→P 4/15

Check Sheet

Company Name: Drum Services PL
Permit Number: AC48-125190
PSD Number:
County:
Permit Engineer:
Others involved:

(AO 48-113583, modifications)

Application:

- [x] Initial Application
- [x] Incompleteness Letters
- [x] Responses
- [ ] Final Application (if applicable)
- [ ] Waiver of Department Action
- [ ] Department Response

Intent:

- [x] Intent to Issue
- [x] Notice to Public
- [x] Technical Evaluation
- [x] BACT Determination
- [x] Unsigned Permit

Withdrawn

Attachments:

- [ ]
- [ ]
- [ ]

- [ ] Correspondence with:
  - [ ] EPA
  - [ ] Park Services
  - [ ] County
  - [ ] Other
- [ ] Proof of Publication
- [ ] Petitions - (Related to extensions, hearings, etc.)

Final Determination:

- [ ] Final Determination
- [ ] Signed Permit
- [ ] BACT Determination

Post Permit Correspondence:

- [ ] Extensions
- [ ] Amendments/Modifications
- [ ] Response from EPA
- [ ] Response from County
- [ ] Response from Park Services

SEABURY-BOTTORF ASSOCIATES, INC.

CONSULTING ENGINEERS ANALYTICAL LABORATORY

4595 PARKBREEZE CT. ORLANDO, FLORIDA 32808-1057 305-298-0846

MECHANICAL

ELECTRICAL

ENVIRONMENTAL

February 23, 1987 Project No. 110-7

DER
FEB 27 1987
BAQM

Mr. C. H. Fancy, P. E.
Deputy Chief
BAQM
Florida Dept. of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Rd.
Tallahassee, Florida 32301-8241

Subject: Orange Co. - AP
Drum Service Company of Florida
200 HP Cleaver Brooks Boiler
AC48-125190

Dear Mr. Fancy:

On behalf of Drum Service Company of Florida, we are withdrawing the construction application for the subject source.

Very truly yours,

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

RTC/JWBJr/ac

cc: Mr. J. M. Murphy

P 408 530 599

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. J. M. Murphy	
Street and No.	
P.O., State and ZIP Code	
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 1/20/87	

PS Form 3800, Feb. 1982

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 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 service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Mr. J. M. Murphy
Drum Service Company of Fla.
P. O. Box 278
Zellwood, FL 32798

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number: P 408 530 599

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X Deborah H. Bonner

7. Date of Delivery
1-22-87

8. Addressee's Address *(ONLY if requested and fee paid)*

DOMESTIC RETURN RECEIPT

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

January 16, 1987

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. J. M. Murphy
President
Drum Service Company of Florida
Post Office Box 278
Zellwood, Florida 32798

Dear Mr. Murphy:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed permit to construct a back-up boiler at your existing drum reclamation plant in Zellwood, Orange County, Florida.

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

Sincerely,

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

CHF/pa

Attachments

cc: J. W. Bottorf, Jr., P.E.
A. T. Sawicki

State of Florida
Department of Environmental Regulation
Notice of Intent

The Department gives notice of its intent to issue a permit to Drum Service Company of Florida to construct a 200 HP Cleaver Brooks boiler to be used as a back-up source for process steam at their drum reclamation plant in Zellwood, Orange County, Florida. A determination of best available control technology (BACT) was required.

Persons whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative determination (hearing) in accordance with Section 120.57, Florida Statutes. The petition must conform to the requirements of Chapters 17-103 and 28-5, Florida Administrative Code, and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a petition within this time period constitutes a waiver of any right such person has to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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

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

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

Dept. of Environmental Regulation
Central Florida District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803

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

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Drum Service Company of Florida
803 Jones Avenue
Zellwood, Florida 32798

DER File No. AC 48-125190

INTENT TO ISSUE

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

The applicant, Drum Service Company of Florida, applied on September 19, 1986, to the Department of Environmental Regulation for a permit to construct a 200 HP Cleaver Brooks boiler to be used as a back-up source for process steam at the applicant's drum reclamation plant located in Zellwood, Orange County, Florida.

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

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

the notice. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. Petitions must comply with the requirement of Florida Administrative Code Rules 17-103.155 and 28-5.201 (copies enclosed) and be filed with (received by) the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant must be filed within fourteen (14) days of receipt of this intent. Petitions filed by other persons must be filed within fourteen (14) days of publication of the public notice or within fourteen (14) days of receipt of this intent, whichever first occurs. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes, concerning the subject permit application. Petitions which are not filed in accordance with the above provisions will be dismissed.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

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

Copies furnished to:

J. M. Murphy
John W. Bottorf, Jr., P.E.
A. T. Sawicki

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on Jan. 20, 1987.

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

Patricia H. Adams
Clerk

1/20/87
Date

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

28-5.15 Requests for Formal and Informal Proceedings

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

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

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

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

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

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

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

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

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

of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to petition to intervene within the allowed time frame constitutes a waiver of any right such person has to an administrative determination (hearing) under Section 120.57, F.S.

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(4) Notice to substantially affected persons concerning applications for Department permits is an essential and integral part of the state environmental licensing process. Therefore, no application for a permit for which publication of notice is required shall be granted until and unless proof of publication of Notice is furnished to the appropriate Department permitting office.

(5)(a) Any applicant or person benefiting from the Department's action may elect to publish notice of proposed agency action in the manner provided by subsection (2) or (3). Any person who elects to publish notice of proposed agency action, upon presentation of proof of publication to the Department, prior to final agency action, shall be entitled to the same benefits under this rule as a person who is required to publish notice of proposed agency action. Since persons whose substantial interests are affected by a Department decision on a permit application may petition for an administrative proceeding within fourteen (14) days after receipt of notice and since, unless notice is given or published as prescribed in this rule, receipt of notice can occur at any time, the applicant or persons benefiting from the Department's action cannot justifiably rely on the finality of the Department's decision without the notice having been duly given or published.

(b) The notices required by this rule may be combined with other notices required by the Department pursuant to Chapter 403, 376, or 253, F.S., or Chapter 17, FAC.

(c) The provisions of this section shall also apply to the permitting of hazardous waste facilities, but only to the extent it is consistent with Chapter 17-30, Part IV, FAC. Whenever Chapter 17-30, Part IV, FAC, provides for a different time or notice procedure than that set forth in this section the time and notice provisions of Chapter 17-30 shall govern.

(6) Failure to publish any notice of application, notice of proposed agency action, or notice of agency action required by the Department shall be an independent basis for the denial of a permit.

Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S. History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.155 Petition for Administrative Hearing; Waiver of Right to Administrative Proceeding.

(1)(a) Any person whose substantial interests may be affected by proposed or final agency action may file a petition for administrative proceeding. A petition shall be in the form required by this Chapter and Chapter 28-5, FAC, and shall be filed (received) in the Office of General Counsel of the Department within fourteen (14) days of receipt of notice of proposed agency action or within fourteen (14) days of receipt of notice of

agency action whenever there is no public notice of proposed agency action. In addition to the requirements of Rule 28-5.201, FAC, the Petition must specify the county in which the project is or will be located.

(b) Failure to file a petition within fourteen (14) days of receipt of notice of agency action or fourteen (14) days of receipt of notice of proposed agency action, whichever notice first occurs, shall constitute a waiver of any right to request an administrative proceeding under Chapter 120, F.S.

(c) When there has been no publication of notice of agency action or notice of proposed agency action as prescribed in Rule 17-103.150, FAC, a person who has actual knowledge of the agency action or has knowledge which would lead a reasonable person to conclude that the Department has taken final agency action, has a duty to make further inquiry within fourteen (14) days of obtaining such knowledge by contacting the Department to ascertain whether action has occurred. The Department shall upon receipt of such an inquiry, if agency action has occurred, promptly provide the person with notice as prescribed by Rule 17-103.150, FAC. Failure of the person to make inquiry with the Department within fourteen (14) days after obtaining such knowledge may estop the person from obtaining an administrative proceeding on the agency action.

(2)(a) "Receipt of notice of agency action" means receipt of written notice of final agency action, as prescribed by Department rule, or the publication, pursuant to Department rule, of notice of final agency action, whichever first occurs.

(b) "Receipt of notice of proposed agency action" means receipt of written notice (such as a letter of intent) that the Department proposes to take certain action, or the publication pursuant to Department rule of notice of proposed agency action, whichever first occurs.

(3) Notwithstanding any other provision in this Chapter, should a substantially affected person who fails to timely request a hearing under Section 120.57, F.S., administratively appeal the final Department action or order, the record on appeal should be limited to:

(a) the application, and accompanying documentation submitted by the applicant prior to the issuance of the agency's intent to issue or deny the requested permit.

(b) the materials and information relied upon by the agency in determining the final agency action or order;

(c) any notices issued or published; and

(d) the final agency action or order entered concerning the permit application.

(4) In such cases where persons do not timely exercise their rights accorded by Section 120.57(1), Florida Statutes, the allegations of fact contained in or incorporated by the final agency action shall be deemed uncontested and true, and appellants may not dispute the truth of such allegations upon subsequent appeal.

(5) Any applicant may challenge the Department's request for additional information by filing with the Office of General Counsel an appropriate petition for administrative proceeding pursuant to Section 120.60, F.S., following receipt by

the applicant of the Department's notification, pursuant to Section 403.0876, F.S., that additional information is required.
Specific Authority: 120.53, 403.0876, 403.815, F.S. Law Implemented: 120.53, F.S.
History: New 9-20-79, Amended 4-28-81, Transferred from 17-1.62 and Amended 6-1-84.

