

P 407 852 676

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

U.S.G.P.O. 1989-234-555 PS Form 3800, June 1985	Sent to Mr. Joseph P. Stidham,	
	Street and No. Hercules, Inc. 7625 Ninth St. S.W.	
	P.O., State and ZIP Code Vero Beach, FL 32968	
	Postage	S
	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	
	TOTAL Postage and Fees	S
Postmark or Date Mailed: 5-2-91 Permit: AC 31-188443		

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check boxes) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. Joseph P. Stidham Plant Manager Hercules, Inc. 7625 Ninth St., S.W. Vero Beach, FL 32968	4. Article Number P 407 852 676 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Addressee X	Always obtain signature of addressee or agent, and DATE DELIVERED . 8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Joseph P. Stidham</i>	
7. Date of Delivery 5/6/91 <i>OSC</i>	



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT

May 2, 1991

Mr. Joseph P. Stidham
Plant Manager
Hercules, Inc.
7625 Ninth St. S.W.
Vero Beach, FL 32968

Dear Mr. Stidham:

Enclosed is Permit Number AC 31-188443 to Hercules, Inc. to construct a fluidized bed citrus peel dryer and hot oil heating system at the facility in Vero Beach, Indian River County, Florida, issued pursuant to Section 403 Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit 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 this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

Copies furnished to:

John Bottorf, Jr., P.E., Bottorf & Assoc.
C. Collins, Central District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 5-2-91.

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.

Kurti J. Ober

Clerk

5-2-91

Date

Final Determination

Hercules, Inc.
Vero Beach, Indian River County
Florida

Fluidized Bed Citrus Peel Dryer and Hot Oil Heating System
Permit No. AC 31-188443

Florida Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

April 29, 1991

Final Determination

The Technical Evaluation and Preliminary Determination for the permit to construct a fluidized bed citrus peel dryer and hot oil heating system at Hercules' facility in Vero Beach, Indian River County, Florida, was distributed on April 3, 1991. The Notice of Proposed Agency Action was published in the Vero Beach Press-Journal on April 13, 1991. Copies of the evaluation were available for public inspection at the Department's offices in Orlando and Tallahassee. No comments were received on the Department's proposed intent to issue the permit.

The final action of the Department will be to issue construction permit No. AC 31-188443 as proposed in the Technical Evaluation and Preliminary Determination.



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Hercules, Inc.
7625 Ninth St. S.W.
Vero Beach, FL 32968

Permit Number: AC 31-188443
Expiration Date: October 31, 1991
County: Indian River
Latitude/Longitude: 27°35'05"N
80°28'57"W
Project: Fluidized Bed Citrus Peel Dryer
& Hot Oil Heating System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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 of a fluidized bed citrus peel dryer manufactured by Rica-Tec with indirect heating. Heat will be supplied by a 24 MMBtu/hr heat transfer oil heater and heat exchanger system that recirculated Dowtherm heat transfer oil. The oil heater will be fired with new No. 6 fuel oil (1% sulfur max) and will have a separate exhaust stack. Particulate emissions from the dryer will be controlled with high efficiency dual cyclones manufactured by Rica-Tec that are 99.3% efficient.

The source shall be constructed in accordance with the permit application, plans, documents, exhibits, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Exhibits are listed below:

1. Hercules' application received October 29, 1990.
2. DER's letter dated November 27, 1990.
3. Hercules' response received December 11, 1990.
4. Hercules' revision received January 7, 1991.
5. DER's letter dated January 10, 1991.
6. Gardinier's response received January 24, 1991.

APIS Nos.: 30ORL31001211 (Fluidized Bed Citrus Peel Dryer)
30ORL31001212 (Hot Oil Heating System)

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

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 revocations 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. Neither 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 is not 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, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; 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:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

GENERAL CONDITIONS:

6. The permittee shall 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 and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor 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 provide the Department with the following information:

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

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 for revocation of this permit.

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

GENERAL CONDITIONS:

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 involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and approximate evidentiary rules.

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 17-4.120 and 17-30.300, F.A.C. 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 or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

GENERAL CONDITIONS:

- 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 dates analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

14. 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 corrected promptly.

SPECIFIC CONDITIONS:

1. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.080).

2. Within 30 days after completion of construction, compliance testing for the fluidized bed dryer and the oil heating system must be performed.

3. The maximum process input rate for the dryer shall be 4.63 tons/hr moist peel, the maximum production rate shall be 0.75 tons/hr dry peel.

4. The oil heater shall be fired with new No. 6 fuel oil with a maximum content of 1% sulfur by weight. The maximum heat input rate shall be 24 MMBTU/hr (159 gal/hr x 151 MBTU/gal). To avoid a PSD review, the existing two dryers at the facility shall also be fired by new No. 6 fuel oil with a maximum content of 1% sulfur by weight.

5. Particulate emissions from the fluidized bed citrus peel dryer shall not exceed the amount allowed by the process weight table, F.A.C. Rule 17-2.610(1), or 9.28 lbs/hr of particulate matter, whichever is less. Visible emissions from the dryer shall not exceed 20% opacity. Visible emissions from the oil heater shall not exceed 20% opacity (F.A.C. Rule 17-2.610(2)).

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

SPECIFIC CONDITIONS:

6. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any source whatsoever without taking reasonable precautions to prevent such emission (F.A.C. Rule 17-2.610(3)). As a reasonable precaution, the dry peel shall directly fall from the dryer into a container or bag to prevent emissions of unconfined particulate matter.

7. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor (F.A.C. Rule 17-2.620(2)).

8. Compliance with the particulate matter limitation for the dryer, as contained in Specific Condition No. 5, shall be determined by EPA Methods 1,2,4, and 5 as described in 40 CFR 60, Appendix A. Compliance with the opacity limitations for the dryer and for the oil heater shall be determined by DER Method 9 as described in F.A.C. Rule 17-2.700(6)(a)9. The compliance tests for particulates and opacity shall be conducted concurrently while the sources are operating within 10% of their permitted capacity. The Central District office shall be notified at least 15 days prior to any compliance test.

9. A certificate of Fuel Oil Analysis for the fuel used during the oil heater opacity compliance test shall be submitted in conjunction with the visible emissions test results to show compliance with the maximum 1% sulfur content limitation.

10. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of the construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, form certifying that construction was completed (noting any deviations from the conditions in the construction permit), and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

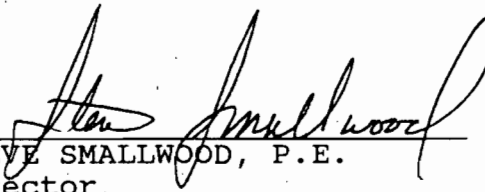
11. Upon obtaining a permit to operate, the permittee shall be required to submit to the Central District office Annual Operating Reports (DER Form 17-1.202(6)) for each of the two sources.

12. These sources shall be allowed to operate 24 hours/day, 7 days/week, 43 weeks/year, 7224 hours/year.

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

Issued this 2nd day
of May, 1991
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

Interoffice Memorandum

TO: Steve Smallwood
 FROM: ^{BA} Clair Fancy
 DATE: April 29, 1991
 SUBJ: Approval of Construction Permit AC 31-188443
 Hercules, Inc.

Attached for your approval and signature is a permit prepared by the Bureau of Air Regulation for the above mentioned company to construct a fluidized bed citrus peel dryer and hot oil heating system at their facility in Vero Beach, Indian River County, Florida.

No comments were received during the public notice period. I recommend your approval and signature.

CF/CP/pa
Attachment

Radio - Please explain me and for all to all of your permit engineers about the Unconfined Emissions rule. I don't want to see this error again. I've brought this to your attention several times.

*Corrected
Thank you. OK
5-1-91*

5-1-91

Check Sheet

Company Name: Hercules Inc
Permit Number: AC 31-108443
PSD Number: _____
Permit Engineer: _____

Application:

- Initial Application
- Incompleteness Letters
- Responses
- Waiver of Department Action
- Department Response
- Other

Cross References:

-
-
-

Intent:

- Intent to Issue
- Notice of Intent to Issue
- Technical Evaluation
- BACT 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 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 the supplementary documents file documents file drawer. Folders in that drawer are arranged alphabetically, then by permit number.

Folder Name: Hercules, Inc.

Permit(s) Numbered:

AC	31	-	188443
----	----	---	--------

Period during
which document
was received:

Detailed Description

Application		Detailed Description
15-Nov-90	1.	24"×36" BLUEPRINT: Fluidized Bed Citrus Peel Dryer & Hot Oil Heating System Elevation and Two Cross Sections

P 832 538 682



Certified Mail Receipt

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to	
Mr. Joseph P. Stidham, Hercules	
Street & No.	
7625 Ninth St. S.W.	
P.O., State & ZIP Code	
Vero Beach, FL 32968	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date	
Mailed: 10-4-91	
Permit: AC 31-188443	

PS Form 3800, June 1990

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP		ACTION NO
		ACTION DUE DATE
1. TO: (NAME, OFFICE, LOCATION)	Initial	
STEVE SMALLWOOD	Date	
2.	Initial	
THRU: CLARE FANCY CTF	Date	
3.	Initial	CP
FROM: CINDY PHILLIPS	Date	10/3/91
4.	Initial	
	Date	

REMARKS:

AMENDMENT TO
AC 31-188443 TO
POSTPONE EXPIRATION
DATE UNTIL 6/30/92.

OK Thank you
10-3-91

INFORMATION

- Review & Return
- Review & File
- Initial & Forward

DISPOSITION

- Review & Respond
- Prepare Response
- For My Signature
- For Your Signature
- Let's Discuss
- Set Up Meeting
- Investigate & Report
- Initial & Forward
- Distribute
- Concurrence
- For Processing
- Initial & Return

DATE

PHONE

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also wish to receive the following services (for an extra fee):

- 1. Addressee's Address
 - 2. Restricted Delivery
- Consult postmaster for fee.

3. Article Addressed to:
Mr. Joseph P. Stidham
Plant Manager
Hercules, Inc.
7625 Ninth St. S.W.
Vero Beach, FL 32968

4a. Article Number
P 832 538 682

- 4b. Service Type
- Registered Insured
 - Certified COD
 - Express Mail Return Receipt for Merchandise

7. Date of Delivery
10-7

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
PERMIT AMENDMENT

October 3, 1991

Mr. Joseph P. Stidham
Plant Manager
Hercules, Inc.
7625 Ninth St. S.W.
Vero Beach, FL 32968

Dear Mr. Stidham:

Re: AC31-188443, Fluidized Bed Citrus Peel Dryer
and Hot Oil Heating System

The Department is in receipt of your request for an extension of time for the referenced construction permit. In order to allow time for you to complete construction, wait for citrus peel season, test stack emissions, and submit an application to operate 60 days prior to the expiration of the construction permit, the following change is hereby made:

From: Expiration Date: October 31, 1991

To: Expiration Date: June 30, 1992.

Sincerely,

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management

c: John W. Bottorf, Jr., P.E.
Alan Zahm, P.E., CD



CONSULTING ENGINEERS — ANALYTICAL LABORATORY

6729 EDGEWATER COMMERCE PARKWAY • ORLANDO, FLORIDA 32810-4278 (407) 298-0846 • FAX (407) 299-7053

September 26, 1991

C. H. Fancy, P.E.
Chief
Bureau of Air Regulations
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
SEP 30 1991
Division of Air
Resources Management
Project No. 215-4

Subject: Indian River County - AP
Hercules, Inc.
Fluidized Bed Citrus
Peel Dryer and Hot Oil
Heating System
AC31-188443

Dear Mr. Fancy,

Construction of the referenced source is in progress at this time, but additional time is needed to complete construction, wait for citrus peel season, stack testing, preparation of stack test report and application to operate, and time for the DER Central District to issue an operating permit.

On behalf of Hercules, Inc., we are requesting that the referenced permit be amended to change the expiration date from October 31, 1991 to June 30, 1992.

If you have any questions regarding this request, please call Roger Caldwell at 407/298-0846.

Very truly yours,

John W. Bottorf, Jr., P.E.

JWB/ms

Cy: Joe Stidham

C. Phillips
A. Zaboron, C. Diet

September 26, 1991

C. H. Fancy, P.E.
Chief
Bureau of Air Regulations
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED
Project No. 215-4
SEP 30 1991
Division of Air
Resources Management

Subject: Indian River County - AP
Hercules, Inc.
Fluidized Bed Citrus
Peel Dryer and Hot Oil
Heating System
AC31-188443

Dear Mr. Fancy,

Construction of the referenced source is in progress at this time, but additional time is needed to complete construction, wait for citrus peel season, stack testing, preparation of stack test report and application to operate, and time for the DER Central District to issue an operating permit.

