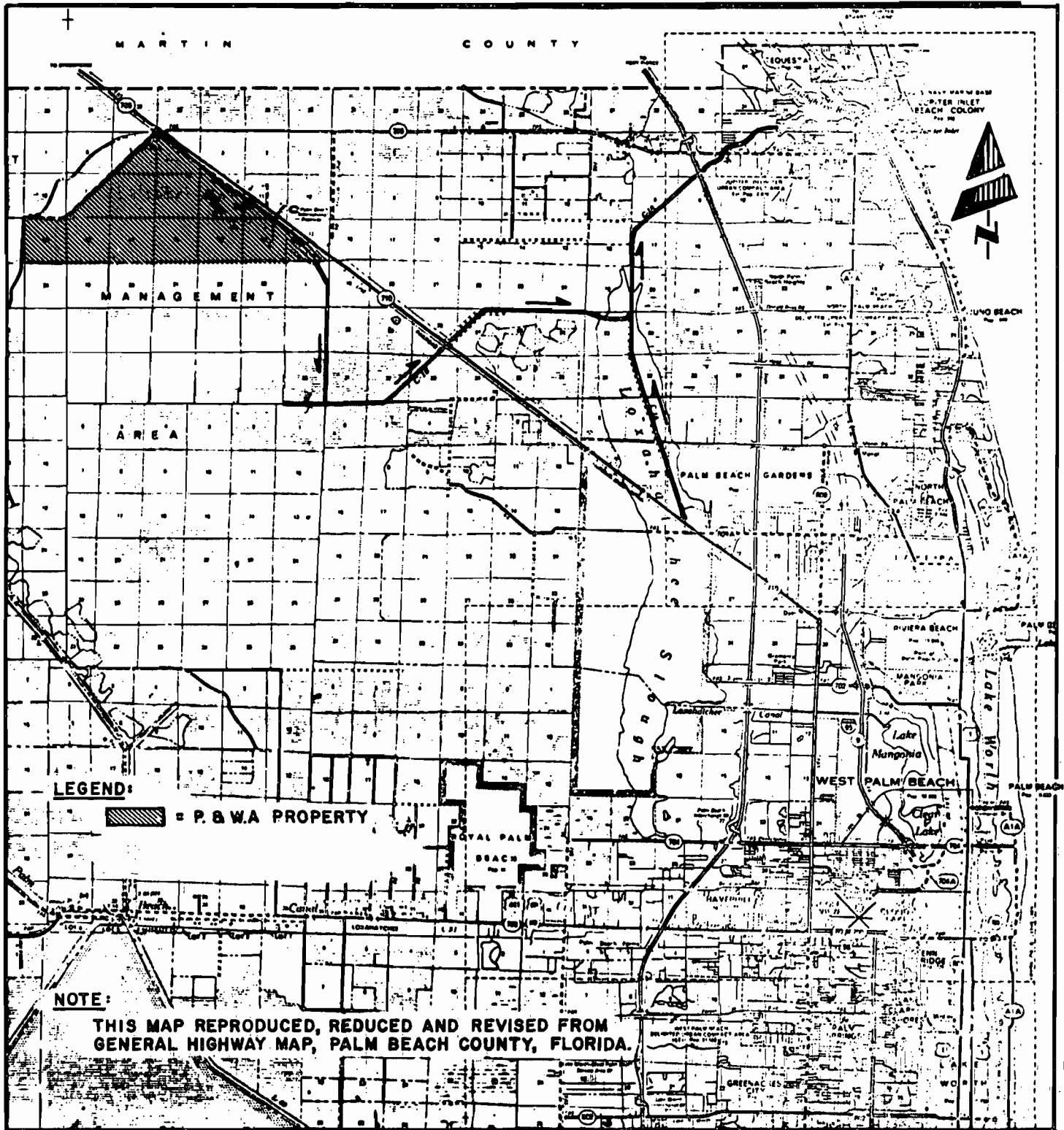


PL-772 A

7/18/81

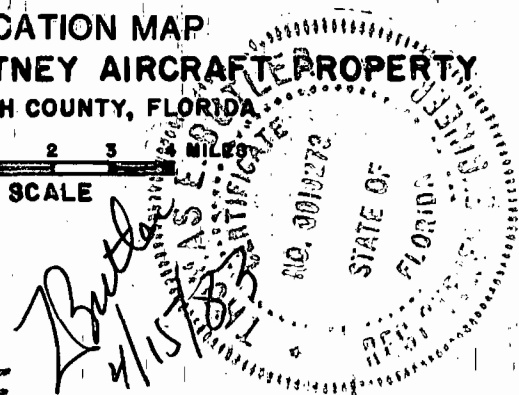
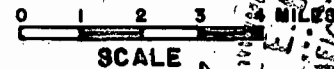
**SITE LOCATION MAP  
FOR PRATT & WHITNEY AIRCRAFT PROPERTY  
PALM BEACH COUNTY, FLORIDA**





PL-772 A  
7/18/81

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



Attachment III

OPERATING ACCOUNT



900613

53-137  
118



Government Products Division  
Box 2691, West Palm Beach, Florida 33402  
Phone (305) 840-2000

IN FULL SETTLEMENT OF ITEMS  
LISTED ON ACCOMPANYING STATEMENT

DATE 3-3-83

\$ 100.00

PAY:

TO  
THE  
ORDER  
OF

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

*Peter H. Acostas*  
AUTHORIZED SIGNATURE  
*Thomas H. Cistone*  
AUTHORIZED COUNTER SIGNATURE

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

**№ 33666**

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from United Technologies Pratt & Whitney aircraft Date April 18, 1983

Address Box 2691, West Palm Beach, FL 33402 Dollars \$ 100.00

Applicant Name & Address Same as above

Source of Revenue \_\_\_\_\_

Revenue Code 0101 Application Number AC 50-68727

By Patricia G. Adams

SUMMARY

United Technologies Corporation, Pratt & Whitney Aircraft, West Palm Beach, Florida, proposes to install a fixed roof fuel storage tank to store Jet A/JP-5 fuel on the plant site located off Beeline Highway, State Road 710.