17-103.160 Uniformity in Approval and Denial of Applications for Department Permits and Certifications. To the extent possible and consistent with the public interest, the Department approves and denies applications for permits and certifications on a uniform and consistent basis. Final Department actions on applications for permits and certifications shall be consistent with prior Department actions, unless deviation therefrom is explained by the Department in writing or the hearing officer who submits a recommended order to the Department for final agency action in accordance with Section 120.57, Florida Statutes.
Specific Authority: 120.53(1), F.S. Law Implemented: 120.53(1), 120.68(12), F.S. History: New 2-6-78, Transferred from 17-1.63, 6-1-84.

17-103.170 Designation, Preparation and Transmittal of Record for Administrative Appeals.

When any Department action or order is the subject of an administrative appeal under Chapter 17-103, Part II, FAC, the following requirements shall apply:

(1) Designation of Record. Within fifteen (15) days of rendition of the Department's final order, the appellant shall designate to the Department, in writing, with copies to other parties, those documents or things under the control of or in the possession of the Department which the appellant desires to have included in the record, and which were received or considered in the Department proceeding below. If a proceeding was reported by mechanical recording devices, the appellant shall designate those portions of the proceeding for which it requires written transcription or tapes for transcription. Any other party may designate other portions of the record in the manner provided herein. Such cross-designation shall be filed with the Department, with copies provided other parties, within seven (7) days after receipt of the designation by the appellant.

(2) Original Record. The Department shall thereupon include in the record all of the designated portions of the original papers and exhibits in the proceedings or matter from which administrative appeal is taken, together with a copy of any such parts of the proceedings as were stenographically reported or transcribed from tapes, and as have been designated by the parties and certified by a notary public, the reporter, or other officer for inclusion in the record on appeal or review, and certified copies of the order, if any, of which review is sought. The Department may, at its discretion, substitute certified copies for original papers or documents in its possession.

(3) Preparation of Record. Upon tender or deposit by appellant of the estimated cost of preparation, the Department shall prepare the record in accordance with the designations of the parties. The cost of preparation, and reproduction,

Technical Evaluation
and
Preliminary Determination

Drum Service Company of Florida
Orange County
Zellwood, Florida

Back-Up Boiler

Permit Number: AC 48-125190

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

January 16, 1987

I. Project Description

A. Applicant

Drum Service Company of Florida
Post Office Box 278
Zellwood, Florida 32798

B. Project and Location

The applicant proposes to construct a 200 HP Cleaver Brooks package boiler to be used as a back-up source for process steam at their drum reclamation plant. The project will be located at the applicant's existing facility at 803 Jones Avenue, Orange County, Zellwood, Florida. The universal transverse mercator (UTM) coordinates of the source are: Zone 17, 439.9 km East and 3178.1 km North.

C. Sources Reviewed

This application has been submitted for the following sources:

Source	Permit Number
Back-up Boiler	AC 48-125190

D. Standard Industrial Classification Code (SIC)

The facility is classified as:

Major Group No. 34 - Fabricated Metal Products, Except Machinery and Transportation Equipment

Industry No. 341 - Metal Cans and Shipping Containers

E. Facility Category

Drum Service Company of Florida is classified as a major emitting facility for the air pollutant volatile organic compounds.

F. Application Completeness Date:

Application Received: September 19, 1986
Application Deemed Complete: November 5, 1986

G. Process and Controls

Drum Service Company of Florida reconditions steel drums. The proposed project is the construction of a Cleaver Brooks package boiler to be used as a back-up source for process steam. Under normal plant operation, this boiler will not be in use.

Steam required for plant operation will be obtained from a new heat recovery boiler/afterburner on the drum furnace. The back-up boiler will be used when the drum furnace is down and steam is required to operate the closed head drum line. This boiler will be fired with No. 2 fuel oil 80-100% of the time. Recovered virgin oil will be burned 0-20% of the time. The term "virgin" means an oil which has been refined from crude oil and has not been used. The applicant recovers virgin oil residues by draining oil company drums prior to reconditioning them.

No emission control device is proposed to control air emissions. There are over 1000 different products from which these residues may be recovered, e.g., engine oils, automotive oils, industrial oils, hydraulic oils, cutting oils, etc. In order to ensure that the burning of these residues will not pose a significant health risk, it will be necessary to ensure that the contents of every batch of residues to be burned meets the used oil specifications contained in 40 CFR Part 266.40(e). This will be accomplished by having the applicant take a composite sample of the entire contents of each batch of fuel that contains residues prior to burning it in the boiler. The sample will be tested to determine if the fuel contents meet the used oil fuel specifications for each constituent or property as given below.

Constituent/Property	Allowable Level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	4000 ppm maximum
Flash point	100 degrees F minimum

In addition, the sulfur content of the No. 2 fuel oil or the reclaimed virgin oil residues is to be 0.5% or less. The applicant will also maintain a policy of selecting only those drums which satisfy the EPA "empty drum" rule as contained in 40 CFR 261.7., as they have proposed to do.

II. Rule Applicability

The existing facility is major for the pollutant VOC, FAC Rule 17-2.100. The facility is located in an area designated as nonattainment for the pollutant ozone, FAC Rule 17-2.410(1)(b). VOC's are precursors to ozone. The proposed project will not result in a significant net emissions increase of VOC (as set forth in FAC Rule 17-2.510(2)(e)2.); therefore, this project is exempt from the provisions of FAC Rule 17-2.510, New Source Review for Nonattainment Areas. In addition, the proposed project is exempt from the provisions of FAC Rule 17-2.500, Prevention of Significant Deterioration.

The proposed project will be permitted under FAC Rule 17-2.520, Sources Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements. Emissions from the boiler must comply with the standards specified in FAC Rule 17-2.600(6).

III. Summary of Emissions and Air Quality Analysis

A. Emissions Limitations

The air pollutants emitted from the back-up boiler will be sulfur dioxide (SO_2), nitrogen oxides (NOx), particulate matter (PM), volatile organic compounds (VOC) and carbon monoxide (CO). Table I summarizes the potential to emit these polluants based on the firing of No. 2 fuel oil. As the table shows, there is not a significant emission increase of any pollutant.

In addition because reclaimed virgin oil residues will used as fuel in the boiler, there is the potential of emissions of arsenic, cadmium, chromium, lead or halogenated compounds. These emissions will be controlled by testing each batch of reclaimed virgin oil residues prior to burning in the boiler in order to ensure that the allowable levels for these constituent/properties are not exceeded.

Table I
Summary of Emissions

Pollutant	lb/hr	tons/yr	Significant Emissions (TPY)
Particulate Matter	0.11	0.03	25
Sulfur Dioxide	3.98	1.01	40
Carbon Monoxide	0.28	0.07	100
Nitrogen Oxide	1.12	0.29	40
Volatile Organic Compounds	0.01	<0.01	40

All emissions are based on 1) AP-42, Table 1.3-1; 2) a maximum 0.056 thousand gallons of No. 2 fuel oil burned/hr; 3) a maximum of 510 hours/yr operation.

b. Air Quality Analysis

From a technical review of the application, the department has determined that the construction and operation of this boiler will not have a significant impact on Florida's ambient air quality standards.

IV. Conclusion

Based on an evaluation of the application, the department concludes that the proposed boiler will comply with related state air regulations, provided certain specific conditions are met.

The General and Specific Conditions are listed in the attached draft state permit.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB MARTINEZ
GOVERNOR

DALE TWACHTMANN
SECRETARY

PERMITTEE:
Drum Service Company of Florida
803 Jones Avenue
Zellwood, Florida 32798

Permit Number: AC 48-125190
Expiration Date: September 30, 1987
County: Orange
Latitude/Longitude: 28° 43' 55"N
81° 36' 45"W
Project: 200 HP Cleaver Brooks Package Boiler

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, 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 package boiler to be used as a back-up source for steam only.

The construction/installation shall be in accordance with the permit application and plans, documents, amendments, and drawings, except as otherwise noted in the "Specific Conditions".

Attachments:

1. Application to construct Air Pollution Sources, DER Form 17-1.202(1), received on September 19, 1986.
2. C. H. Fancy's letter to J. M. Murphy dated October 17, 1986.
3. J. W. Bottorf's response to C. H. Fancy's letter, received on November 5, 1986.

PERMITTEE:
Drum Service Company of Florida

Permit Number: AC 48-125190
Expiration Date: September 30, 1987

GENERAL CONDITIONS:

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

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

13. This permit also constitutes:

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

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

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

GENERAL CONDITIONS:

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

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

1. This 200 HP Cleaver Brooks package boiler will be used as a back-up source for steam only. During normal plant operation this boiler will not be in use. Steam required for plant operation will be obtained from the heat recovery/afterburner on the drum furnace. Only when the drum furance is down and steam is required to operate the closed head drum line, shall this back-up boiler be used.

2. The hours of operations for this back-up boiler shall not exceed 510 hours per year.

SPECIFIC CONDITIONS:

3. The boiler shall be fired with virgin No. 2 fuel oil at least 80% of the time and virgin oil residues recovered during drum reclamation operations, such as engine oils, industrial oils, and hydraulic oils that meet or exceed used oil standards, no more than 20% of the time. The term "virgin" means oil which has been refined from crude oil and has not been used.

4. Neither the sulfur content of the virgin No. 2 fuel oil nor the virgin oil residues recovered during drum reclamation operations shall exceed 0.5 percent by weight, as determined by ASTM D-1552. The fuel analysis reports of the oil used shall be recorded and these records shall be kept for a minimum of two years for regulatory agency inspection.