On behalf of Hercules, Inc., we are requesting that the referenced permit be amended to change the expiration date from October 31, 1991 to June 30, 1992.

If you have any questions regarding this request, please call Roger Caldwell at 407/298-0846.

Very truly yours,



John W. Bottorf, Jr., P.E.

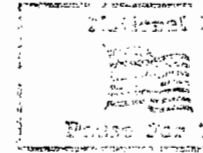
JWB/ms

Cy: Joe Stidham

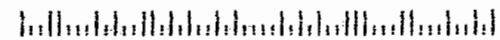
C. Phillips
A. Zahm, C. Diet

ROTTORF
Associates inc.

6729 EDGEWATER COMMERCE PARKWAY • ORLANDO, FLORIDA 32810-4278



C. H. Fancy, P.E.
Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400





Hercules Incorporated
7625 Ninth Street, S.W.
Vero Beach, FL 32962
(407) 569-3800

RECEIVED

APR 22 1991

DER-BAQM

April 19, 1991

Barry D. Andrews
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Andrews:

Re: Construct Permit AC31 188443

A notarized copy of the Notice of Intent to Issue as published in the Vero Beach Press Journal is attached.

Sincerely,

Joseph P. Stidham
Plant Manager

cc
Chuck Collins, Central District
John Bottorf, Bottorf & Assoc.

C. Phillips

VERO BEACH PRESS-JOURNAL

Published Daily

Vero Beach, Indian River County, Florida

COUNTY OF INDIAN RIVER: STATE OF FLORIDA

Before the undersigned authority personally appeared J. J. Schumann, Jr. who on oath says that he is Business Manager of the Vero Beach Press-Journal, a daily newspaper published at Vero Beach in Indian River County, Florida; that the attached copy of advertisement, being

a Notice
_____ in the matter of Intent to Issue

_____ in the _____ Court, was pub-

lished in said newspaper in the issues of April 13, 1991

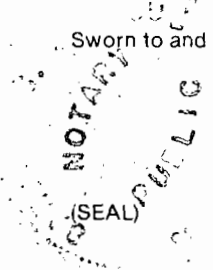
Affiant further says that the said Vero Beach Press-Journal is a newspaper published at Vero Beach, in said Indian River County, Florida, and that the said newspaper has heretofore been continuously published in said Indian River County, Florida, each daily and has been entered as second class mail matter at the post office in Vero Beach, in said Indian River 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 15 day of April A.D. 19 91

John J. Schumann, Jr.
(Business Manager)

Richard [Signature]
(Clerk of the Circuit Court, Indian River County, Florida)

Notary Public, State of Florida
My Commission Expires June 29, 1993



**STATE OF FLORIDA
DEPARTMENT OF
ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE**

The Department of Environmental Regulation gives notice of its intent to issue a construction permit (No. AC 31-188443) for a fluidized bed citrus peel dryer and hot oil heating system to Hercules, Inc., 7625 Ninth St. S.W., Vero Beach, Indian River County, Florida 32968. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by this proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. 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.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the permit have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any such right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

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:

Bureau of Air Regulation
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Department of Environmental Regulation
Central District Office
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767

Any person may send written comments on the proposed action to Mr. Barry Andrews 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.
April 13, 1991.

P 407 852 657

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

U.S.G.P.O. 1989-234-555

PS Form 3800, June 1985

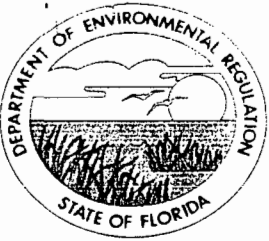
Sent to	Joseph Stidham	
Street and No.	Hercules, Inc	
P.O., State and ZIP Code	Vero Beach, FL	
Postage		\$
Certified Fee		
Special Delivery Fee		
Restricted Delivery Fee		
Return Receipt showing to whom and Date Delivered		
Return Receipt showing to whom, Date, and Address of Delivery		
TOTAL Postage and Fees		\$
Postmark or Date	4-4-91	
	AC 31-188443	

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. Joseph P. Stidham Hercules Inc. 7625 9th St. SW Vero Beach, FL 32968	4. Article Number P 407 852 657 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Addressee X	Always obtain signature of addressee or agent and DATE DELIVERED.
6. Signature - Agent X <i>Joseph P. Stidham</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery 4-8-91	

File Copy



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

April 3, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Joseph P. Stidham
Plant Manager
Hercules, Inc.
7625 Ninth St. S.W.
Vero Beach, FL 32968

Dear Mr. Stidham:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed construction permit to Hercules, Inc. for a fluidized bed citrus peel dryer and hot oil heating system at the facility in Vero Beach, Indian River County, Florida.

Please publish the attached "Notice of Intent to Issue" in the legal ad section of a newspaper of general circulation in the area affected and submit the proof of publication to the Department within seven days of publication, along with any written comments you wish to have considered concerning the Department's proposed action, to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

for

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/CP
Attachments

c: Chuck Collins, Central District
John Bottorf, Jr., P.E., Bottorf & Assoc.

Ready File }
Cindy Phillips } 4-4-91 ROR

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of an application
for a Permit by:

DER File No. AC 31-188443
Indian River County

Hercules, Inc.
7625 Ninth St. S.W.
Vero Beach, FL 32968

INTENT TO ISSUE

The Department of Environmental Regulation gives notice of its intent to issue a construction permit for the proposed project as detailed in the application specified above, for the reasons stated below.

The applicant, Hercules, Inc., applied on October 29, 1990, to the Department of Environmental Regulation for a permit to construct a fluidized bed citrus peel dryer and hot oil heating system.

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

Pursuant to Section 403.815, F.S., and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed NOTICE OF INTENT TO ISSUE.

The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at 2600 Blair Stone Road, Tallahassee, FL 32399-2400, within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the attached permit unless a 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 this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this intent. Petitions filed by other

persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. 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.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

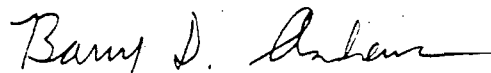
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

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 position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the permit have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any such right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



fr C. H. Fancy, P.E.
Chief

Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 4-4-91 to the listed persons.

Clerk Stamp

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.

Kenn Deber
(Clerk)

4-4-91
(Date)

copies furnished to:

Chuck Collins, Central District

John Bottorf, Jr. P.E., Bottorf & Assoc.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF INTENT TO ISSUE

The Department of Environmental Regulation gives notice of its intent to issue a construction permit (No. AC 31-188443) for a fluidized bed citrus peel dryer and hot oil heating system to Hercules, Inc., 7625 Ninth St. S.W., Vero Beach, Indian River County, Florida 32968. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by this proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of their receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. 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.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
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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 position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the permit have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any such right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

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:

Bureau of Air Regulation
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Department of Environmental Regulation
Central District Office
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767

Any person may send written comments on the proposed action to Mr. Barry Andrews 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.

Technical Evaluation
and
Preliminary Determination

Hercules, Inc.
Vero Beach, Indian River County
Florida

Fluidized Bed Citrus Peel Dryer and Hot Oil Heating System
Permit No. AC 31-188443

Florida Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

March 26, 1991
(Amended April 3, 1991)

I. Application

A. Applicant

Hercules, Incorporated
7625 Ninth St., S.W.
Vero Beach, FL 32968

B. Project and Location

The Department received an application on October 29, 1990 for a permit to construct a fluidized bed citrus peel dryer and hot oil heating system. The application was deemed complete on January 24, 1991. The facility is located in Vero Beach, Florida at 7625 Ninth St., S.W.

C. Facility Category

The SIC Code is 2037 and
the SCC Codes are: 3-02-999-98 (Citrus peel dryer)
3-02-900-02 (Hot oil heating system)

II. Project Description

This project is for the construction of a fluidized bed citrus peel dryer, manufactured by Rica-Tec with indirect heating. Heat will be supplied by a 24 MMBTU/HR heat transfer oil heater and heat exchanger system that recirculates Dowtherm heat transfer oil. The oil heater will be fired with new No. 6 fuel oil (1% sulfur max) and will have a separate exhaust stack. Particulate emissions from the dryer will be controlled with high efficiency dual cyclones manufactured by Rica-Tec that are 99.3% efficient.

III. Rule Applicability

The source will be in an area designated as attainment for sulfur dioxide and particulate matter. It will not cause a significant emission rate increase as defined by F.A.C. Rule 17-2, Table 500-2 due to reduction of the sulfur content of the fuel of for the two existing dryers to one percent by weight. Therefore, the project is subject to F.A.C. rule 17-2.520, Sources Not Subject to PSD or Nonattainment Requirements. BACT (Best Available Control Technology) and NSPS (Standards of Performance of New Stationary Sources) do not apply.

The project is subject to Rule 17-2.610, General Particulate Emission Limiting Standards, and Rule 17-2.620, General Pollutant Emission Limiting Standards.

IV. Technical Evaluation

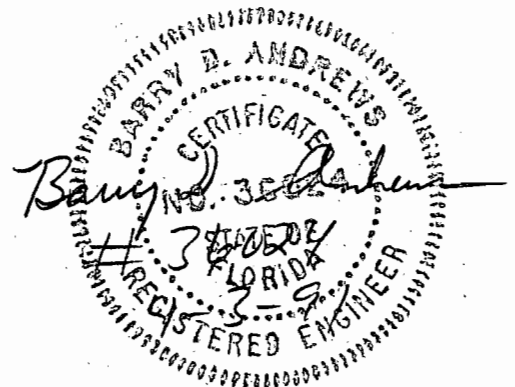
Based upon the fuel analysis and usage, the sulfur dioxide emissions for the new dryer are calculated to be 90.15 tons/year and NOX emissions are calculated to be 49.4 tons/year. Based upon the 99.3% efficiency of the dual cyclones, the particulate emissions are expected to be 4.62 lbs./hour and 16.68 tons/year.

V. Air Quality Analysis

It is the judgement of the Department that the estimated sulfur dioxide and particulate matter emissions from the proposed source will not create a health hazard or cause/contribute to an ambient air quality violation.

VI. Conclusion

Based on the information provided by the applicant, the Department has reasonable assurance that the proposed project, as described in this evaluation and subject to the proposed attached permit conditions, will not cause or contribute to a violation of an ambient air quality standard, PSD increment, or any other technical provisions of Chapter 17-2 of the Florida Administrative Code.





Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:
Hercules, Inc.
7625 Ninth St. S.W.
Vero Beach, FL 32968

Permit Number: AC 31-188443
Expiration Date: October 31, 1991
County: Indian River
Latitude/Longitude: 27°35'05"N
80°28'57"W
Project: Fluidized Bed Citrus Peel Dryer
& Hot Oil Heating System

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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 of a fluidized bed citrus peel dryer manufactured by Rica-Tec with indirect heating. Heat will be supplied by a 24 MMBtu/hr heat transfer oil heater and heat exchanger system that recirculated Dowtherm heat transfer oil. The oil heater will be fired with new No. 6 fuel oil (1% sulfur max) and will have a separate exhaust stack. Particulate emissions from the dryer will be controlled with high efficiency dual cyclones manufactured by Rica-Tec that are 99.3% efficient.

The source shall be constructed in accordance with the permit application, plans, documents, exhibits, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Exhibits are listed below:

1. Hercules' application received October 29, 1990.
2. DER's letter dated November 27, 1990.
3. Hercules' response received December 11, 1990.
4. Hercules' revision received January 7, 1991.
5. DER's letter dated January 10, 1991.
6. Gardinier's response received January 24, 1991.

APIS Nos.: 300RL31001211 (Fluidized Bed Citrus Peel Dryer)
300RL31001212 (Hot Oil Heating System)

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

GENERAL CONDITIONS:

6. The permittee shall 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 and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor 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 provide the Department with the following information:

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

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 for revocation of this permit.

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

GENERAL CONDITIONS:

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 involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and approximate evidentiary rules.

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 17-4.120 and 17-30.300, F.A.C. 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 or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold 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) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

GENERAL CONDITIONS:

- 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 dates analyses were performed;
 - the person responsible for performing the analyses;
 - the analytical techniques or methods used; and
 - the results of such analyses.

14. 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 corrected promptly.

SPECIFIC CONDITIONS:

1. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.080).