The cylindrical tank will be sixty (60) feet in diameter, forty-eight (48) feet high and will be designed to store 1,000,000 gallons of Jet A/JP-5 fuel. The average throughput for the tank is estimated to be 7,000,000 gallons per year.

Vol 2  
 $\frac{\pi(60)^2 \cdot 48}{4} = 1,015,142 \text{ gal}$   
7.48 =

Calculations were performed to determine the emission losses in tons per year for the tank. Using worse case conditions in the formulae to determine maximum total emissions from both breathing and working losses from the tank, it was determined that the maximum total emissions from the tank would be 1.745 tons per year. The formulae used in the calculations were taken directly from the Environmental Protection Agency AP-42, Supplement No. 12 publication.

Attached are the supporting calculations, vapor pressure chart, isometric pictorial and site location map which comprise the supporting backup for this proposed addition.

Pratt & Whitney Aircraft proposes to obtain the Florida Department of Environmental Regulation's (DER) concurrence that this tank meets the requirements of Chapter 17-2 Florida Administrative Code and that the construction permit can be issued for this proposed source as designed.

Butler 4/15/83  
THOMAS E. BUTLER  
CERTIFICATE  
NO. 000273  
STATE OF  
FLORIDA  
REGISTRATION



2/15/83

BREATHING LOSSES

Fixed Roof Tank Breathing Losses (60' dia. tank)

JET "A"/JP-5

$$L_B = 2.26 \times 10^{-2} M \left( \frac{P}{14.7-P} \right)^{.68} D^{1.73} H^{0.51} \Delta T^{.5} F_P C K_C$$

$L_B = \#/\text{yr}$

$M = 150 \text{ lb/lb mole (Molecular wt) (180 MAX)}$

$P = .06 \text{ psia at } 100^\circ\text{F (true vapor press)}$  *0.029 psia @ 100°F (JP-4 is 2.7 psia @ 100°F)*

$D = 60' \text{ tank dia.}$

$H = 20' \text{ Avg. vapor space height}$

$\Delta T = 20^\circ\text{F Avg. diurnal temp.}$

$F_P = 1.0 \text{ Paint factor - Table 4.3-2}$  *Roof + SNELL WHITE (POOR WHITE,  $F_p = 1.15$ )*

$C = 1.0 \text{ ADJ factor for small dia. tanks}$

$K_C = 1.0 \text{ Product factor}$

$$L_B = 2.26 \times 10^{-2} \times 150 \times \left( \frac{.06}{14.7-.06} \right)^{.68} \times 60^{1.73} \times 20^{.51} \times 20^{.5} \times 1 \times 1 \times 1$$

$$= 2.26 \times 10^{-2} \times 150 \times .0237 \times 1191.79 \times 4.60 \times 4.47 \times 1 \times 1 \times 1$$

$L_B = 1977 \text{ \#/\text{yr. OR } 0.9885 \text{ TONS/YEAR}$

$$L_B = \frac{1977}{365 \times 24} = .226 \text{ \#/\text{Hr.} < 5 \text{ \#/\text{HR}}$$

$$L_B = 2.26 \times 10^{-2} \times 180 \times \left( \frac{.06}{14.7-.06} \right)^{0.68} \times 60^{1.73} \times 20^{0.51} \times 20^{0.5} \times 1.15$$

$$L_B = 0.312 \text{ \#/\text{hr} (5 \text{ \#/\text{hr})}$$

*Z. Butler 4/15/83*



2/15/83

WORKING LOSSES

Fixed Roof Tank Working Losses (60' dia. tank)

JET "A"/JP-5

$$LW = 2.40 \times 10^{-2} M P K_n K_c$$

$$LW = \#/10^3 \text{ Gal. } \checkmark$$

M = 150 <sup>-18°</sup> lb/lb mole (molecular wgt)

P = .06 psia True Vapor Press @ 100°F

K<sub>n</sub> = 1.0  Turnover Factor

K<sub>c</sub> = 1.0  Product Factor

*↑ up to 40 turnovers per year*

$$LW = .024 \times 150 \times .06 \times 1 \times 1$$

$$\checkmark LW = 0.216 \#/10^3 \text{ gal.} = .000216 \#/gal. \text{ throughput}$$

Throughput = 7,000,000 gallons

$$\checkmark LW = \frac{(.000216)(7 \times 10^6)}{2000} = \frac{1512 \#/year}{2000} = 0.756 \text{ tons/year}$$

$$LT = LW + L_B = 1512 + 1977 = \underline{3489 \#/yr.} \text{ or } \underline{1.745 T/yr}$$

$$LW = 0.024 \times 180 \times .06 \times 1 \times 1 = 0.26 \#/10^3 \text{ gal}$$
$$LW = \frac{7,000,000 \times 0.26}{1000} = 1820 \#/yr = 0.91 T/yr$$

$$LT = LW + L_B$$
$$= 1.37 + 0.91$$
$$= 2.3 T/yr$$