5. Whenever a batch of fuel containing reclaimed virgin oil residues is to be burned in this boiler, a composite sample must be taken prior to burning and tested to ensure that the contents meet the used oil specification contained in 40 CFR Part 266.40(e). The entire batch must then be consumed in the boiler before any more virgin oil residues can be added. No virgin oil residues may be added to this batch during a burning period unless the new batch of residues to be added has had a composite sample taken to be tested.

If the entire batch is not consumed during a burning period and any virgin oil residues are added in between burning periods, then another composite sample must be taken and tested. However, if the entire batch is not consumed during a burning period and no virgin oil residues are added before the next burning period, then no sample needs to be taken.

6. The visible emissions from the proposed boiler shall not exceed 15 percent opacity, six (6) minute average. DER Method 9 (17-2.700(6)(a)9, FAC) shall be used for the performance test conducted by the permittee.

7. The test of visible emissions shall be accomplished at 90 to 100 percent of design capacity. The permittee shall notify DER's Central Florida District office 14 days prior to the compliance test.

8. The applicant will adhere to the drum acceptance policy as stated in attachment 3 to this permit.

PERMITTEE:
Drum Service Company of Florida

Permit Number: AC 48-125190
Expiration Date: September 30, 1987

SPECIFIC CONDITIONS:

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

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

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

Issued this_____day of_____, 19___

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

_____
Howard L. Rhodes, P.E.
Director, Division of Environmental Programs

____ pages attached

Best Available Control Technology (BACT) Determination
Drum Service Company of Florida
Orange County

The applicant plans to install a 200 horsepower Cleaver Brooks Model #CB552-200 steam boiler at their facility in Zellwood, Florida. The boiler, which will be used as a backup steam supply only when the waste heat boiler is down and the closed head drum line is in operation, will fire either No. 2 fuel oil or recovered virgin oil. The boiler is scheduled to operate approximately 500 hours per year.

This BACT determination is established for the source as set forth in the Florida Administrative Code Rule 17-2.600(6) - Emissions Limiting and Performance Standards.

BACT Determination Requested by the Applicant:

Particulate and sulfur dioxide emissions to be controlled by firing of low sulfur content distillate oils.

Date of Receipt of a BACT application:

September 25, 1986

Review of Group Members:

The determination was based upon comments received from the Stationary Source Control Section and the Central Florida District.

Review Determined by DER:

The amount of particulate and sulfur dioxide emissions from the new boiler will be limited by the firing of new [1] No. 2 distillate oil and recovered virgin oil having a sulfur content not to exceed 0.5 percent, by weight. The firing of recovered virgin oils shall not exceed 20% of the boiler's total operating time.

Visible Emissions	Not to exceed 15 percent opacity.

DER Method 9 (17-2.700(6)(a)9, FAC) will be used to determine compliance with the opacity standard.

[1] The term "new" means an oil which has been refined from crude oil and has not been used.

BACT Determination Rationale:

Sulfur in fuel oil is a primary air pollution concern, in that most of the fuel sulfur becomes SO_2 and particulate emissions from oil burning are related to the sulfur content. The department agrees with the applicant's proposal that the firing of No. 2 distillate oil and recovered virgin oils, each containing 0.5 percent or less sulfur, by weight, is BACT for the 200 horsepower steam generator.

The term "new oil" disallows the use of re-refined and waste oils or any non-fossil fuels which were not considered in this BACT analysis.

Details of the Analysis May be Obtained by Contacting:

Barry Andrews, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Recommended By:

_____
C. H. Fancy, P.E., Deputy Bureau Chief

Date: _____

Approved By:

_____
Howard L. Rhodes, Director
Division of Environmental Programs

Date: _____

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Loctn: _____
To: _____ Loctn: _____
To: _____ Loctn: _____
From: _____ Date: _____

To: Bill Thomas

Thru: John Brown

From: Ligia Mora-Applegate

Date: November 21, 1986

Subject: Drum Services

This memo is in response to your request that I review the Drum Services letter regarding the burning of recovered oil.

Based on the information available to me it appears that the residue in the barrels can consist of virtually any substance marketed. If that assumption is true it is entirely possible that burning of these residuals may create serious health related consequences.

If the residues were entirely comprised of lubricating oils, even then, it would be necessary to ensure that the contents meet as a minimum "on spec", criteria for use per the current policy. If the oils were not certified to meet these specs upon delivery, then it would seem to be necessary to conduct analyses for each batch used. That could be accomplished only by isolating discrete batches, collecting appropriate composite samples, and consuming the entire batch before anything is added. Allowing the source to burn the material, even with composite sampling, may result in missing many potentially toxic pollutants if the assumption in my original paragraph is correct. I cannot recommend that approval to burn the residues be approved based on the information provided.

JB:LM:ht

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

CENTRAL FLORIDA DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803-3767

November 10, 1986

Drum Service Company of Florida
Post Office Box 278
Zellwood, Florida 32798

Attention: J. M. Murphy, President

Orange County - AP
Drum Service Company of Florida
Drum Reclamation Furnace
Modification of Conditions
Permit No. A048-113583

Dear Mr. Murphy:

We are in receipt of your request for a modification of the permit conditions. The conditions are changed as follows:

Condition	From	To
Permit Page No. 1	The Furnace/Afterburner shall be heated with No. 2 Fuel Oil ...	The Furnace shall be heated with virgin No. 2 Fuel oil and unused virgin oil residues recovered from drum reclamation operations, that meet or exceed used oil standards. Exhaust gases from ..
Permit Page No. 5 Specific Condition No. 10	This source will be fired with No. 2 Fuel Oil Only.	The furnace will be heated with approximately 97 percent virgin No. 2 Fuel Oil and aproximately 3 percent unused virgin oil residues recovered during Drum Reclamation operations, such as, engine oils, industrial oils, and hydraulic

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) William Thomas, BAQM	Initial	
	Date	
2. Tally	Initial	
	Date	
3. Cleve Holladay DER	Initial	
	Date	
4. FYI. NOV 17 1986	Initial	
	Date	

REMARKS: BAQM

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

FROM: A. T. Sawichi, P.E.

DATE 11/14/86

PHONE

To

oils that meet or exceed used oil standards. The term "virgin" means an oil which has been refined from crude oil and has not been used.

This letter must be attached to your permit and becomes a part of that permit.

The remaining conditions of this permit remain unchanged.

Sincerely,

A. Alexander, P.E.
District Manager

AA:ATS:jtb

cc: Joseph L. Tessitore, P.E.
John Bateman
William Thomas, BAQM

DER FORM 17-1.122(59)

SEABURY-BOTTORF ASSOCIATES, INC.

CONSULTING ENGINEERS ANALYTICAL LABORATORY

4595 PARKBREEZE CT. ORLANDO, FLORIDA 32808-1057 305-298-0846

October 29, 1986 Project No. 110-7

DER

NOV 5 1986

BAQM

C. H. Fancy, P. E., Deputy Chief
Bureau of Air Quality Management
Florida Dept. of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301-8241

Subject: Orange Co. - AP
Drum Service Co. of Florida
Back-Up Boiler
AC48-125190

Dear Mr. Fancy:

On behalf of our client, Drum Service Co. of Florida, we are responding to your letter dated October 17, 1986, addressed to Mr. J. M. Murphy, President of Drum Service Co. of Florida.

Our response is submitted in the order in which information was requested.

1. Your request for "detailed information about all the specific types of recovered oils" would require an almost impossible amount of work. There are too many "separate types" for such an analysis to be practical.

   Last year Drum Service asked two of their major oil company customers to advise the number of separate products they package in drums they recondition. You can see from the enclosed correspondence that Chevron and Texaco reported 124 and 102 different products, respectively. Since Drum Service works for over 10 different oil companies, this means well over 1,000 separate products come into their plant.

   The oil sample report we provided with Drum Service's Application was a composite sample: taken over a period of time to get a true, representative sample of the actual recovered virgin oil. This type of sample yields better data because - even if Drum Service could afford to sample over 1,000 products - it approximates the actual "mix" of the various oils in drums coming into their plant. This is important because many individual oils are sold in low volumes; an "average" of 1,000 different analyses - even if it

could be done - would not give an accurate picture of the actual blend of all the types actually recovered.

Your letter of 10/17/86 requested an oil analysis, but did not specify the parameters to be measured. We now understand through communication with Bill Thomas of your staff that an analysis of a composite of the recovered virgin oil to meet or exceed the used oil specifications may be acceptable.

Our interpretation of the EPA/DER "used oil" rule leads us to believe that this rule does not apply to this recovered oil because it is unused virgin oil.

Nevertheless - if demonstration of the composite meeting the EPA 40 CFR, Part 266 "Specifications" for used oil is a condition for issuance of the requested permit, we will take a composite sample and test for the EPA "Specifications".

2. As we understand through communication with Bill Thomas, additional emission calculations will not be required unless the recovered oil fails to meet the used oil specifications. Failure of these specifications is very unlikely; however, we will submit the calculations if this did happen.

3. Quality Control

The primary method of quality control consists of the company's existing program governing acceptance of incoming empty drums. The policy insures:

a. Only EPA empty drums are picked up.

b. Plugs must be securely in place.

c. Labels must remain on the drum.

The driver is the first line of enforcement of these policies (when he picks up drums).

All incoming loads are then inspected again at the plant by the yard inspections to insure the policy has been adhered to.

The customer must certify (on Drum Service's receiving ticket) that he has complied with all applicable rules. Enclosed is a copy of Drum Services's "Drum Acceptance Policy".