2. Within 30 days after completion of construction, compliance testing for the fluidized bed dryer and the oil heating system must be performed.

3. The maximum process input rate for the dryer shall be 4.63 tons/hr moist peel, the maximum production rate shall be 0.75 tons/hr dry peel.

4. The oil heater shall be fired with new No. 6 fuel oil with a maximum content of 1% sulfur by weight. The maximum heat input rate shall be 24 MMBTU/hr (159 gal/hr x 151 MBTU/gal). To avoid a PSD review, the existing two dryers at the facility shall also be fired by new No. 6 fuel oil with a maximum content of 1% sulfur by weight.

5. Particulate emissions from the fluidized bed citrus peel dryer shall not exceed the amount allowed by the process weight table, F.A.C. Rule 17-2.610(1), or 9.28 lbs/hr of particulate matter, whichever is less. Visible emissions from the dryer shall not exceed 20% opacity. Visible emissions from the oil heater shall not exceed 20% opacity (F.A.C. Rule 17-2.610(2)).

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

SPECIFIC CONDITIONS:

6. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any source whatsoever without taking reasonable precautions to prevent such emission (F.A.C. Rule 17-2.610(3)). As a reasonable precaution, the dry peel shall directly fall from the dryer into a container or bag to prevent emissions of unconfined particulate matter.

7. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor (F.A.C. Rule 17-2.620(2)).

8. Compliance with the particulate matter limitation for the dryer, as contained in Specific Condition No. 5, shall be determined by EPA Methods 1,2,4, and 5 as described in 40 CFR 60, Appendix A. Compliance with the opacity limitations for the dryer and for the oil heater shall be determined by DER Method 9 as described in F.A.C. Rule 17-2.700(6)(a)9. The compliance tests for particulates and opacity shall be conducted concurrently while the sources are operating within 10% of their permitted capacity. The Central District office shall be notified at least 15 days prior to any compliance test.

9. A certificate of Fuel Oil Analysis for the fuel used during the oil heater opacity compliance test shall be submitted in conjunction with the visible emissions test results to show compliance with the maximum 1% sulfur content limitation.

10. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of the construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, form certifying that construction was completed (noting any deviations from the conditions in the construction permit), and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

11. Upon obtaining a permit to operate, the permittee shall be required to submit to the Central District office Annual Operating Reports (DER Form 17-1.202(6)) for each of the two sources.

12. These sources shall be allowed to operate 24 hours/day, 7 days/week, 43 weeks/year, 7224 hours/year.

PERMITTEE:
Hercules, Inc.

Permit Number: AC 31-188443
Expiration Date: October 31, 1991

Issued this _____ day
of _____, 1991
STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

STEVE SMALLWOOD, P.E.
Director
Division of Air Resources
Management



CONSULTING ENGINEERS — ANALYTICAL LABORATORY

6729 EDGEWATER COMMERCE PARKWAY • ORLANDO, FLORIDA 32810-4278 • (407) 298-0846 • FAX (407) 299-7053

January 18, 1991

Project No. 215-4

C. H. Fancy, P.E.
 Chief, Bureau of Air Regulation
 Florida Department of Environmental Reg.
 2600 Blair Stone Road
 Tallahassee, Florida 32399-2400

RECEIVED
 JAN 24 1991
 DER-BAQM

Subject: Indian River County - AP
 Hercules, Inc.
 Fluidized Bed Citrus
 Peel Dryer & Hot Oil
 Heating System
 AC31-188443

Gentlemen:

We are in receipt of your January 10, 1991 letter requesting additional information to complete the referenced application.

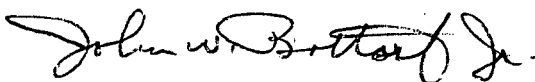
The discharge is through a rotary valve air lock. In order to change containers, the rotary valve will be shut off for the short time required to change either a bag, if the material is for shipment, or box, if the material is for Hercules use. The bags, which hold about 100 lbs. would be loosely sealed to the discharge chute, while the boxes which hold 1000 lbs., are open. In either case, the particle size of the material is large enough (80% greater than 20 mesh) to prevent dusting from being a problem in the absence of conveying air. Impact on air quality will be negligible since the drier, feed and discharge system are located in a building.

The feed to the drier consists of water wet citrus peel at 14% solids. Before entering the drier, it is conveyed through a high speed, cut flight, closed screw conveyor in order to break up the compressed cake, which discharges from the dewatering press. Particulate emissions are not a problem and again the drier, feed and discharge system are located in a building.

We have enclosed a print of the drier showing the feed and discharge to the drier.

We trust this completes the referenced application. If you have any questions, Please call Roger Caldwell at 407/298-0846.

Very truly yours,


 John W. Bottorf, Jr., P.E.

JWB/ms

Cy: Joe Stidham

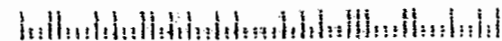
C. Phillips
C. Collins, c. Dist

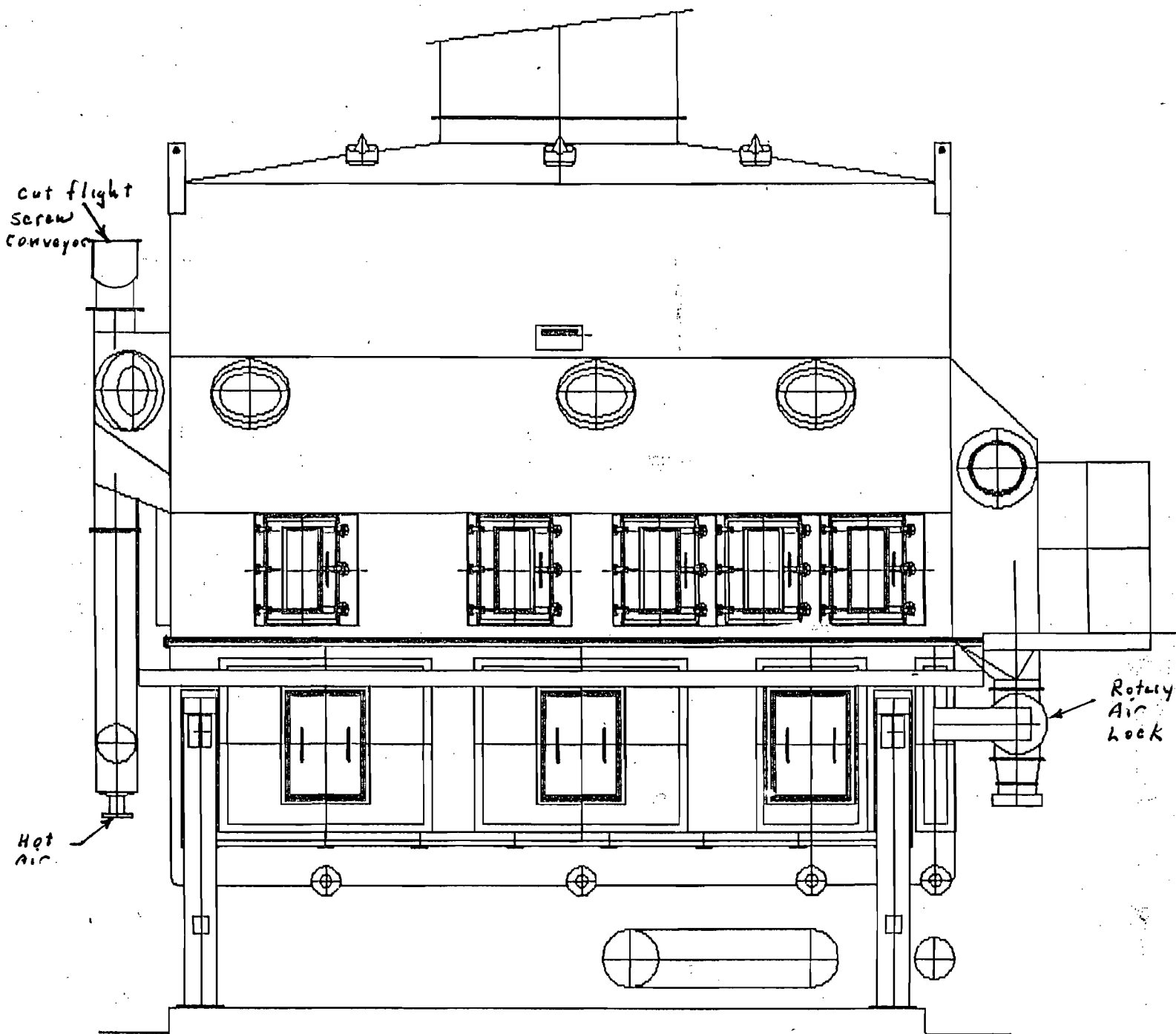
BOTTORF
Associates inc.

6729 EDGEWATER COMMERCE PARKWAY • ORLANDO, FLORIDA 32810-4278



C. H. Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Department of Environmental Reg.
2600 Blair Stone Road
Tallahassee, Florida 32399-2400





SECTION C-C

P 407 852 913

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

U.S.G.P.O. 1989-234-555

Sent to Mr. Joseph P. Stidham, Hercules	
Street and No. 7625 Ninth St., S.W.	
P.O., State and ZIP Code Vero Beach, FL 32968	
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	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 1-10-91 Permit: AC 31-188443	

PS Form 3800, June 1985

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. Joseph P. Stidham Plant Manager Hercules, Inc. 7625 Ninth St., S.W. Vero Beach, FL 32968	4. Article Number P 407 852 913 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Addressee X	Always obtain signature of addressee at point and DATE DELIVERED.
6. Signature - Agent <i>Manon H. Pierre</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery 1-14-91	

RECEIVED

JAN 18 1991

DER - BAQA



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

~~Lawton Chiles, Governor~~

~~Pat Wachman, Secretary~~

~~John Stinner, Assistant Secretary~~

Lawton Chiles, Governor

Carol M. Browner, Secretary

January 10, 1991

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Joseph P. Stidham
Plant Manager
Hercules, Inc.
7625 Ninth St., S.W.
Vero Beach, FL 32968

Dear Mr. Stidham:

Re: Fluidized Bed Citrus Peel Dryer & Hot Oil Heating System
Construction Permit Application No. AC31-188443

On December 11, 1990, the Department received Hercules's response to our letter of incompleteness dated November 27, 1990.

In response #3, it was stated that the dry peel will directly fall from the dryer into a container or bag. Is the container to be an open hopper, or a closed container? Will the dryer continue to discharge peel as the collection container, or bag, is being emptied or changed out? What are the expected particulate emissions from this system? Please submit drawings of the feed screw conveyor and the peel collection system.

If you have any questions concerning this request for additional information, please contact Cindy Phillips at (904)488-1344.

Sincerely,

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/CP

c: John W. Bortorf, Jr., P.E., Bortorf & Associates
Chuck Collins, P.E., Central District

December 27, 1990

Clair Fancy, P.E.
Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RECEIVED Project No. 215-4

JAN 7 1991

DER-BAQM

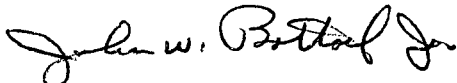
Subject: Indian River County - AP
Hercules, Inc.
Fluidized Bed Citrus
Peel Dryer & Hot Oil
Heating System
AC31-188443

Dear Mr. Fancy,

The proposed emission stack geometry for the oil heater has changed since the application to construct was originally submitted. Enclosed find four (4) revised copies of page 6 from the application that reflects the correct information.

If you have any questions, please call Roger Caldwell at 407/298-0846.

Very truly yours,



John W. Bottorf, Jr., P.E.

JWB/ms

Cy: Joseph P. Stidham, Plant Manager

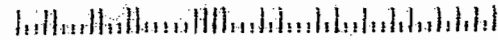
C. Phillipis
C. Collins, Asst

BOTTORF
Associates inc.

6729 EDGEWATER COMMERCE PARKWAY • ORLANDO, FLORIDA 32810-4278



Clair Fancy, P.E.
Chief
Bureau of Air Quality Management
Southwest District
Florida Dept. of Environmental Reg.
4520 Oak Fair Blvd.
Tampa, Florida 33610-9544



DOWTHERM HEATER STACK

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

Stack Height: 20 ft. Stack Diameter: 2.5 ft.
 Gas Flow Rate: 13,068 ACFM 5664 DSCFM Gas Exit Temperature: 650 °F.
 Water Vapor Content: 7.9 % Velocity: 44.37 FPS

SECTION IV: INCINERATOR INFORMATION

N/A

Type of Waste	Type D (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) _____



December 5, 1990

Project No. 215-4

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation
Florida Department of Environmental Reg.
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Indian River County - AP
Hercules, Inc.
Fluidized Bed Citrus
Peel Dryer & Hot Oil
Heating System
AC31-188443

RECEIVED
PER-MAIL ROOM
1990 DEC 11 AM 9:35

Dear Mr. Fancy,

We are in receipt of your November 27, 1990 letter requesting additional information to complete the referenced application. The information is addressed in the order requested.