4. Most oil is recovered at a special draining station where drums are inverted over a tank on a slow moving conveyor. Heat is applied to the drums, if necessary, due to weather conditions. Oil is decanted

into dedicated tanks for storage prior to burning. There are two vertical, above ground, steel tanks of 4000 and 3000 gallon capacity. Some oil is also recovered from the first preflushing station where steam and hot water rinse the inside of all drums.

All aspects of the system are above ground - tanks, lines, pumps, etc. There is no part underground.

Please advise if the proposed analysis of the recovered virgin oil composite to meet used oil specifications will be adequate for the issuance of this permit.

If you have any questions, please call Roger Caldwell at 305/298-0846.

Very truly yours,

SEABURY-BOTTORF ASSOCIATES, INC.

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

RTC/ac

Encls: Chevron letter dated 4/1/85,
Texaco letter dated 3/18/85,
Petroleum Packers, Inc. letter dated 3/19/85,
Drum Service Co. of Florida's "Drum Acceptance Policy".

cc: Mr. J. M. Murphy
Mr. John M. Bateman, OCEPD
Mr. A. T. Sawicki, P. E., FDER-Orlando

Chevron U.S.A. Inc.
P.O. Box 189000, Plantation, FL 33318-9000 • Phone (305) 474-3880

April 1, 1985

Mr. J. M. Murphy
Drum Service Co. of Florida
P.O. Box 278
Zellwood, FL. 32798

Dear Mr. Murphy:

Chevron uses returnable drums for approximately 124 different lubricating oils.

Sincerely,

C. E. Anderson

CEA/gm

TEXACO

PETROLEUM PRODUCTS

March 18, 1985

P. O. Box 5226
N. Charleston, SC 29406

Mr. J. M. Murphy
DRUM SERVICE OF FLORIDA
P. O. Box 278
Zellwood, FL 32798

Dear Mike:

This letter, in reply to your request this date, is to inform you that Texaco Charleston, SC fills approximately 102 different drums of lube oil products that may be shipped into the State of Florida. These products include, but may not be limited to, engine oils, automotive oils, industrial oils, and hydraulic oils.

If further assistance is requested, advise.

A. L. Shakas/jw

A. L. SHAKAS, Terminal Manager
TEXACO REFINING AND MARKETING INC.

JWG:bc

PETROLEUM PACKERS, INC.

1601 McCLOSKEY BOULEVARD
HOOKERS POINT • TAMPA, FLORIDA 33605

COMPOUNDING
BLENDING
PACKAGING

TELEPHONE
(813) 248-1988

TELEX: 80-3777
PEPAC TPA

March 19, 1985

Mr. Mike Murphy
Drum Service Company of Florida
P.O. Box 278
Zellwood, FL 32789

Dear Mike:

Petroleum Packers, Inc. is presently packaging a number of products in the steel drums your company provides us. The primary products we ship via drum are:

Automatic Transmission Fluids
Automotive Motor Oils (PCMO & Diesel)
Chemical Additives for Lubricants
Cutting Oils
Electrimotive Oils
Gear Oils
Hydraulic Oils
Marine Oils
Specialty Oils
Spray Oils
Turbine Oils

There are numerous products that we fill infrequently. Hopefully, you find this list complete enough for your requirements.

Best regards,

Dennis J. Madden
General Manager

DJM:bhm

DRUM SERVICE CO. OF FLORIDA

POST OFFICE BOX 278
ZELLWOOD, FLORIDA 32798
PHONE AREA 305 — 889-2581

DRUM ACCEPTANCE POLICY

The following presents our policies which cover the pick up, transportation, acceptance and purchase of, or charges for, used empty steel and plastic drums.

These policies reflect the current status of applicable regulations published by the U.S. Department of Transportation (DOT), the Environmental Protection Agency (EPA), and the Florida Department of Environmental Regulation (DER).

1. DRUMS MUST BE EMPTY

We will accept no drums that are not empty. We understand that some minor residue of the drum's prior contents will remain after normal emptying. How much is decided by the EPA's definition of an "empty" container (40 CFR 261.7). This regulation says: first, that the drum is as empty as it can be gotten using "...the practices commonly employed to remove materials from that type of container, e.g., pouring, dumping..."; but second, that in no event may there be more than one inch (or 3 percent by weight) of residue left in the drum.

Note that different types of products require different degrees of emptying (solvents vs. viscous paints, for example). Note also that the "one-inch" rule applies only as an outside limit; IT DOES NOT AUTHORIZE ALL DRUMS TO HAVE ONE INCH OF RESIDUE. The first part of the regulation must be met: the drums must be as empty as they can be gotten using normal emptying methods. With all but a very few products (like tars, etc.), this will result in far less than one inch of residue. As a practical matter, the rule means that if an open drum is turned over, only a few drops of product will come out.

A full copy of the regulation is attached as Exhibit 1.

2. DRUMS MUST NOT HAVE CONTAINED "ACUTELY HAZARDOUS" CHEMICALS

The EPA has published - at 40 CFR 261.33(e) - a list of chemicals whose residues are considered to be "acutely hazardous". A copy of the list is attached as Exhibit 2.

We will not pick up any drums which contained any of the products on the EPA's 261.33(e) list. Note that this is true even if the drums have been "triple rinsed" in accordance with 40 CFR 261.33(c). If you find you have any of these drums, please contact us and we will recommend a proper disposition.

3. DRUMS MUST BE PROPERLY PREPARED FOR TRANSPORTATION

The DOT requires that an uncleaned empty drum must be shipped:

a. With "all openings including removable heads and filling and vent holes tightly closed..."; and

b. With the original label (describing the drum residue) legibly in place (49 CFR 173.29(a).

Our drivers carry extra drum plugs on their trucks and will replace plugs, if necessary, to enable pick up. Cost for such plugs are published in Exhibit 4.

There is no DOT placarding requirement for vehicles transporting empty drums (49 CFR 173.29(a)(3)(i). Also, empty drums picked up by our trucks (or delivered by your trucks or contract carriers to our plant) are exempt from the DOT shipping paper requirement, because such drums are "collected and transported for .... reconditioning and reuse" (49 CFR 173.29(a)(3)(ii).

4. CERTIFICATION OF THE REQUIREMENTS BY SHIPPER

We can pick up drums only after the shipper (on every load) certifies compliance with the above requirements. This certification appears on our drum Receiving Tickets (a copy of which - signed also by our driver - is left with you after pick up). A sample is enclosed as Exhibit 3.

5. INSPECTION

Drums are inspected at our receiving yard. Drums vary considerably in their reuse value due to many factors. Some major ones are:

(1) gauge of metal of construction;

(2) DOT specification status;

(3) nature of residues of previous contents, difficulty of removal, and steps necessary to handle safely and dispose of these residues;

(4) interiors lined or unlined; and

(5) degree of damage and overall condition.

Some drums have no value and must be disposed of. Because of strict environmental regulations, these drums must first be cleaned before the drum carcass may be sent to a steel scrap recycler. For this reason, charges will be made for certain low value drums and for drum disposal.

6. LOADING

Our drivers will stack and load drums in their trailers. Our offer to pick up drums is based on suppliers placing the drums "on the tailgate". In cases where a trailer is "dropped" at a supplier's plant, all loading will be done by the supplier's personnel.

7. PRICES

Prices paid for good, reusable drums and prices charged for replacement bungs and drum disposal charges are published in Exhibit 4.

EXHIBIT 1

§261.7 Residues of hazardous waste in empty containers.

(a) (1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to regulation under Parts 261 through 265, or Part 270 or 124 of this chapter or to the notification requirements of §3010 of RCRA.

(2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from a container that is not empty, as defined in paragraph (b) of this section, is subject to regulation under Parts 261 through 265, and Parts 270 and 124 of this chapter and to the notification requirements of §3010 of RCRA.

(b)(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in §§261.31, 261.32, or 261.33(e) of this chapter is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, *e.g.*, pouring, pumping, and aspirating, *and*

(ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, *or*

(iii) (A) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gallons in size, *or*

(B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in §§261.31, 261.32, or 261.33(e) is empty if:

(i) the container or inner liner has been triple rinsed using a solvent capable of removing the commerical chemical product or manufacturing chemical intermediate;

(ii) the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by test conducted by the generator, to achieve equivalent removal; or

(iii) in the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

(e) The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (a) through (d) of this section, are identified as acute hazardous wastes (H) and are subject to be the small quantity exclusion defined in §261.5(e).