1. Enclosed find check in the amount of \$200.00 for additional permit fee required for the citrus peel dryer.
2. The currently permitted allowable SO₂ emissions are calculated below.

Large Dryer A031-162463

223 GPH (Max) #6 fuel oil 2.5% sulfur (Max)

$$(.223)157(2.5) \left(\frac{3000 \text{ hr./yr.}}{2000 \text{ lbs/ton}} \right) = 131.3 \text{ ton/yr.}$$

Small Dryer A031-182789

57.12 GPH (Max) #6 fuel oil 2.5% sulfur (Max)

$$(.05712)157(2.5) \left(\frac{4752 \text{ hr./yr.}}{2000 \text{ lbs/ton}} \right) = 53.3 \text{ tons/yr.}$$

Total SO₂ Emission = 184.6 ton/yr.
Currently Permitted.

With the additional 90.15 tons/yr. of SO₂ from this new dryer, the new total will exceed 250TPY and PSD will apply.

To avoid PSD permitting, we are requesting on behalf of Hercules, Inc., that permit #A031-162463 and A031-182789 be amended to reduce the sulfur content in the #6 fuel oil from 2.5% to 1.0% maximum. Using #6 fuel oil with 1.0% sulfur maximum, we calculate the total SO₂ emissions below.

001031



BOTTORF
Associates Inc.

6720 SE WATERS COMMERCE PARKWAY • ORLANDO, FLORIDA 32810-4278



\$

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation
Florida Department of Environmental Reg.
2600 Blair Stone Road
Tallahassee, Florida 32399-2400



Large Dryer

$$(.223)157(1) \left(\frac{3000 \text{ hr./yr}}{2000 \text{ lbs./ton}} \right) = 52.52 \text{ tons/yr.}$$

Small Dryer

$$(.05712)157(1) \left(\frac{4752 \text{ hrs/yr.}}{2000 \text{ lbs/ton}} \right) = 21.31 \text{ tons/yr.}$$

New Fluidized Bed Dryer

$$= 90.15 \text{ tons/yr.}$$

$$\text{Total SO}_2 \text{ Emission} = 164 \text{ tons/yr.}$$

3. The peel will be fed to the dryer with a screw conveyor. Dry peel will directly fall from the dryer into a container or a bag.
4. With the existing dryers converting to a 1% sulfur #6 fuel oil, no additional storage tanks will be necessary. All three dryers can now feed from one tank.
5. Enclosed is a typical fuel oil analysis for the oil to be used. As you can see, the nitrogen content is 0.4 percent. The NOX emission from this new dryer is calculated below.

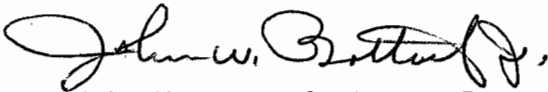
$$22 + 400(.4)^2 = 86 \text{ lbs/1000 gallons.}$$

$$(.159 \text{ kgph})(86) = 13.67 \text{ lbs/hr.}$$

$$13.67 \text{ lbs/hr.} \left(\frac{7224 \text{ hrs/yr.}}{2000 \text{ lbs/ton}} \right) = 49.4 \text{ tons/yr.}$$

We trust this completes the referenced application. If you have any additional questions, please call Roger Caldwell at 298-0846.

Very truly yours,



John W. Bottorf, Jr., P.E.

JWB/ms

Cy: Joe Stidham
Chuck Collins, P.E., Central District DER

C. Phillips



Coastal Fuels Marketing, Inc.
A SUBSIDIARY OF THE COASTAL CORPORATION

The Energy People

TYPICAL ANALYSIS

NO. 6 FUEL OIL (1% MAX SULPHUR)

GRAVITY, API @ 60 F.	12.0
FLASH POINT, FMCC, F	200
VISCOSITY, SSU @ 122 F	300 Max
FOUR POINT, F	35
SULPHUR, WT %	1.0% Max
B.S.& W. BY CENTRIFUGE, WT %02
ASH, WT %04
B.T.U. PER GALLON	151,000
NITROGEN	0.4

P. O. BOX 498
PALMETTO, FLORIDA 34220



BEST AVAILABLE COPY
Hercules Incorporated

Hopewell
Virginia

MELLON BANK, N.A.

DATE 12-5-90

No. 008-01615

60-160
433

PAY THE SUM OF 200 DOLLARS

\$ 200.00

TO THE ORDER OF Florida Department of Environmental Regulation

On. H. [Signature]

ATORY

7053

CHECK IS VOID IF COLORED BACKGROUND IS ABSENT—BACK OF THIS CHECK CONTAINS AN ARTIFICIAL WATERMARK

Florida Department of Environmental Reg.
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Indian River County - AP
Hercules, Inc.
Fluidized Bed Citrus
Peel Dryer & Hot Oil
Heating System
AC31-188443

RECEIVED
SERIAL ROOM
11 AM 9 35

Dear Mr. Fancy,

We are in receipt of your November 27, 1990 letter requesting additional information to complete the referenced application. The information is addressed in the order requested.

1. Enclosed find check in the amount of \$200.00 for additional permit fee required for the citrus peel dryer.
2. The currently permitted allowable SO₂ emissions are calculated below.

Large Dryer A031-162463

223 GPH (Max) #6 fuel oil 2.5% sulfur (Max)

$$(.223)157(2.5) \left(\frac{3000 \text{ hr./yr.}}{2000 \text{ lbs/ton}} \right) = 131.3 \text{ ton/yr.}$$

Small Dryer A031-182789

57.12 GPH (Max) #6 fuel oil 2.5% sulfur (Max)

$$(.05712)157(2.5) \left(\frac{4752 \text{ hr./yr.}}{2000 \text{ lbs/ton}} \right) = 53.3 \text{ tons/yr.}$$

Total SO₂ Emission = 184.6 ton/yr.
Currently Permitted.

With the additional 90.15 tons/yr. of SO₂ from this new dryer, the new total will exceed 250TPY and PSD will apply.

To avoid PSD permitting, we are requesting on behalf of Hercules, Inc., that permit #A031-162463 and A031-182789 be amended to reduce the sulfur content in the #6 fuel oil from 2.5% to 1.0% maximum. Using #6 fuel oil with 1.0% sulfur maximum, we calculate the total SO₂ emissions below.

P 256 396 141
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
 NOT FOR INTERNATIONAL MAIL
 (See Reverse)

U.S.G.P.O. 1989-234-555
PS Form 3800, June 1985

Sent to Mr. Joseph P. Stidham	
Street and No. Plant Manager, Hercules, Inc.	
City, State and ZIP Code 7625 Ninth St., S.W. Vero Beach, FL 32968	
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	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 11-27-90 Permit: AC 31-188443	

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. Joseph P. Stidham Plant Manager Hercules, Inc. 7625 Ninth St., S.W. Vero Beach, FL 32968	4. Article Number P 256 396 141 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Joseph P. Stidham</i>	
7. Date of Delivery 11-29	



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

November 27, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Joseph P. Stidham
Plant Manager
Hercules, Inc.
7625 Ninth St., S.W.
Vero Beach, FL 32968

Dear Mr. Stidham:

Re: Fluidized Bed Citrus Peel Dryer & Hot Oil Heating System
Construction Permit Application No. AC31-188443

On October 29, 1990, the Department received Hercules' application to construct a fluidized bed citrus peel dryer and hot oil heating system. The application is deemed incomplete. Additional information is required for further processing of this application.

Within 30 days of receipt of this letter, please respond to the following items of incompleteness:

1. The citrus peel dryer and the hot oil heating system are two separate sources which will be individually regulated. A permit application fee of \$200 is required for the citrus peel dryer.
2. The application states that the Prevention of Significant Deterioration (PSD) requirement does not apply to these sources. However, a review of our files indicates that the currently permitted allowable emissions of sulfur dioxide at the facility exceed 250 tons per year. As Table 500-2 in Chapter 17-2, F.A.C. lists the significant sulfur dioxide emission rate to be 40 tons per year, and the application states actual sulfur dioxide emissions will be 90 tons per year, please explain why you feel these sources should not be subject to PSD requirements.
3. How will the peel be fed to and collected from the dryer? Are the existing "airveying" system and dump hopper to be utilized, or is separate support equipment to be installed?
4. Our records indicate that the currently permitted fuel oil sulfur content for an existing peel dryer heater is 2.5%. How many fuel oil storage tanks are at the facility? Will a new fuel oil storage tank be built for the proposed 1% sulfur fuel oil? If so, this application will remain incomplete until a completed construction permit application is submitted for the tank.

Hercules, Inc.
AC31-188443
November 27, 1990
Page 2 of 2

5. As the AP-42 factor used to compute the nitrogen oxides emissions is dependent on the nitrogen content of the fuel, please submit this information.

If you have any questions concerning this request for additional information, please contact Cindy Phillips at (904)488-1344.

Sincerely,

A handwritten signature in cursive script, appearing to read "C. H. Fancy for".

C. H. Fancy, P.E.
Chief
Bureau of Air Regulation

CHF/CP

c: John W. Bortorf, Jr., P.E., Bortorf & Associates
Chuck Collins, P.E., Central District

NOx EMISSIONS

Large Dryer

$$(0.223 \frac{\text{lb NO}_x}{\text{hr}}) (86 \frac{\text{# NO}_x}{1000 \text{ gal}}) (\frac{3000 \text{ hrs}}{\text{yr}}) (\frac{1 \text{ ton}}{2000 \text{ lbs}}) = 28.8 \text{ TPY}$$

Small Dryer

$$(0.05712 \frac{\text{lb NO}_x}{\text{hr}}) (86 \frac{\text{# NO}_x}{1000 \text{ gal}}) (\frac{4752 \text{ hrs}}{\text{yr}}) (\frac{1 \text{ ton}}{2000 \text{ lbs}}) = 11.67 \text{ TPY}$$

New Fluidized Bed Dryer

$$\frac{49.4}{89.9 \text{ TPY}} \\ \text{C 50 TPY}$$

	(* ESTIMATED) ALLOWABLE NOX	(* ESTIMATED) ALLOWABLE SO ₂	(* ESTIMATED) (** ACTUAL) ALLOWABLE PM
01		87 #/hr* , 207 TPY*	1.3 #/hr 3.1 TPY
02			0.002 TPY**
03			2.04 #/hr 2.0 TPY
05			0.003 TPY**
06			
07	10.18 #/hr 22 TPY	81.7 #/hr 250 TPY	22.99 #/hr 52 TPY 1.8**
08			0.002** TPY
09			1.85 #/hr
10			3.65 #/hr 9.81 TPY
11	8.74 #/hr* 31.57 TPY*	24.96 #/hr* 90.15 TPY*	2 #/hr* 7.47 TPY*
12			2.55 #/hr* 9.21 TPY*

SIGNIFICANT EMISSION RATE SO₂ 40 TPY

Particulate for Dryer 9.21 TPY 1E < 25 TPY \$200

SO₂ for Oil Heater 90.15 TPY SO₂ ≤ 1C < 100 \$1000

5/25/83 Debottlenecking

- J. Turner
- 182789
- 01 PEEL DRYER
 - 02 DRY PECTINATE HARVESTING SYSTEM W/BAGHOUSE CONTROL
 - 03250 05 PEEL DUMP HOPPER W/BAGHOUSE CONTROL
 - 06 NITROGEN ATMOSPHERE SYSTEM W/VAPOR SCRUBBER CONTROL

- 110154
- 03 PECTINATE DRYER W/DUAL CYCLONE CONTROL

- J. Turner
- 162463
- 07 CITRUS PEEL DRYER W/WASTE HEAT EVAPORATOR & SCRUBBER

- 111876
- 08 SODA ASH UNLOADING & STORAGE SYSTEM

- A. ZAHM
- 170740
- 09 BAGHOUSE (FERMENTATION PROCESS) PECTIN PIN MILL

- J. Turner
- 176791
- 10 PELLET COOLER CONTROLLED BY A CYCLONE

W

01 PEEL ORYER (AZOL) A031-182789 NO V.E. INFO
POTENT. SO₂ 87 #/hr Estimated 207 TPY
1.67% S PM EST. 3.1 TPY

02 DRY PECTINATE AIRVEYING SYSTEM W/BAGHOUSE CONTROL
A031-182789 20% OP.
NO SO₂
ACTUAL 89 PM: 0.002 TPY

03 PECTINATE ORYER W/DUAL CYCLONE CONTROL A031-110154
VE LIMIT?
NO SO₂
PM ALLOW: 2 TPY ACTUAL 89: 1.36 TPY

05 PEEL DUMP HOPPER W/BAGHOUSE CONTROL AC 31-182789
20% VE ACT. 89 PM 0.003 TPY
NO SO₂

06 NITROGEN ATMOSPHERE SYSTEM W/VAPOR SCRUBBER CONTROL
A031-182789 NO VE
NO SO₂

07 CITRUS PEEL ORYER W/WASTE HEAT EVAPORATOR & SCRUBBER
NO VE REQUIRED A031-162463
ALLOW. SO₂: 81.7 #/hr 250 TPY ACTUAL 89: 85 TPY
2.5% S PM ALLOW 52 TPY, 22.99 #/hr ACTUAL 89 1.8 TPY

08 SODA ASH UNLOADING & STORAGE SYSTEM A031-11876
5% VE STACK 24', 120°F WET SCRUBBER PM 3.5 TPH PM 0.002 TPY
NO SO₂ PM 89 ACTUAL 0.002 TPY TEST NOT REQUIRED

09 BAGHOUSE AC 31-170740 685 #/hr 15' STACK 80°F FERMENTATION
NO SO₂ PM ALLOW 1.85 #/hr Est. 0.17 TPY 5% opacity PROCESS?

365 #/hr 20% VE 10 PELLET COOLER CONTROLLED BY A CYCLONE A031-176791 8800 #/hr
NO SO₂ 36' STACK 100°F

APPLICATION TRACKING SYSTEM

10/30/90

APPL NO: 188443

APPL RECVD: 10/29/90 TYPE CODE: AC SUBCODE: 1C LAST UPDATE: 10/29/90

DER OFFICE RECVD: ORL DER OFFICE TRANSFER TO: APPLICATION COMPLETE: / /

DER PROCESSOR: A. ZAHM B. ANDREWS

APPL STATUS: AC DATE: 10/29/90 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)

RELIEF: (SSAC/EXEMPTIONS/VARIANCE)

(Y/N) N MANUAL TRACKING DISTRICT: 30 COUNTY: 31
(Y/N) N OGC HEARING REQUESTED LAT/LONG: 27.35.05/80.28.57
(Y/N) N PUBLIC NOTICE REQD? BASIN-SEGMENT:
(Y/N) N GOV BODY LOCAL APPROVAL REQD? COE #:
(Y/N) Y LETTER OF INTENT REQD? (I/ISSUE D/DENY) ALT#:

PROJECT SOURCE NAME: HERCULES/FLUIDIZED BED CITRUS PEEL

STREET: 7625 NINTH ST SW CITY: VERO BEACH

STATE: FL ZIP: PHONE:

APPLICATION NAME: HERCULES, INC.

STREET: 7625 NINTH STREET SW CITY: VERO BEACH

STATE: FL ZIP: 32968 PHONE: 407-569-3800

AGENT NAME: BOTTORF & ASSOCIATES, INC.

STREET: 4595 PARKBREEZE CT CITY: ORLANDO

STATE: FL ZIP: 32808 PHONE: 407-298-0846

FEE #1 DATE PAID: 10/29/90 AMOUNT PAID: 01000 RECEIPT NUMBER: 00164461

B DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE
C DATE DER SENT DNR APPLICATION/SENT DNR INTENT
D DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP.
E DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT
E DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT
E DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT
E DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT
E DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT
E DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT
F DATE LAST 45 DAY LETTER WAS SENT
G DATE FIELD REPORT WAS REQ--REC
H DATE DNR REVIEW WAS COMPLETED
I DATE APPLICATION WAS COMPLETE
J DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS
K DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT
L DATE PUBLIC NOTICE WAS SENT TO APPLICANT
M DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED
N WAIVER DATE BEGIN--END (DAY 90)

COMMENTS:

ROUTING AND
CONTROL SLIP

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO
ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)	Initial
Barry Andrews	Date
2. Div. of Air Resources	Initial
	Date
3.	Initial
	Date
4.	Initial
	Date

RECEIVED
NOV 15 1990

REMARKS:

I spoke to Bruce Mitchell on this one and apologized for its lateness.

DER - BAQM

INFORMATION	
<input type="checkbox"/>	Review & Return
<input type="checkbox"/>	Review & File
<input type="checkbox"/>	Initial & Forward
DISPOSITION	
<input type="checkbox"/>	Review & Respond
<input type="checkbox"/>	Prepare Response
<input type="checkbox"/>	For My Signature
<input type="checkbox"/>	For Your Signature
<input type="checkbox"/>	Let's Discuss
<input type="checkbox"/>	Set Up Meeting
<input type="checkbox"/>	Investigate & Report
<input type="checkbox"/>	Initial & Forward
<input type="checkbox"/>	Distribute
<input type="checkbox"/>	Concurrence
<input type="checkbox"/>	For Processing
<input type="checkbox"/>	Initial & Return

FROM: John Turner

DATE 11/14/90
PHONE SC 325-1202

Hercules - Potential Emissions

(t/yr)

	PM	SO2	NOX
1. Bulk Unloading & Storage System	3		
2. Pectinate Dryer (waste heat)	1		
3. Pellet Cooler	10		
4. Pectin Pin Mill	0.2		
5. Peel Dryer (Large)	~ 12	130	18
6. Dump Hopper	1		
7. Pectinate Air drying System	0.1		
8. Nitrogen System (VOC only)	—	—	—
9. Peel Dryer (A-202)	~ 4	57	8
	<u>31</u>	<u>187</u>	<u>26</u>

4595 PARKBREEZE CT. • ORLANDO, FLORIDA 32808-1043 • (407) 298-0846

LETTER OF TRANSMITTAL

DATE: October 25, 1990

TO: Air Section
 Central District
 Florida Dept. of Environmental Reg.
 3319 Maguire Blvd., Suite 232
 Orlando, Florida 32803-3767

JOB NO. 215-4



We are forwarding to you

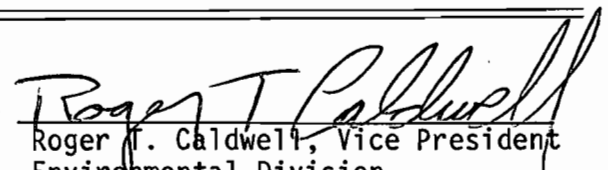
<input type="checkbox"/> Attached	<input type="checkbox"/> Delivered by
<input type="checkbox"/> Tracings	<input checked="" type="checkbox"/> Applications
<input type="checkbox"/> Prints	<input type="checkbox"/> Sketch
<input type="checkbox"/> Specifications	<input type="checkbox"/> Other
<input type="checkbox"/> Shop Drawings	<input type="checkbox"/> Copy of Letter
<input type="checkbox"/> Proposal	<input type="checkbox"/> Catalog Cut Sheet
<input type="checkbox"/> Report	

Copies	Dated	Description
4	10/25/90	Application to construct Air Pollution Sources, Hercules, Inc., Indian River County, Fluidization Bed Citrus Peel Dryer & Hot Oil Heating System, along with check #008-01558 in the amount of \$1,000.00 for permit fees.

These are transmitted:

<input type="checkbox"/> For Your Use	<input type="checkbox"/> No Exceptions Taken	<input type="checkbox"/> For Review
<input checked="" type="checkbox"/> As Required	<input type="checkbox"/> Make Corrections Noted	<input type="checkbox"/> For Return
<input type="checkbox"/> As Requested	<input type="checkbox"/> Amend & Resubmit	<input type="checkbox"/> Other
<input type="checkbox"/> For Your Signature	<input type="checkbox"/> Rejected-See Remarks	

Cy: Joseph P. Stidham, Plant Manager

By: 
 Roger T. Caldwell, Vice President
 Environmental Division



Permit Data Form

Project Source Name Hercules Fluidized Bed Citrus Peel Dryer
 Type Code: AC Subcode IC Check if: GP Exempt
 Correct Fee \$1,000.00
 Amount Received 11000.00
 Amount Refund -0-
 Permit Processor's Initial ADZ Data Entry Operator's Initial _____
 Comments:

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

164461

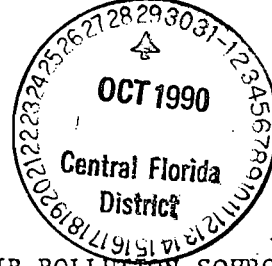
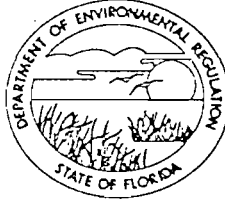
RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Hercules, LLC Date 10/29/90
 Address 7625 Ninth St. Vero Beach, 32968 Dollars \$ 1,000.00
 Applicant Name & Address _____
 Source of Revenue Fluidized Bed Citrus Peel Dryer
 Revenue Code 0010310K008-01558 Application Number AC31-135443
 By Chris

	HERCULES	Hercules Incorporated	Hopewell Virginia
MELLON BANK, N.A. Pittsburgh, Pa.	DATE 10-23-90	No. 008-01558	60-160 433
PAY TO THE ORDER OF		THE SUM OF ONE THOUSAND DOLLARS	
Department of Environmental Regulation		\$ 1,000.00	
		<u>Dr. H. Jones</u>	
CHECK IS VOID IF COLORED BACKGROUND IS ABSENT—BACK OF THIS CHECK CONTAINS SIMULATED WATERMARK			

DEPARTMENT OF ENVIRONMENTAL REGULATION

ST. JOHNS RIVER DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ALEX SENKEVICH
DISTRICT MANAGER

OCT 29 1990
1000.00

CENTRAL FLORIDA DISTRICT

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: FLUIDIZED BED CITRUS PEEL DRYER [] New¹ [] Existing¹

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

COMPANY NAME: HERCULES, INCORPORATED COUNTY: INDIAN RIVER

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) FLUIDIZATION BED CITRUS PEEL DRYER & HOT OIL HEATING SYST.

SOURCE LOCATION: Street 7625 NINTH ST., S.W. City VERO BEACH

UTM: East 17-754.99 KM North 3051.02 KM

Latitude 27° 35' 5" N Longitude 80° 28' 57" W

APPLICANT NAME AND TITLE: JOSEPH P. STIDHAM, PLANT MANAGER

APPLICANT ADDRESS: 7625 NINTH ST., S.W., VERO BEACH, FLORIDA 32968

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of HERCULES INCORPORATED

I certify that the statements made in this application for a CONSTRUCTION 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: Joseph P. Stidham
JOSEPH P. STIDHAM, PLANT MANAGER
Name and Title (Please Type)

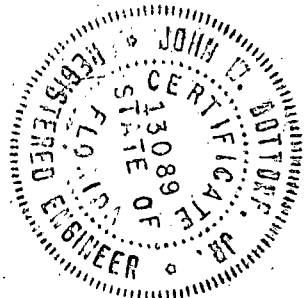
Date: 10/22/90 Telephone No. 407/569-3800

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

¹ 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 John W. Bottorf, Jr.
JOHN W. BOTTORF, JR., P.E.

Name (Please Type)

BOTTORF & ASSOCIATES, INC.

Company Name (Please Type)

4595 PARKBREEZE CT., ORLANDO, FLORIDA 32808-1057

Mailing Address (Please Type)

Florida Registration No. 13089 Date: 10-26-90 Telephone No. 407/298/0846

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.

THIS PROJECT IS FOR THE CONSTRUCTION OF A FLUIDIZED BED CITRUS PEEL DRIER, MANUFACTURED BY RICA-TEC WITH INDIRECT HEATING. HEAT WILL BE SUPPLIED BY A 24 MMBTU/HR. HEAT TRANSFER OIL HEATER AND HEAT EXCHANGER SYSTEM THAT RECIRCULATES "DOWTHERM" HEAT TRANSFER OIL. THE OIL HEATER WILL BE FIRED WITH NEW NO. 6 FUEL OIL (1% SULFUR MAX.), AND WILL HAVE A SEPARATE EXHAUST STACK. PARTICULATE EMISSIONS FROM THE DRYER WILL BE CONTROLLED WITH HIGH EFFICIENCY DUAL CYCLONES MANUFACTURED BY RICA-TEC, THAT ARE 99.3% EFFICIENT. THIS PROJECT WILL RESULT IN FULL COMPLIANCE.