[*Comment:* For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.] These wastes and their corresponding EPA Hazardous Waste Numbers are:

Hazardous Waste No.:	Substance
P023	Acetaldehyde, chloro-
P002	Acetamide, N-(aminothioxomethyl)-
P057	Acetamide, 2-fluoro-
P058	Acetic acid, fluoro-, sodium salt
P066	Acetimidic acid, N-[(methylcarbamoyl)-oxy]thio-, methyl ester
P001	3-(alpha-acetonylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations greater than 0.3%
P002	1-Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-aminopyridine
P009	Ammonium picrate (R)
P119	Ammonium vanadate
P010	Arsenic acid
P012	Arsenic (III) oxide
P011	Arsenic (V) oxide
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl-
P054	Aziridine
P013	Barium cyanide
P024	Benzenamine, 4-chloro-
P077	Benzenamine, 4-nitro-
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4[1-hydroxy-2-(methylamino)ethyl]-
P014	Benzenethiol
P028	Benzyl chloride
P015	Beryllium dust
P016	Bis(chloromethyl) ether
P017	Bromoacetone
P018	Brucine
P021	Calcium cyanide
P123	Camphene, octachloro-
P103	Carbamimidoselenoic acid
P022	Carbon bisulfide
P022	Carbon disulfide
P095	Carbonyl chloride
P033	Chlorine cyanide
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanides
P030	Cyanides (soluble cyanide salts), not elsewhere specified
P031	Cyanogen
P033	Cyanogen chloride
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P039	O,O-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate
P041	Diethyl-p-nitrophenyl phosphate
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropyl fluorophosphate
P044	Dimethoate
P045	3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl] oxime
P071	O,O-Dimethyl O-p-nitrophenyl phosphorothioate
P082	Dimethylnitrosamine
P046	alpha, alpha-Dimethylphenethylamine
P047	4,6-Dinitro-o-cresol and salts
P034	4,6-Dinitro-o-cyclohexylphenol
P048	2,4-Dinitrophenol
P020	Dinoseb
P085	Diphosphoramide, octamethyl-
P039	Disulfoton
P049	2,4-Dithiobiuret
P109	Dithiopyrophosphoric acid, tetraethyl ester
P050	Endosulfan
P088	Endothall
P051	Endrin
P042	Epinephrine
P046	Ethanamine, 1,1-dimethyl-2-phenyl-
P084	Ethenamine, N-methyl-N-nitroso-
P101	Ethyl cyanide
P054	Ethylenimine
P097	Famphur
P056	Fluorine
P057	Fluoroacetamide
P058	Fluoroacetic acid, sodium salt
P065	Fulminic acid, mercury (II) salt (R,T)
P059	Heptachlor
P051	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo, endo-1,4:5,8-dimethanonaphthalene
P037	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1, 4:5,8-dimethanonaphthalene
P060	1,2,3,4,10,10-Hexachloro-1,4,4a, 5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonaphthalene
P004	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,exo-dimethan onaphthalene
P060	Hexachlorohexahydro-exo,exo-dimethanonaphthalene
P062	Hexaethyl tetraphosphate
P116	Hydrazinecarbothioamide
P068	Hydrazine, methyl-
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P096	Hydrogen phosphide
P064	Isocyanic acid, methyl ester
P007	3(2H)-isoxazolone, 5-(aminomethyl)-
P092	Mercury, (acetato-O)phenyl-
P065	Mercury fulminate (R,T)
P016	Methane, oxybis(chloro-
P112	Methane, tetranitro-(R)
P118	Methanethiol, trichloro-
P059	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066	Methomyl
P067	2-Methylaziridine
P068	Methyl hydrazine
P064	Methyl isocyanate
P069	2-Methyllactonitrile
P071	Methyl parathion
P072	alpha-Naphthylthiourea
P073	Nickel carbonyl
P074	Nickel cyanide
P074	Nickel(II) cyanide

P073 ..... Nickel tetracarbonyl
P075 ..... Nicotine and salts
P076 ..... Nitric oxide
P077 ..... p-Nitroaniline
P078 ..... Nitrogen dioxide
P076 ..... Nitrogen(II) oxide
P078 ..... Nitrogen(IV) oxide
P081 ..... Nitroglycerin (R)
P082 ..... N-Nitrosodimethylamine
P084 ..... N-Nitrosomethylvinylamine
P050 ..... 5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite
P085 ..... Octamethylpyrophosphoramide
P087 ..... Osmium oxide
P087 ..... Osmium tetroxide
P088 ..... 7-Oxabicyclo[2,2,1]heptane-2,3-dicarboxylic acid
P089 ..... Parathion
P034 ..... Phenol, 2-cyclohexyl-4,6-dinitro-
P048 ..... Phenol, 2,4-dinitro-
P047 ..... Phenol, 2,4-dinitro-6-methyl-
P020 ..... Phenol, 2,4-dinitro-6-(1-methylpropyl)-
P009 ..... Phenol, 2,4,6-trinitro-, ammonium salt (R)
P036 ..... Phenyl dichloroarsine
P092 ..... Phenylmercuric acetate
P093 ..... N-Phenylthiourea
P094 ..... Phorate
P095 ..... Phosgene
P096 ..... Phosphine
P041 ..... Phosphoric acid, diethyl p-nitrophenyl ester
P044 ..... Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl]ester
P043 ..... Phosphorofluoric acid, bis(1-methylethyl)-ester
P094 ..... Phosphorothioic acid, O,O-diethyl S-(ethylthio)methyl ester
P089 ..... Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester
P040 ..... Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097 ..... Phosphorothioic acid, O,O-dimethyl O-[p-((dimethylamino)-sulfonyl)phenyl]ester
P110 ..... Plumbane, tetraethyl-
P098 ..... Potassium cyanide
P099 ..... Potassium silver cyanide
P070 ..... Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P101 ..... Propanenitrile
P027 ..... Propanenitrile, 3-chloro-
P069 ..... Propanenitrile, 2-hydroxy-2-methyl-
P081 ..... 1,2,3-Propanetriol, trinitrate-(R)
P017 ..... 2-Propanone, 1-bromo
P102 ..... Propargyl alcohol
P003 ..... 2-Propenal
P005 ..... 2-Propen-1-ol
P067 ..... 1,2-Propylenimine
P102 ..... 2-Propyn-1-ol
P008 ..... 4-Pyridinamine
P075 ..... Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts
P111 ..... Pyrophosphoric acid, tetraethyl ester
P103 ..... Selenourea
P104 ..... Silver cyanide
P105 ..... Sodium azide
P106 ..... Sodium cyanide
P107 ..... Strontium sulfide
P108 ..... Strychnidin-10-one, and salts
P018 ..... Strychnidin-10-one, 2,3-dimethoxy-
P108 ..... Strychnine and salts
P115 ..... Sulfuric acid, thallium(I) salt
P109 ..... Tetraethyldithiopyrophosphate
P110 ..... Tetraethyl lead
P111 ..... Tetraethylpyrophosphate
P112 ..... Tetranitromethane (R)
P062 ..... Tetraphosphoric acid, hexaethyl ester
P113 ..... Thallic oxide
P113 ..... Thallium(III) oxide
P114 ..... Thallium(I) selenite
P115 ..... Thallium(I) sulfate
P045 ..... Thiofanox
P049 ..... Thioimidodicarbonic diamide
P014 ..... Thiophenol
P116 ..... Thiosemicarbazide
P026 ..... Thiourea, (2-chlorophenyl)-
P072 ..... Thiourea, 1-naphthalenyl-
P093 ..... Thiourea, phenyl-
P123 ..... Toxaphene
P118 ..... Trichloromethanethiol
P119 ..... Vanadic acid, ammonium salt
P120 ..... Vanadium pentoxide
P120 ..... Vanadium(V) oxide
P001 ..... Warfarin, when present at concentrations greater than 0.3%
P121 ..... Zinc cyanide
P122 ..... Zinc phosphide, when present at concentrations greater than 10%

DRUM SERVICE COMPANY OF FLORIDA

Exhibit 3

P. O. BOX 278 - 803 JONES AVENUE
ZELLWOOD, FLORIDA 32798
PHONE 305/889-2581

NATIONAL BARREL AND DRUM ASSOCIATION - INCORPORATED - APPROVED N.B.A.D.A. MEMBER

RECEIVING TICKET 65106

RECEIVED FROM: _____

C/O: _____ DATE: _____

ADDRESS: _____ TRAILER/ CAR NO.: _____

CITY & STATE _____ RECEIVED BY: _____

	55 GALLON EMPTY OPEN HEAD DRUMS LIDS RINGS	BUNGS FURNISHED BY DRUM SERVICE CO. OF FLORIDA
	55 GALLON EMPTY BUNG TYPE DRUMS	
		2" _____
	EMPTY JUNK DRUMS	3/4" _____
	TOTAL EMPTY DRUMS	

1. This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the DEPARTMENT OF TRANSPORTATION. (49 CFR 172.204) 2. It is further certified that all containers are empty; that all plugs, lids and rings are securely in place. (49 CFR 173.29) 3. It is further certified that all containers are properly classified, described, and offered for shipment according to the applicable regulations of the ENVIRONMENTAL PROTECTION AGENCY (40 CFR Parts 260-263), and that they are EMPTY as defined in 40 CFR 261.7, and have not contained "acutely hazardous waste," as listed in 40 CFR 261.33 (e).

SHIPPER: _____ BY: _____

THIS IS YOUR RECEIPT FOR EMPTY DRUMS PICKED UP. PLEASE REFERENCE ALL INQUIRIES TO THE TICKET NUMBER SHOWN ABOVE. PLEASE MAKE ANY INQUIRIES WITHIN FIVE DAYS FROM THE PICKUP DATE.

DRUMS ARE PICKED UP SUBJECT TO DRUM SERVICE COMPANY'S WRITTEN POLICY. IF YOU DO NOT HAVE A COPY OF THIS POLICY, PLEASE CALL FOR ONE.

DRUMS SUBJECT TO COUNT AND INSPECTION AT DRUM SERVICE COMPANY YARD. OUR DRIVERS ARE NOT INSPECTORS. THEY MAY PICK UP SOME DRUMS WHICH HAVE NO VALUE TO US OR DRUMS FOR WHICH WE MUST CHARGE A FEE FOR PROPER DISPOSAL. CHARGES, WHERE APPLICABLE, WILL BE MADE IN ACCORDANCE WITH OUR CURRENT PUBLISHED SCHEDULE OF DISPOSAL CHARGES.