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

Start of Construction DECEMBER 1990 Completion of Construction JUNE 1991

- 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.)

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

N/A

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 43 ;
if power plant, hrs/yr _____ ; if seasonal, describe: THE PLANT WOULD OPERATE DURING THE
ORANGE/GRAPEFRUIT SEASON AND ALSO DURING THE LIME/LEMON SEASON, APPROXIMATELY MID. NOV.
THROUGH MAY, AND JULY THROUGH MID. OCTOBER

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? NO
a. If yes, has "offset" been applied? _____
b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
c. If yes, list non-attainment pollutants. _____
2. Does best available control technology (BACT) apply to this source? NO
If yes, see Section VI. _____
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 justifi-
cation 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:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
CITRUS PEEL	PARTICULATE	3.93	9260	

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

1. Total Process Input Rate (lbs/hr): 9260 LB/HR.

2. Product Weight (lbs/hr): 1500 LBS/HR. DRIED CITRUS PEEL (TO BE USED IN THE PRODUCTION OF PECTIN).

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

Name of Contaminant	Emission ¹		Allowed Emission Rate per Rule 17-2	Allowable Emission lbs/hr ³	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
PARTICULATE	4.62	16.68	.610(1)	9.28	2,644,468	1322	
SO ₂	24.96	90.15	-----	-----	180,311	90.15	
CO	0.79	2.87	-----	-----	5,743	2.87	
NOX	8.74	31.57	-----	-----	63,138	31.57	
VOC	0.04	0.14			289	0.14	

¹See Section V, Item 2.

²Reference 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)

³Calculated from operating rate and applicable standard.

⁴Emission, 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)
CYCLONE	PARTICULATE	99.3%	20 AND LARGER	MFG. CALC.

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
NO. 6 FUEL OIL <1% SULFUR	125 GAL/HR.	159 GAL/HR.	24 MILLION BTU/HR.

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

Fuel Analysis:

Percent Sulfur: 1% SULFUR Percent Ash: 0.04%
 Density: <8.22 lbs/gal Typical Percent Nitrogen: _____
 Heat Capacity: _____ BTU/lb 151,000 BTU/GAL. 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 _____

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

WASH WATER DISPOSAL IN INJECTION WELL.

FLUID BED DRIER STACK

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

Stack Height: 55 ft. Stack Diameter: 4 ft.
 Gas Flow Rate: 41,775 ACFM 30846 DSCFM Gas Exit Temperature: 190 °F.
 Water Vapor Content: 9.1 % Velocity: 55.4 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) _____

DOWTHERM HEATER STACK

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

Stack Height: 52 ft. Stack Diameter: 4.25 ft.
 Gas Flow Rate: 13,068 ACFM 5664 DSCFM Gas Exit Temperature: 650 °F.
 Water Vapor Content: 7.9 % Velocity: 15.35 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)]
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.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
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.)
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).
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.
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).
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.

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

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

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:

¹Explain method of determining efficiency.

²Energy 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:

¹Explain method of determining efficiency.

²Energy 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:

¹Applicant 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

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ () SO₂* _____ 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.

HERCULES INCORPORATED

PROCESS DESCRIPTION

"Dow Therm" heat transfer oil is heated in a 24 MMBTU/hr. oil heater that has a separate stack. The heat transfer oil circulates through a heat transfer unit. Prefiltered clean air flows through the heat transfer unit and is heated. Heated air flows up through the bottom of the fluidized bed dryer and through a moving screen-type conveyor inside the dryer. Wet peel is loaded onto the screen-type conveyor and is dried as it travels through the dryer. As the peel dries, it is lifted and agitated by the upward heated air flow to cause uniform drying of the peel.

The dryer above the screen is funnel shaped, (larger at the top), to reduce the air velocity as it rises. The reduction of air velocity stops the peel from remaining entrained in the air stream as the air exits the top of the dryer.

The heated air, moisture from the citrus peel and some particulate flows out of the dryer and into high efficiency dual cyclones that remove 99.3% of the particles entering. Relatively clean air flows out of the dual cyclones through an exhaust fan and up a stack.

HERCULES INCORPORATED

EMISSION ESTIMATE CALCULATIONS FOR OIL HEATER STACK

BASED ON THE FOLLOWING:

1. AP42, TABLE 1.3-1.
2. 159 GAL/HR. NEW #6 FUEL OIL WITH 1% SULFUR (MAX.)
3. 7224 HOURS PER YEAR OF OPERATING TIME.

$$\text{PARTICULATE} = (13 \text{ LBS}/1000 \text{ GAL.}) \left(\frac{159 \text{ GAL}/\text{HR.}}{1000} \right) = 2.067 \text{ LBS}/\text{HR.}$$

$$(2.067 \text{ LBS}/\text{HR.}) \left(\frac{7224 \text{ HRS}/\text{YR.}}{2000 \text{ LBS}/\text{TON}} \right) = 7.47 \text{ TONS}/\text{YR.}$$

$$\text{SO}_2 = (157(1) \text{ LBS}/1000 \text{ GAL.}) \left(\frac{159 \text{ GAL}/\text{HR.}}{1000} \right) = 24.96 \text{ LBS}/\text{HR.}$$

$$(24.96 \text{ LBS}/\text{HR.}) \left(\frac{7224 \text{ HRS}/\text{YR.}}{2000 \text{ LBS}/\text{TON}} \right) = 90.15 \text{ TONS}/\text{YR.}$$

$$\text{CO} = (5 \text{ LBS}/1000 \text{ GAL.}) \left(\frac{159 \text{ GAL}/\text{HR.}}{1000} \right) = 0.795 \text{ LBS}/\text{HR.}$$

$$(0.795 \text{ LBS}/\text{HR.}) \left(\frac{7224 \text{ HRS}/\text{YR.}}{2000 \text{ LBS}/\text{TON}} \right) = 2.87 \text{ TONS}/\text{YR.}$$

$$\text{NOX} = (55 \text{ LBS}/1000 \text{ GAL.}) \left(\frac{159 \text{ GAL}/\text{HR.}}{1000} \right) = 8.74 \text{ LBS}/\text{HR.}$$

$$(8.74 \text{ LBS}/\text{HR.}) \left(\frac{7224 \text{ HRS}/\text{YR.}}{2000 \text{ LBS}/\text{TON}} \right) = 31.57 \text{ TONS}/\text{YR.}$$

$$\text{VOC} = (.28 \text{ LBS}/1000 \text{ GAL.}) \left(\frac{159 \text{ GAL}/\text{HR.}}{1000} \right) = 0.04 \text{ LBS}/\text{HR.}$$

$$(0.04 \text{ LBS}/\text{HR.}) \left(\frac{7224 \text{ HRS}/\text{YR.}}{2000 \text{ LBS}/\text{TON}} \right) = 0.14 \text{ TONS}/\text{YR.}$$

HERCULES INCORPORATED

PARTICULATE EMISSION CALCULATION FOR DRYER STACK

BASED ON THE FOLLOWING:

1. 9,260 LBS/HR. WET CITRUS PEEL TO THE DRYER (4.63 TPH).
2. 364 LBS/HR. INLET LOADING TO DUAL CYCLONES (BASED ON SIMILAR UNIT INFORMATION PROVIDED BY RICA-TEC A/S)
3. 99.3% OF TOTAL PARTICULATE ENTERING DUAL CYCLONES ARE GREATER THAN 20 MICRONS IN SIZE. (BASED ON SIMILAR UNIT INFORMATION PROVIDED BY RICA-TEC A/S)
4. ASSUME 100% OF PARTICLES 20 MICRONS AND LARGER ARE COLLECTED AND 100% OF PARTICLES LESS THAN 20 MICRONS ARE EXHAUSTED TO ATMOSPHERE.
5. 7224 HOURS PER YEAR OF OPERATING TIME.

$$\text{PARTICULATE} = 364 \text{ LBS/HR.} (1 - .993) = 2.55 \text{ LBS/HR.}$$

$$(2.55 \text{ LBS/HR.}) \left(\frac{7224 \text{ HRS/YR.}}{2000 \text{ LBS/TON}} \right) = 9.21 \text{ TONS/YR.}$$

NOTE: THE ABOVE CALCULATION IS JUST AN ESTIMATED EMISSION RATE AND SHOULD NOT BE USED AS AN ALLOWABLE EMISSION STANDARD.

ALLOWABLE PARTICULATES ARE BASED ON PROCESS RATE TABLE

$$E = 3.59(P)^{.62}$$
$$E = 3.59(4.63)^{.62}$$
$$E = 9.28 \text{ LBS/HR.}$$

HERCULES INCORPORATED

TOTAL PARTICULATE

OIL HEATER STACK = 2.07 LBS/HR.

CITRUS PEEL DRYER STACK = 2.55 LBS/HR.

TOTAL PARTICULATE = 4.62 LBS/HR.

$$(4.62 \text{ LBS/HR.}) \left(\frac{7224 \text{ HRS/YR.}}{2000 \text{ LBS/TON}} \right) = 16.68 \text{ TONS/YR.}$$

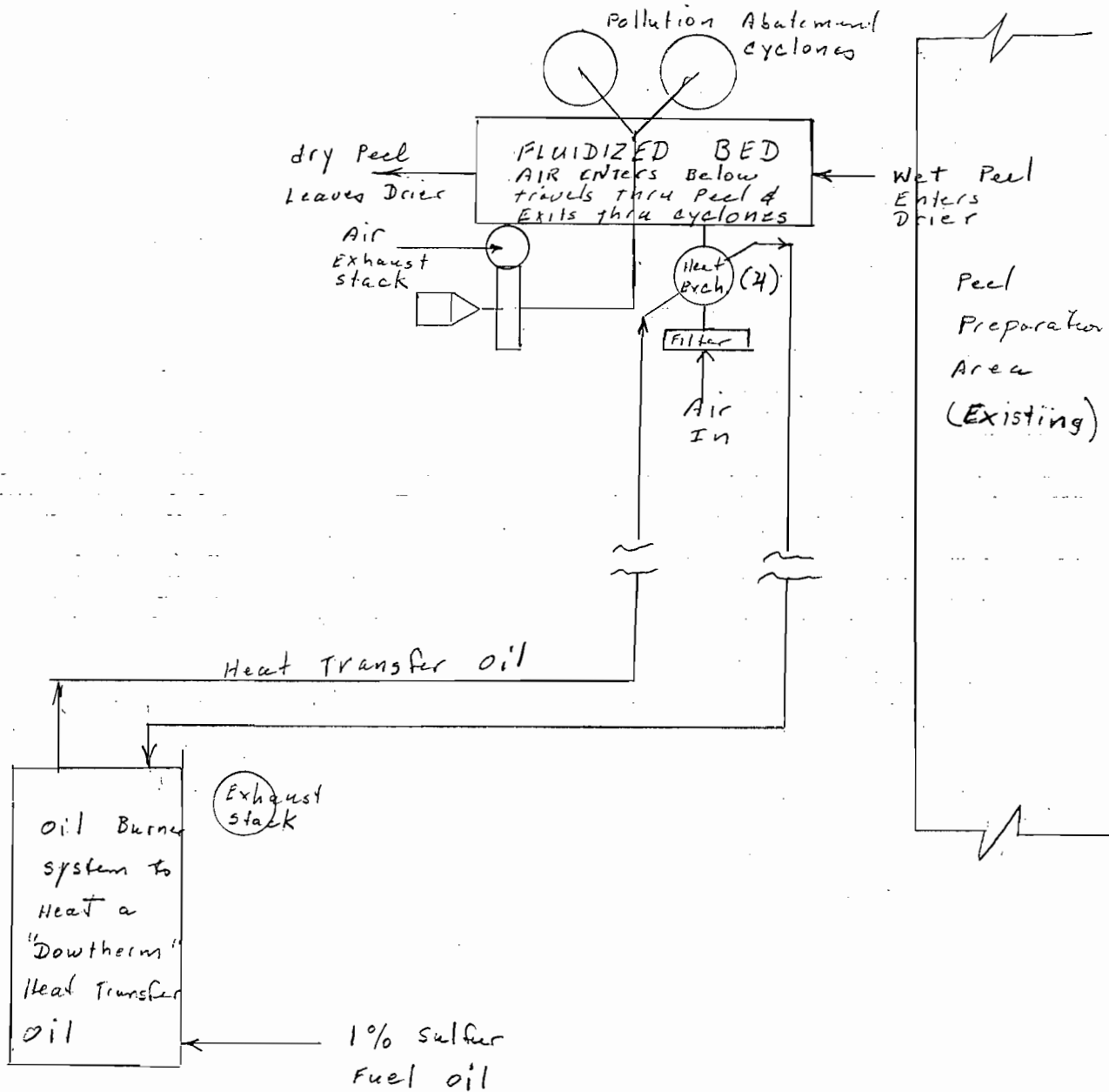
PROPOSED COMPLIANCE TESTING

OIL HEATER STACK

The oil heater operates essentially like a small process steam boiler, and will have the same type of emissions that a small boiler burning No. 6 fuel oil would have. We feel an opacity standard of 20% and a visible emission test (EPA Method 9) would be appropriate for this emission point.

CITRUS PEEL DRYER STACK

The fluidized bed citrus peel dryer should be subjected to Rule 17-2.610(1) process weight table (9.28 lbs/hr.) and Rule 17-2.610(2) general visible emission standard (20% opacity). Compliance should be determined using EPA Methods 1, 2, 4, 5 and 9.





RICA-TEC

ENGINEERING A/S

Hercules Incorporated
Att.: Mr. Joseph P. Stidham
7625 Ninth Street S.W.
Vero Beach, Florida 32960
USA

Mileparken 29
DK-2730 Herlev
Copenhagen - Denmark
Tlf. 42 94 31 11
+ 45 42 94 31 11
Telefax: 42 94 75 94
Int.: + 45 42 94 75 94
Bank: Den Danske Bank
Giro: 7 37 37 40
Reg.-nr.: 153.725

Deres ref.:

Vor ref.: 743-US.B01

Dato: 01.08.1990

Fluid-bed dryer for citrus peel.

The emission from the cyclones of the dryer has been calculated to approx. 1.2 kg/h at the design capacity (product inlet = 4600 kg/h, product outlet = 665 kg/h).

Due to the particle characteristics such prediction calculation is of cause to be evaluated with a relatively large margin.

Kind regards
RICA-TEC A/S

Kai Richardt

Encl.: Draft calculation.

kbl. Peltin. 2027-743.

13/6.90.

Emission - sorting of citrus hulls.

Estimat. - konservativt!

f-hast ~ 140 m/min:

S-hast ~ 100 m/min. 1.67 m/sec

RRB-diagr.: Est. faktisk part. fordeling
Korrigeres til runde part., $g=1$

100 m/min \Rightarrow faldhast \Rightarrow middel \varnothing runde, $g=1$
 $\sim 300 - 400 \mu\text{m.}$

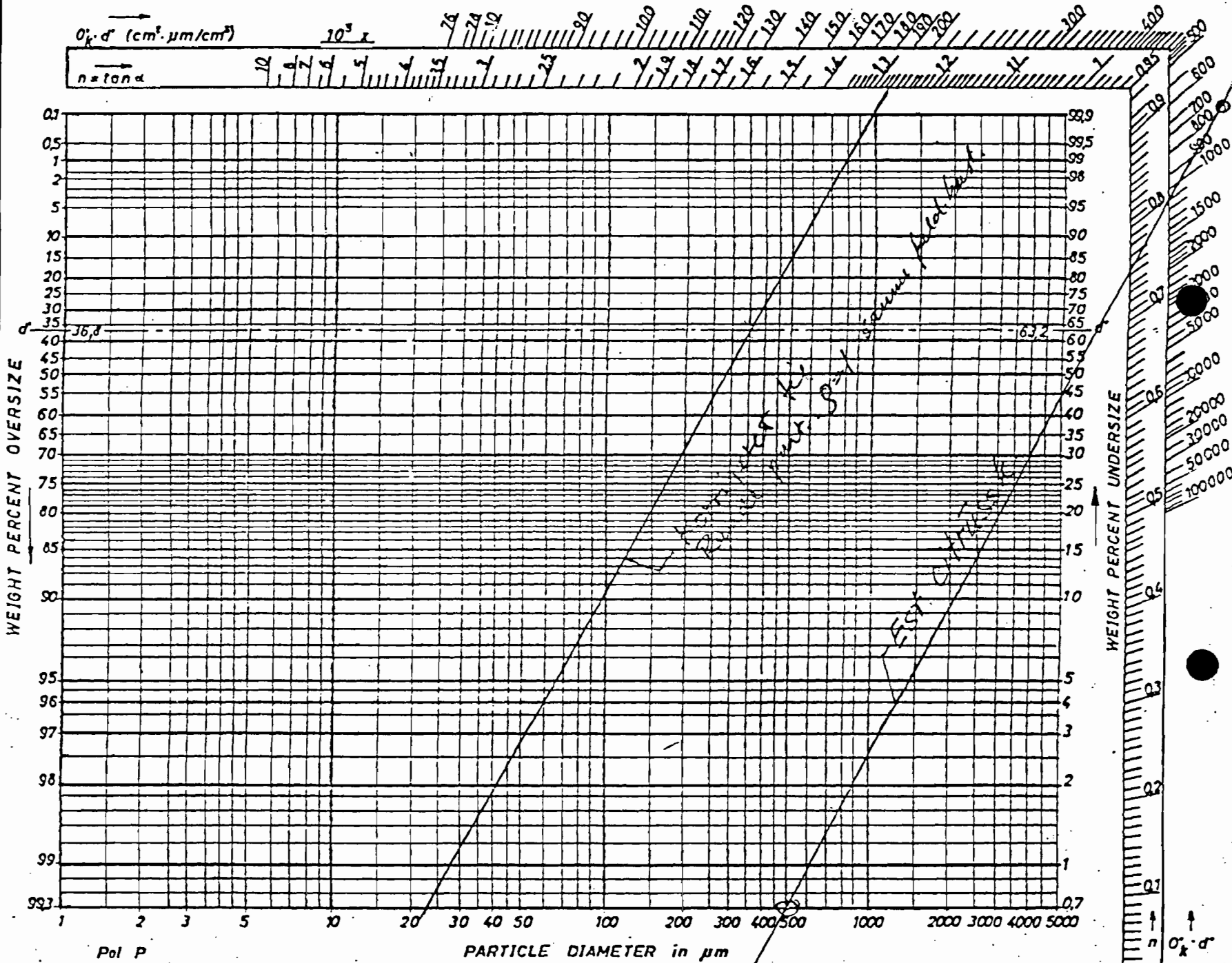
Estim. (konservativt.) cykl. taber

part. $< 20 \mu$ \Rightarrow

RRD diagr. tab $\sim 0,7\%$

Prod. til cykl. $\sim 25\%$ af 665 kg/h ~ 170 kg/h

Tab $\sim 0,7\%$ af 170 kg/h. ~ 1.2 kg/h.



PRODUCT:

REF. No.: 2027-743

TEST N°:

SPECIFICATIONS:

Cytus Svallet

RRB-mean diameter $d_m =$ _____ μm

Inclination parameter $n =$ _____

$O_k d' =$ _____ $\times 10^2 \text{ cm}^2 \cdot \mu\text{m/cm}^3$

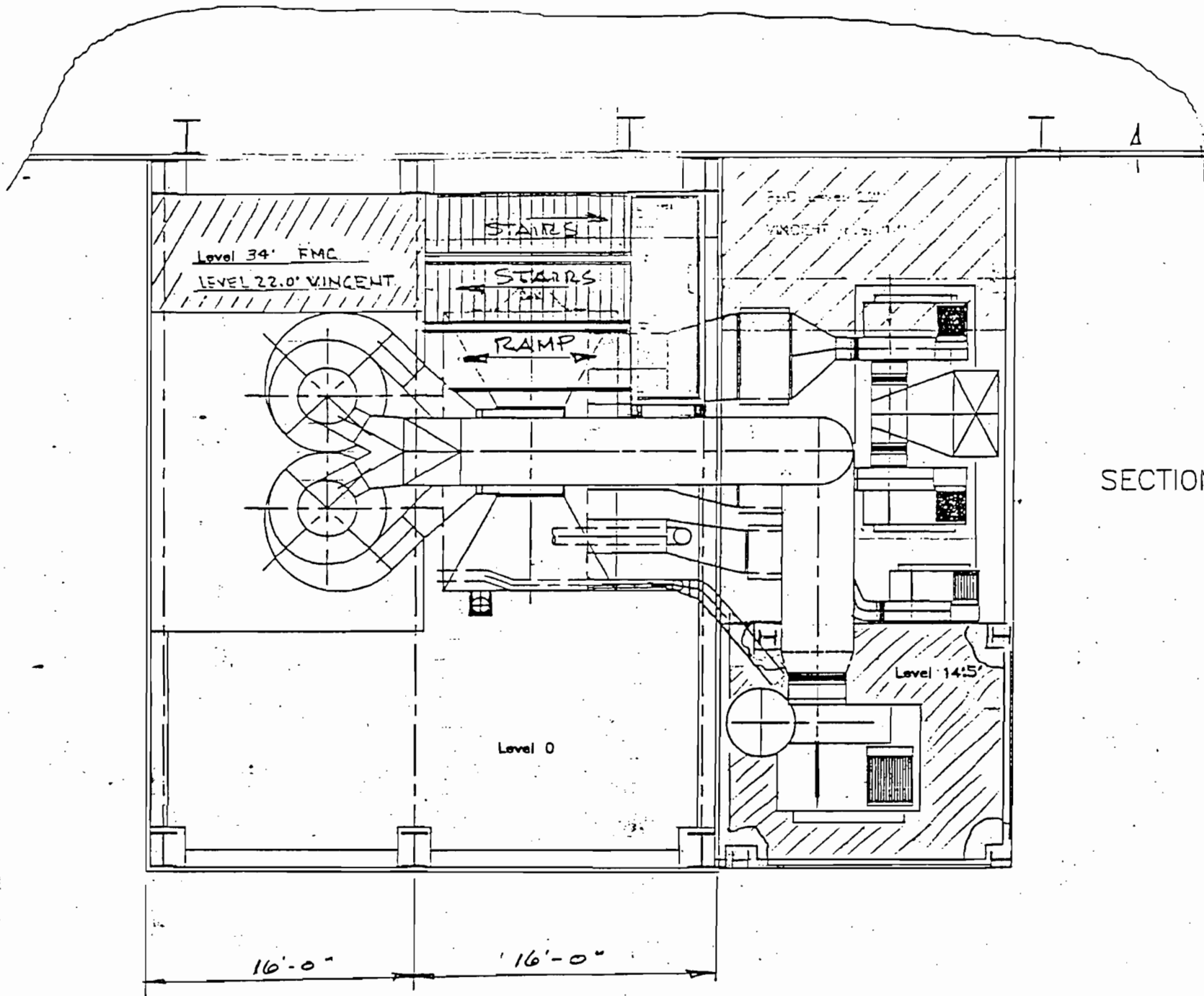
Specific surface $O_k =$ _____ cm^2/cm^3