THANK YOU FOR YOUR BUSINESS

CUSTOMER COPY
LEAVE WITH CUSTOMER

P 408 532 052

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to J. M. Murphy	
Street and No.	
P.O., State and ZIP Code	
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 10/17/86	

PS Form 3800, Feb. 1982

A

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 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 service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Mr. J. M. Murphy
Drum Service Co. of Florida
Post Office Box 278
Zellwood, FL 32798

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number: P 408 532 052

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature – Addressee
X

6. Signature – Agent
X Deborah H Bower

7. Date of Delivery
10-20-86

8. Addressee's Address *(ONLY if requested and fee paid)*

DOMESTIC RETURN RECEIPT

cc: John Botting
Tom Lauderdale

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

October 17, 1986

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. J. M. Murphy, President
Drum Service Company of Florida
Post Office Box 278
Zellwood, Florida 32798

Dear Mr. Murphy:

Re: Construction Permit Application AC 48-125190

The Bureau of Air Quality Management has received your application to construct a boiler which will be used as a back-up source for process steam only at your drum reclamation plant. At this time time the application is incomplete. Before the application can be processed, the answers to the following questions must be received.

1. Since you are applying for permit conditions which will permit you to burn recovered virgin oil from drum reclamation operations in this back-up boiler, please provide detailed information about all the specific types of recovered oils you plan to burn, including the analysis of all these oils.

2. Provide and submit all emissions calculations when burning each and all of these oils.

3. Include and send your proposal for quality control.

4. Explain how these oils are going to be collected, stored, and delivered to the boiler burner.

When the requested information is received, we will resume processing your application. If you have any questions on its status, please write to me at the above address or call Cleve Holladay, who is reviewing your application, at (904)488-1344.

Sincerely,

for H. H. Thomas

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

CHF/CH/s

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

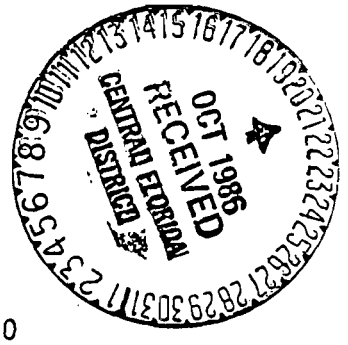
TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

October 17, 1986

CERTIFIED MAIL - RETURN RECEIPT REQUESTED



Mr. J. M. Murphy, President
Drum Service Company of Florida
Post Office Box 278
Zellwood, Florida 32798

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Re: Construction Permit Application AC 48-125190

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Sincerely,

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

CHF/CH/s

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

CENTRAL FLORIDA DISTRICT
3319 MAGUIRE BOULEVARD
SUITE 232
ORLANDO, FLORIDA 32803-3767

October 7, 1986

Drum Service Company of Florida
Post Office Box 278
Zellwood, Florida 32798

Attention: J. M. Murphy, President

Orange County - AP
Drum Service Company of Florida
Drum Reclamation Furnace
Modification of Conditions
Permit No. AO48-113583

Dear Mr. Murphy:

We are in receipt of your request for a modification of the permit conditions. The conditions are changed as follows:

Condition	From	To
Permit Page No. 1	The Furnace/Afterburner shall be heated with No. 2 Fuel Oil ...	The Furnace shall be heated with virgin No. 2 Fuel oil and unused virgin oil residues recovered from drum reclamation operations, that meet or exceed used oil standards. Exhaust gases from ..
Permit Page No. 5 Specific Condition No. 10	This source will be fired with No. 2 Fuel Oil Only.	The afterburner will be fired with virgin No. 2 Fuel Oil only. The furnace will be heated with approximately 97 percent virgin No. 2 Fuel Oil and approximately 3 percent unused virgin oil residues recovered during

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)	Initial / Date
William Thomas BAQM	
2. Tally	Initial / Date
3.	Initial / Date
4.	Initial / Date

DER
OCT 15 1986
BAQM

REMARKS:

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

FROM:

A.T. Sawicki, P.E.

DATE

PHONE

To

drum reclamation operations, such as, engine oils, automation oils, industrial oils, & hydraulic oils, that meet or exceed used oil standards. The term "virgin" means an oil which has been refined from crude oil and has not been used.

This letter must be attached to your permit and becomes a part of that permit.

Sincerely,

A. Alexander, P.E.
District Manager

AA:ATS:jtb

cc: Joseph L. Tessitore, P.E.
John Bateman
William Thomas, BAQM

DER FORM 17-1.122(59)

APPLICATION TRACKING SYSTEM 09/19/86

APPL NO:125190
APPL RECVD:09/19/86 TYPE CODE:AC SUBCODE:01 LAST UPDATE:09/19/86
DER OFFICE RECVD:ORL DER OFFICE TRANSFER TO:BAQ APPLICATION COMPLETE:__/__/__
DER PROCESSOR:~~J TURNER~~ B. Thomas
APPL STATUS:AC DATE:09/19/86 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)
RELIEF:__ (SSAC/EXEMPTIONS/VARIANCE)
(Y/N) N MANUAL TRACKING DISTRICT:30 COUNTY:48
(Y/N) N DNR REVIEW REQD? LAT/LONG:28.43.55/81.36.45
(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:DRUM SERVICE CO./BACK-UP STEAM BLR
STREET:803 JONES AVENUE CITY:ZELLWOOD
STATE:FL ZIP:_____ PHONE:___-___-____
APPLICATION NAME:MURPHY, J.M.
STREET:P.O. BOX 278 CITY:ZELLWOOD
STATE:FL ZIP:32798 PHONE:___-___-____
AGENT NAME:SEABURY-BOTTORF ASSOCIATES
STREET:4595 PARKBREEZE CT. CITY:ORLANDO
STATE:FL ZIP:32808 PHONE:305-298-0846
FEE #1 DATE PAID:09/19/86 AMOUNT PAID:00100 RECEIPT NUMBER:00105455

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 GOVERNING BODY REQUESTED SURVEY RESULTS/REPORTS - - __/__/__
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:

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

	INITIAL	DATE
1. TO: (NAME, OFFICE, LOCATION) [redacted]		
2. Bureau of Air Quality Manag.		
3.		
4.		

DER
SEP 26 1986
BAQM

REMARKS:

F. Y. R.

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 & REPT
- INITIAL & FORWARD
- DISTRIBUTE
- CONCURRENCE
- FOR PROCESSING
- INITIAL & RETURN

FROM: John Turner

DATE 9-25-86

PHONE

CASE HISTORY SHEET

File Name Drum Service Co. / Back-Up Steam Boiler

PATS Number AC48-125190 Permit Number

Date	Action Taken	Init.	Time	Miles
ENTERED SEP 1 9 1986		JC	.25	
9-29-86	Received Permit Appl.	[illegible]	0.75	
		Total:		

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Nº 105455

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from Drum Service Co. of Florida Date Sept. 19, 1986

Address P.O. Box 278 Zellwood 32798 Dollars $ 100.00

Applicant Name & Address

Source of Revenue same

Revenue Code 000031 CK 40464 Application Number AC48-195190

By S. Coombs

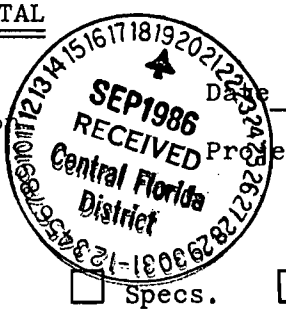
SBA

SEABURY-BOTTORF ASSOCIATES, INC.

CONSULTING ENGINEERS ANALYTICAL LABORATORY

4595 PARKBREEZE CT. ORLANDO, FLORIDA 32808-1057 305-298-0846

TRANSMITTAL



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

Date September 18, 1986

Project No. 110-7 - DRUM SERVICE CO. OF FLORIDA

☐ Tracings ☐ Prints ☐ Shop Drawings ☐ Specs. ☐ Letters ☒ Other

No. Cys.	Numbered	Date	Description
4	DER Form 17-1.202(1)	9/17/86	APPLICATION TO CONSTRUCT AIR POLLUTION SOURCES
			(BOILER) w/Attachments including Check No. 40464
			in amount of $100.00 payable to DER

REMARKS:

SEABURY-BOTTORF ASSOCIATES, INC.

By Roger T. Caldwell
Roger T. Caldwell
Vice President/Environmental Division

COPY TO: Mr. J. M. Murphy (w/cy. encl.)

AC 48-125190

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

PAID
100
SEP 19 1986
SAINT JOHNS
RIVER DISTRICT

SEP1986
RECEIVED
Central Florida
District

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

ALEX SENKEVICH
DISTRICT MANAGER

APPLICATION TO ~~OPERATE~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Boiler [X] New[1] [ ] Existing[1]

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

COMPANY NAME: Drum Service Co. of Florida COUNTY: Orange

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) Back-up Process Steam Boiler

SOURCE LOCATION: Street 803 Jones Ave. City Zellwood

UTM: East 17-439.904 North 3178.077

Latitude 28° 43' 55"N Longitude 81° 36' 45"W

APPLICANT NAME AND TITLE: J. M. Murphy, President

APPLICANT ADDRESS: P. O. Box 278, Zellwood, FL 32798

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Drum Service Co.of Florida

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 contro facilities in such a manner as to comply with the provision of Chapter 403, Florid Statutes, and all the rules and regulations of the department and revisions thereof. also understand that a permit, if granted by the department, will be non-transferabl and I will promptly notify the department upon sale or legal transfer of the permitte establishment.