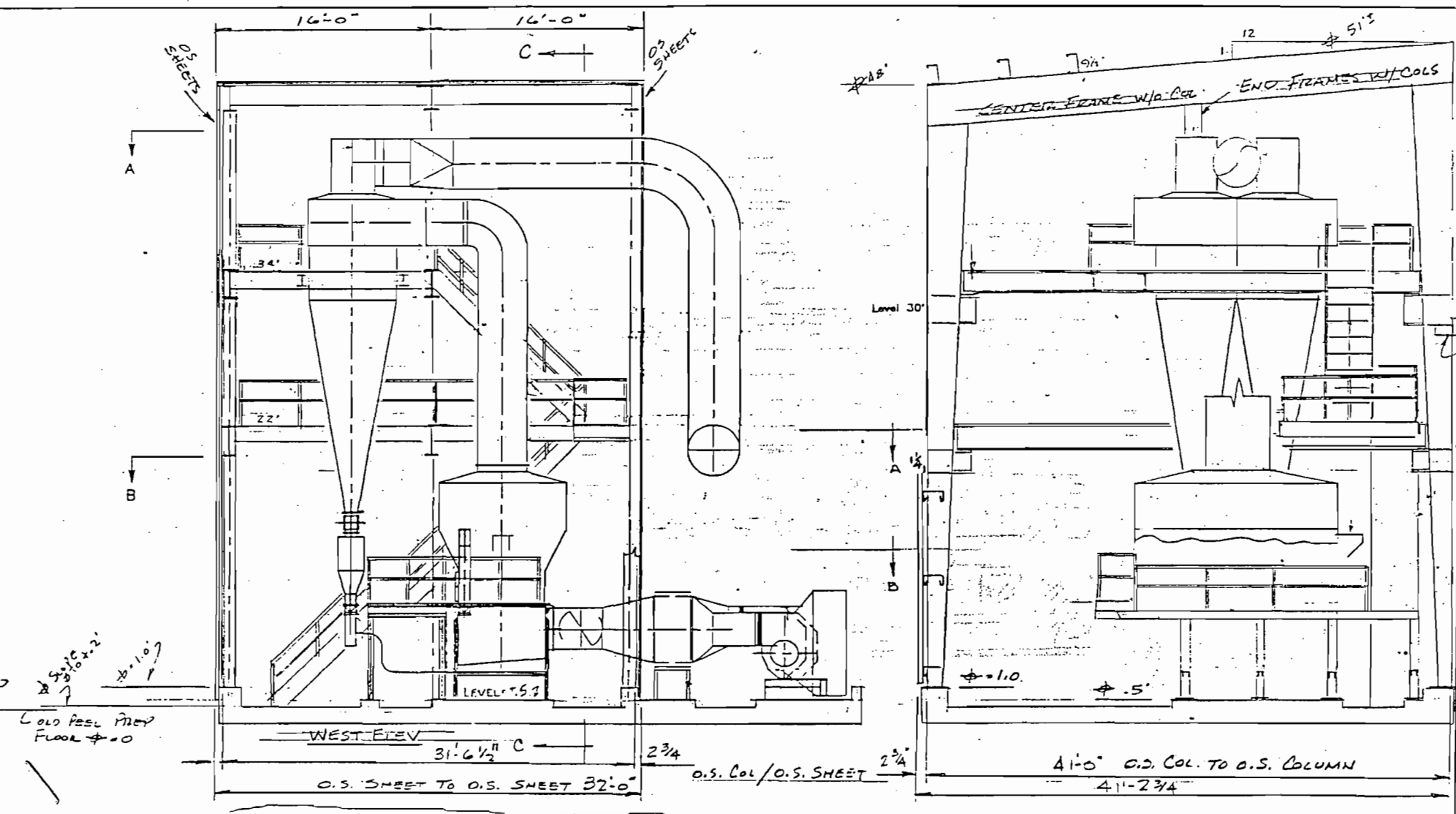
ENGINEERING APS
MILEPARKEN 29
DK-2730 HERLEV

Pol P





SECTION A-A



16'-0"

16'-0"

O.S. SHEETS

O.S. SHEET

A

B

Level 30'

A

B

OLD FLOOR FLOOR $\phi = 0$

WEST ELEV

31'-6 1/2" C

O.S. SHEET TO O.S. SHEET 32'-0"

2 3/4

O.S. COL / O.S. SHEET

2 3/4

41'-0" O.S. COL. TO O.S. COLUMN

41'-2 3/4

CENTER FRAMES W/O COL.

END FRAMES W/ COLS

OR REVISION



Hercules Incorporated
Hercules Plaza
Wilmington, DE 19894
(302) 594-5000
Telex: 83-5479

CERTIFICATE OF AUTHORITY

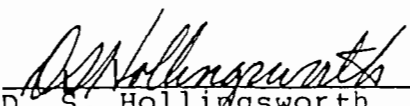
Pursuant to the provisions of the State of Florida and the United States Environmental Protection Agency environmental regulations, I, D. S. Hollingsworth, being a principal executive officer of the Corporation of at least the level of Vice President, do hereby certify that I have this day authorized and directed, as my duly authorized representative, the person designated below (being the individual having responsibility for the overall operation of the regulated facility), to complete, sign, and submit, in the name and on behalf of the Corporation, all environmental reports or requests for information required by Federal and/or State permit issuing authorities:

Authorized Representative: J. P. Stidham
Plant Manager

Regulated Facility: Hercules Incorporated
Vero Beach, Florida

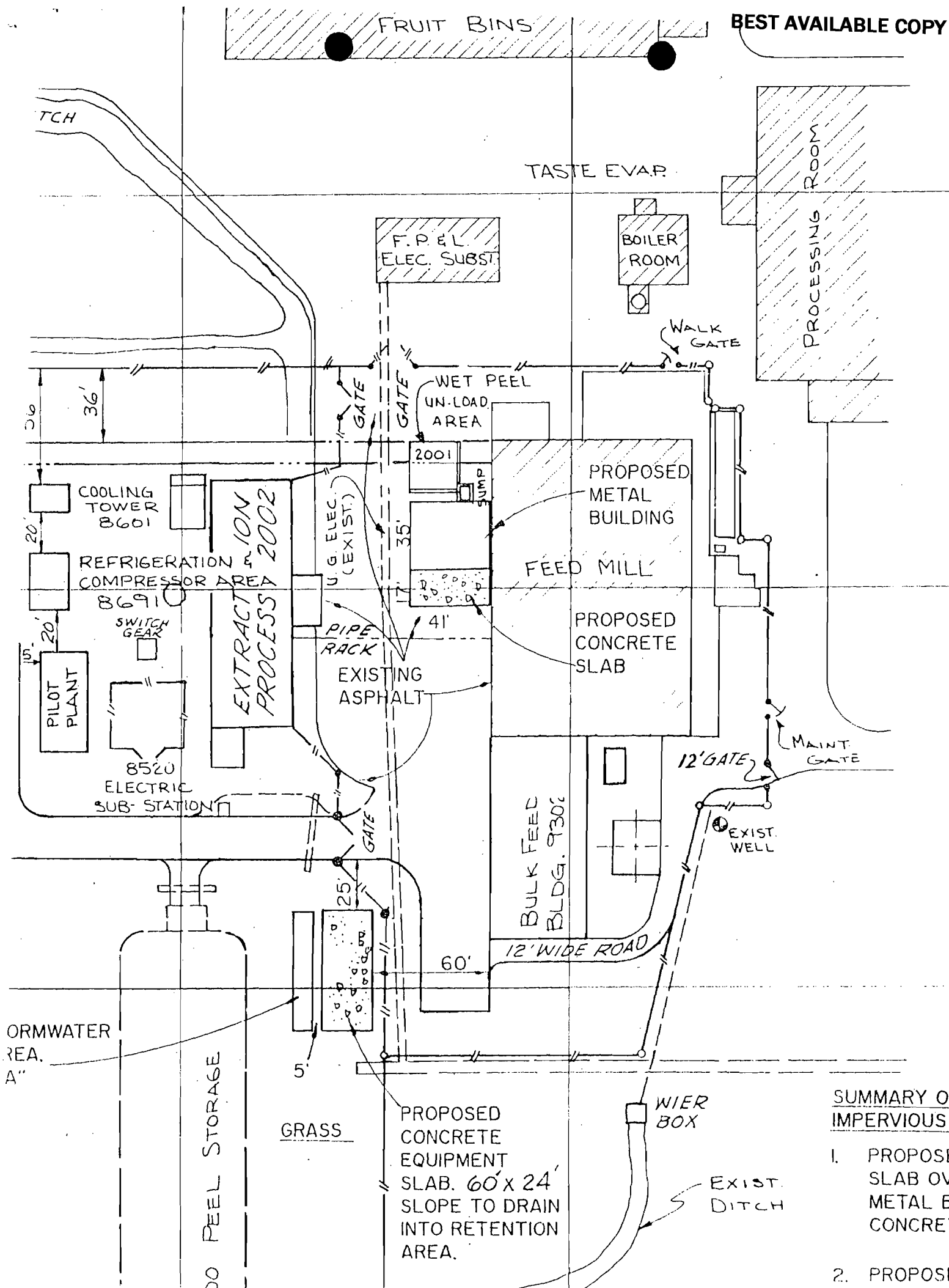
IN WITNESS WHEREOF, I have hereunto affixed my signature on this 22nd day of September 1986.

HERCULES INCORPORATED



D. S. Hollingsworth
Vice Chairman

0046n



SUMMARY OF IMPERVIOUS

1. PROPOSED SLAB OVER METAL BUILDING CONCRETE

2. PROPOSED

PROPOSED CONCRETE EQUIPMENT SLAB. 60' x 24' SLOPE TO DRAIN INTO RETENTION AREA.

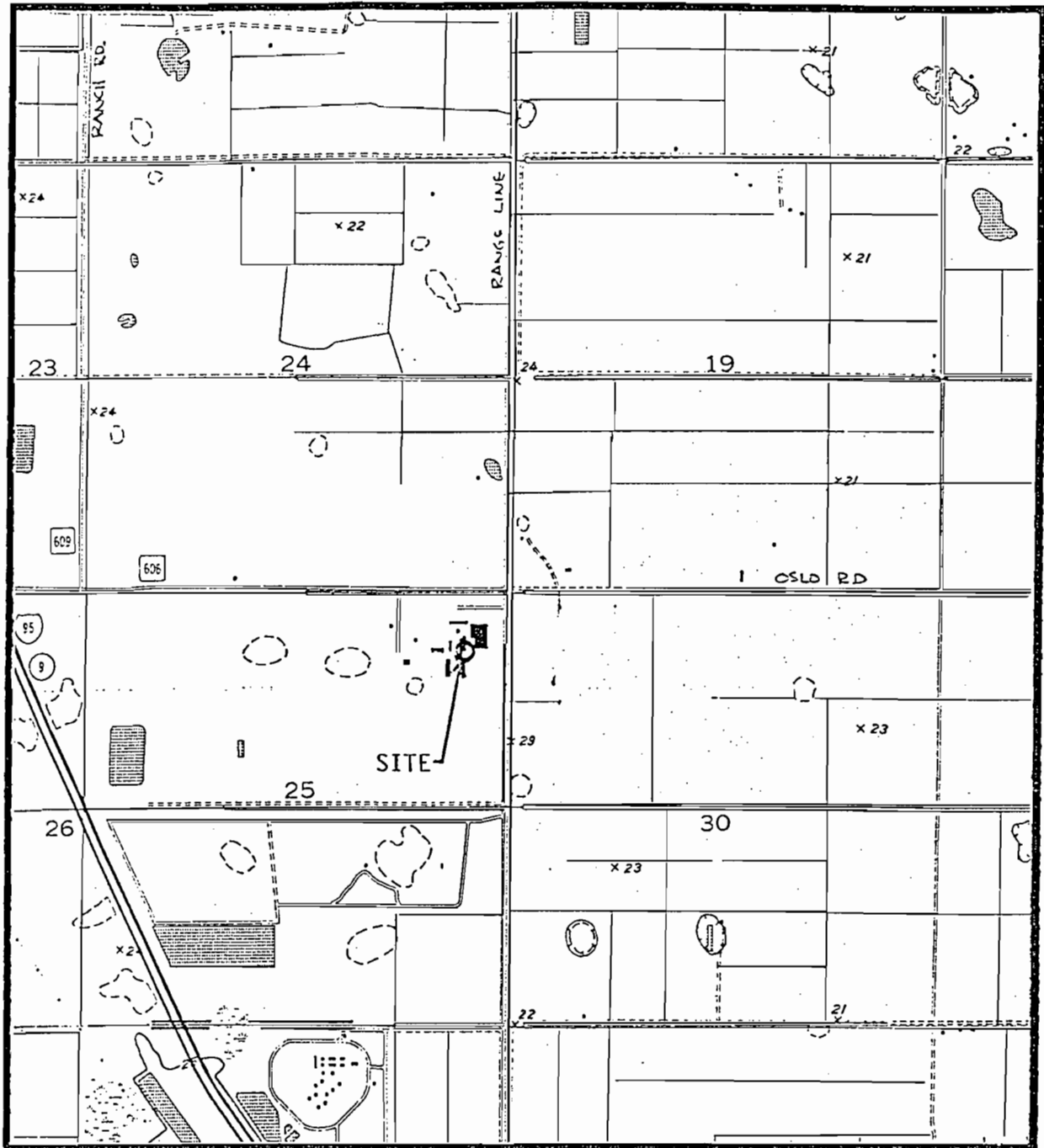
EXIST. DITCH

WIER BOX

GRASS

WET PEEL STORAGE

ORMWATER REA. A"



LOCATION MAP



BOTTORF Associates, inc.		
HERCULES, INC. VERO BEACH, INDIAN RIVER CO., FL		
USGS MAP Description	Drawn by N/A	215-4 Project Number
Scale 1:24000	Date 5-5-89	