*Attach letter of authorization

Signed: _____

J. M. Murphy, President
Name and Title (Please Type)

Date: 9/15/86 Telephone No. 305/889-2581

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 hav been designed/examined by me and found to be in conformity with modern engineerin principles applicable to the treatment and disposal of pollutants characterized in th permit application. There is reasonable assurance, in my professional judgment, that

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

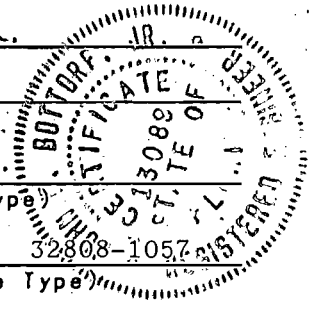
the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the 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.
Name (Please Type)

Seabury-Bottorf Associates, Inc.
Company Name (Please Type)

4595 Parkbreeze Ct., Orlando, FL 32808-1057
Mailing Address (Please Type)



Florida Registration No. 13089 Date: 9/17/86 Telephone No. 305/298-0846

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.

For the installation of a 200 HP Cleaver Brooks package process steam boiler, Model #CB552-200, Serial #L44759. This boiler will be used as a backup steam supply, only when the waste heat boiler is down and the closed head drum line is in operation. This project will result in full compliance.

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

Start of Construction Purchased Completion of Construction 10 days after permit issued

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.)

N/A

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

None

510

E. Requested permitted equipment operating time: hrs/day 10 ; daye/wk 1 ; wks/yr 51 ;

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

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

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

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

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

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

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. Yes

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

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

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

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

   a. If yes, for what pollutants?_____

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

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

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

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

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

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

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

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

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

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Visible Emissions			.600(6)(a)	20% Opacity			
Particulate	0.112	0.029	.600(6)(b)	BACT Determination	57.12	0.029	
SO_2	3.976	1.014	.600(6)(c)	BACT Determination	2028	1.014	
CO	0.28	0.0714			143	0.0714	
NO_x	1.12	0.2856			571	0.2856	

[1]See Section V, Item 2.

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

[3]Calculated from operating rate and applicable standard.

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

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
#2 Fuel Oil	30	56	7.90
Recovered Virgin Oil	30	56	7.90

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

Fuel Analysis:

Percent Sulfur: 0.5 Percent Ash: 0.68

Density: 7.206 lbs/gal Typical Percent Nitrogen: .0072

Heat Capacity: 19,036 BTU/lb 141,000 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.

Boiler blowdown to wastewater treatment system.

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

Stack Height: 11.8 ft. Stack Diameter: 1.33 ft.

Gas Flow Rate: 2955 ACFM 1821 DSCFM Gas Exit Temperature: 400 °F.

Water Vapor Content: 5 % Velocity: 35.28 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 Dismter: _____ Stack Temp. _____

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

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

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

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

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

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
   N/A
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
   See Attachment 1.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
   See Attachment 1.
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.) N/A
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).
   N/A
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 [X] No

Contaminant	Rate or Concentration

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

[ ] Yes [X] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration
Particulate	0.112 Lbs./Hr.
SO_2	3.976 Lbs./Hr.

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

1. Control Device/System:
2. Operating Principles: Low sulphur oil
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
We propose BACT for this small package boiler to be the burning of #2 fuel oil 80-100% of the time and recovered virgin oil 0-20% of the time. Both fuels to have a maximum sulphur content of 0.5%.	

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

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

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

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

j. Applicability to manufacturing processes:

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

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

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

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

1. _____ no. sites _____ TSP _____ ( ) SO^2* _____ Wind spd/dir

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

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location)_____

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

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

C. Computer Models Uaed

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.

SECTION II,A. Addendum

Drum Service Co. of Florida has purchased a used boiler from National Steel Drum Company, Inc., Philadelphia, Pennsylvania. The boiler is a 200 HP Cleaver Brooks package boiler, Model #CB552-200, Serial #L44759. This boiler will be used as a back-up source for process steam only. During normal plant operation this boiler will not be in use. Steam required will be obtained from a new heat recovery boiler/afterburner on the drum furnace. In rare cases when the drum furnace is down and steam is required to operate the closed head drum line, this conventional back-up boiler will be used. This boiler will be fired with #2 fuel oil 80-100% of the time. Recovered virgin oil will be burned 0-20% of the time. This virgin oil may consist of various combinations of engine oils, automation oils, industrial oils and hydraulic oils. The recovered oil is unused and is obtained by draining oil company drums prior to reconditioning. An analysis of this composite of oils has been performed and is attached.

GALBRAITH
Laboratories, Inc.
QUANTITATIVE MICROANALYSES
ORGANIC – INORGANIC
KNOXVILLE, TENNESSEE 37921

P. O. BOX 4187
2323 SYCAMORE DR.

PHONE 546-1335
AREA CODE 615

Drum Service Company of Florida
803 Jones Avenue
Post Office Box 278
Zellwood, Florida 32798

August 6, 1985

Received: July 29th

Dear Sir:

Analysis of your compound gave the following results:

Your #,	Our #,	Analyses,	
Recovered Virgin	K-2925	% Nitrogen	0.0072
		% Sulfur	0.45
		% Ash	0.68
		BTU/pound	19,036
		Density @ 60/60°F	0.889
		BTU/gallon	140,942

Sincerely yours,

GALBRAITH LABORATORIES, INC.

Gail R. Hutchens
Exec. Vice-President

GRH:sc

ATTACHMENT 1

POTENTIAL/ACTUAL EMISSION CALCULATIONS

All emissions are based on:

1. AP42, Table 1.3-1
2. A maximum of 0.056 thousand gallons of #2 fuel oil burned/Hr.
3. A maximum of 510 hours/Yr. of operation.

POTENTIAL EMISSIONS

Particulate = 0.056 KGALB/Hr. X 2 Lbs./10^3 = 0.112 Lbs./Hr.

X $\frac{510 \text{ Hrs./Yr.}}{2000 \text{ Lbs./Ton}}$ = 0.029 Tons/Yr.

SO_2 = 0.056 X 142(.5) = 3.976 Lbs./Hr. X $\frac{510}{2000}$ = 1.014 Tons/Yr.

CO = 0.056 X 5 = 0.28 Lbs./Hr. X $\frac{510}{2000}$ = .0714 Tons/Yr.

NO_x = 0.056 X 20 = 1.12 Lbs./Hr. X $\frac{510}{2000}$ = 0.2856 Tons/Yr.

VOC = 0.056 X 0.2 = 0.0112 Lbs./Hr. X $\frac{510}{2000}$ = 0.0029 Tons/Yr.

ACTUAL EMISSIONS

Actual emissions will be equal to potential emissions, due to no control device being used.

TABLE 1.3-1. UNCONTROLLED EMISSION FACTORS FOR FUEL OIL COMBUSTION

EMISSION FACTOR RATING: A

Boiler Type[a]	Particulate[b] Matter		Sulfur Dioxide[c]		Sulfur Trioxide		Carbon Monoxide[d]		Nitrogen Oxide[e]		Volatile Organics[f] Nonmethane		Methane	
	$kg/10^3$ l	$lb/10^3$ gal	$kg/10^3$ l	$lb/10^3$ gal	$kg/10^3$ l	$lb/10^3$ gal	$kg/10^3$ l	$lb/10^3$ gal	$kg/10^3$ l	$lb/10^3$ gal	$kg/10^3$ l	$lb/10^3$ gal	$kg/10^3$ l	$lb/10^3$ gal
Utility Boilers														
Residual Oil	g	g	19S	157S	0.34S[h]	2.9S[h]	0.6	5	8.0 (12.6)(S)[i]	67 (105)(42)[i]	0.09	0.76	0.03	0.28
Industrial Boilers														
Residual Oil	g	g	19S	157S	0.24S	2S	0.6	5	6.6[j]	55[j]	0.034	0.28	0.12	1.0
Distillate Oil	0.24	2	17S	142S	0.24S	2S	0.6	5	2.4	20	0.024	0.2	0.006	0.052
Commercial Boilers														
Residual Oil	g	g	19S	157S	0.24S	2S	0.6	5	6.6	55	0.14	1.13	0.057	0.475
Distillate Oil	0.24	2	17S	142S	0.24S	2S	0.6	5	2.4	20	0.04	0.34	0.026	0.216
Residential Furnaces														
Distillate Oil	0.3	2.5	17S	142S	0.24S	2S	0.6	5	2.2	18	0.085	0.713	0.214	1.78

[a] Boilers can be approximately classified according to their gross (higher) heat rate as shown below:
Utility (power plant) boilers: >106 x 10^9 J/hr (>100 x 10^6 Btu/hr)
Industrial boilers: 10.6 x 10^9 to 106 x 10^9 J/hr (10 x 10^6 to 100 x 10^6 Btu/hr)
Commercial boilers: 0.5 x 10^9 to 10.6 x 10^9 J/hr (0.5 x 10^6 to 10 x 10^6 Btu/hr)
Residential furnaces: <0.5 x 10^9 J/hr (<0.5 x 10^6 Btu/hr)

[b] References 3-7 and 24-25. Particulate matter is defined in this section as that material collected by EPA Method 5 (front half catch).

[c] References 1-5. S indicates that the weight % of sulfur in the oil should be multiplied by the value given.

[d] References 3-5 and 8-10. Carbon monoxide emissions may increase by factors of 10 to 100 if the unit is improperly operated or not well maintained.

[e] Expressed as NO_2. References 1-5, 8-11, 17 and 26. Test results indicate that at least 95% by weight of NO_x is NO for all boiler types except residential furnaces, where about 75% is NO.

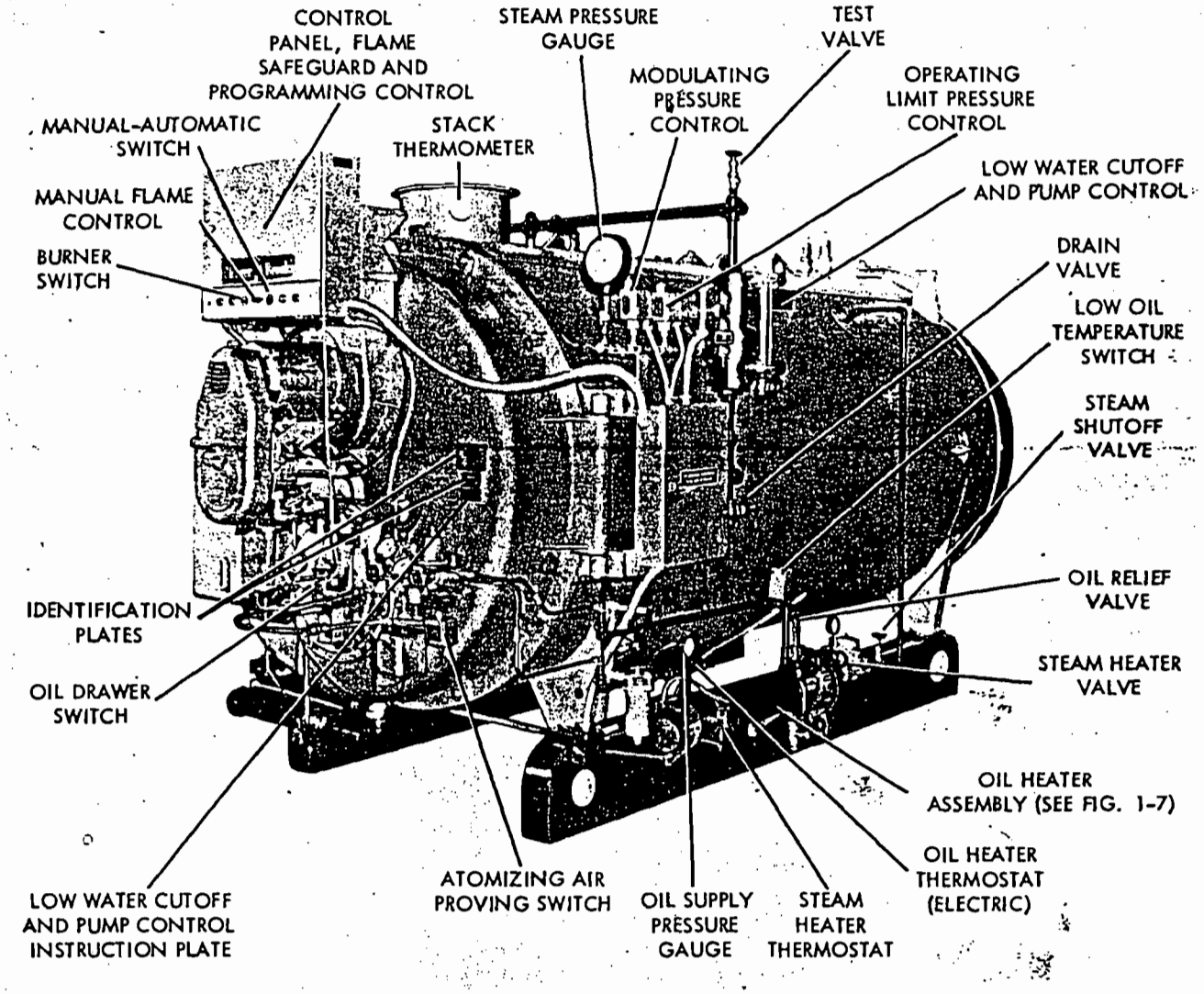
[f] References 18-21. Volatile organic compound emissions are generally negligible unless boiler is improperly operated or not well maintained, in which case emissions may increase by several orders of magnitude.

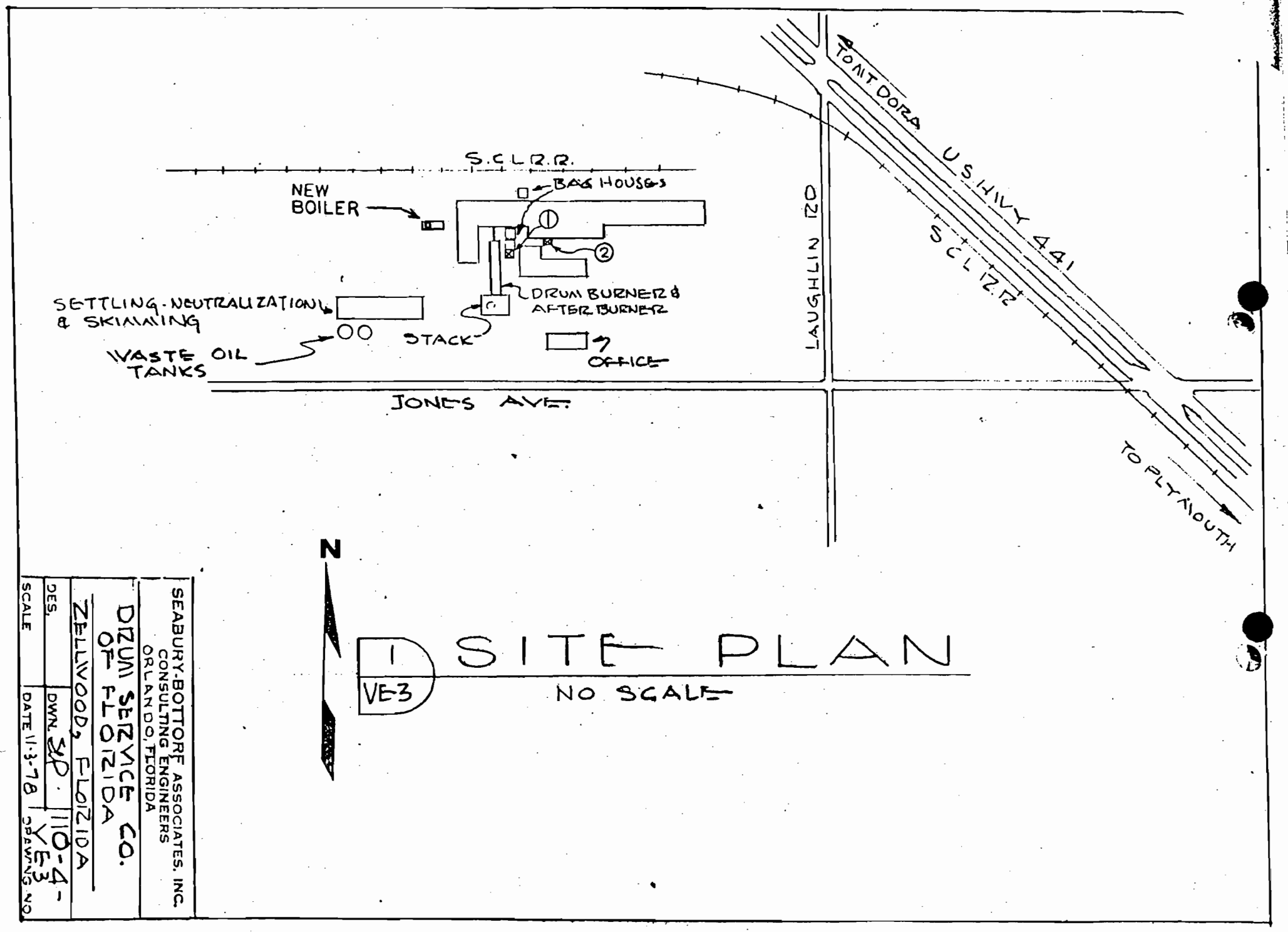
[g] Particulate emission factors for residual oil combustion are, on average, a function of fuel oil grade and sulfur content:
Grade 6 oil: 1.25(S) + 0.38 $kg/10^3$ liter [10(S) + 3 $lb/10^3$ gal] where S is the weight % of sulfur in the oil. This relationship is based on 81 individual tests and has a correlation coefficient of 0.65.
Grade 5 oil: 1.25 $kg/10^3$ liter (10 $lb/10^3$ gal)
Grade 4 oil: 0.88 $kg/10^3$ liter (7 $lb/10^3$ gal)

[h] Reference 25.

[i] Use 5 $kg/10^3$ liters (42 $lb/10^3$ gal) for tangentially fired boilers, 12.6 $kg/10^3$ liters (105 $lb/10^3$gal) for vertical fired boilers, and 8.0 $kg/10^3$ liters (67 $lb/10^3$ gal) for all others, at full load and normal (>15%) excess air. Several combustion modifications can be employed for NO_x reduction: (1) limited excess air can reduce NO_x emissions 5-20%, (2) staged combustion 20-40%, (3) using low NO_x burners 20-50%, and (4) ammonia injection can reduce NO_x emissions 40-70% but may increase emissions of ammonia. Combinations of these modifications have been employed for further reductions in certain boilers. See Reference 23 for a discussion of these and other NO_x reducing techniques and their operational and environmental impacts.

[j] Nitrogen oxides emissions from residual oil combustion in industrial and commercial boilers are strongly related to fuel nitrogen content, estimated more accurately by the empirical relationship:
kg $NO_2/10^3$ liters = 2.75 + 50$(N)^2$ [lb $NO_2/10^3$gal = 22 + 400$(N)^2$] where N is the weight % of nitrogen in the oil. For residual oils having high (>0.5 weight %) nitrogen content, use 15 kg $NO_2/10^3$ liter (120 lb $NO_2/10^3$gal) as an emission factor.



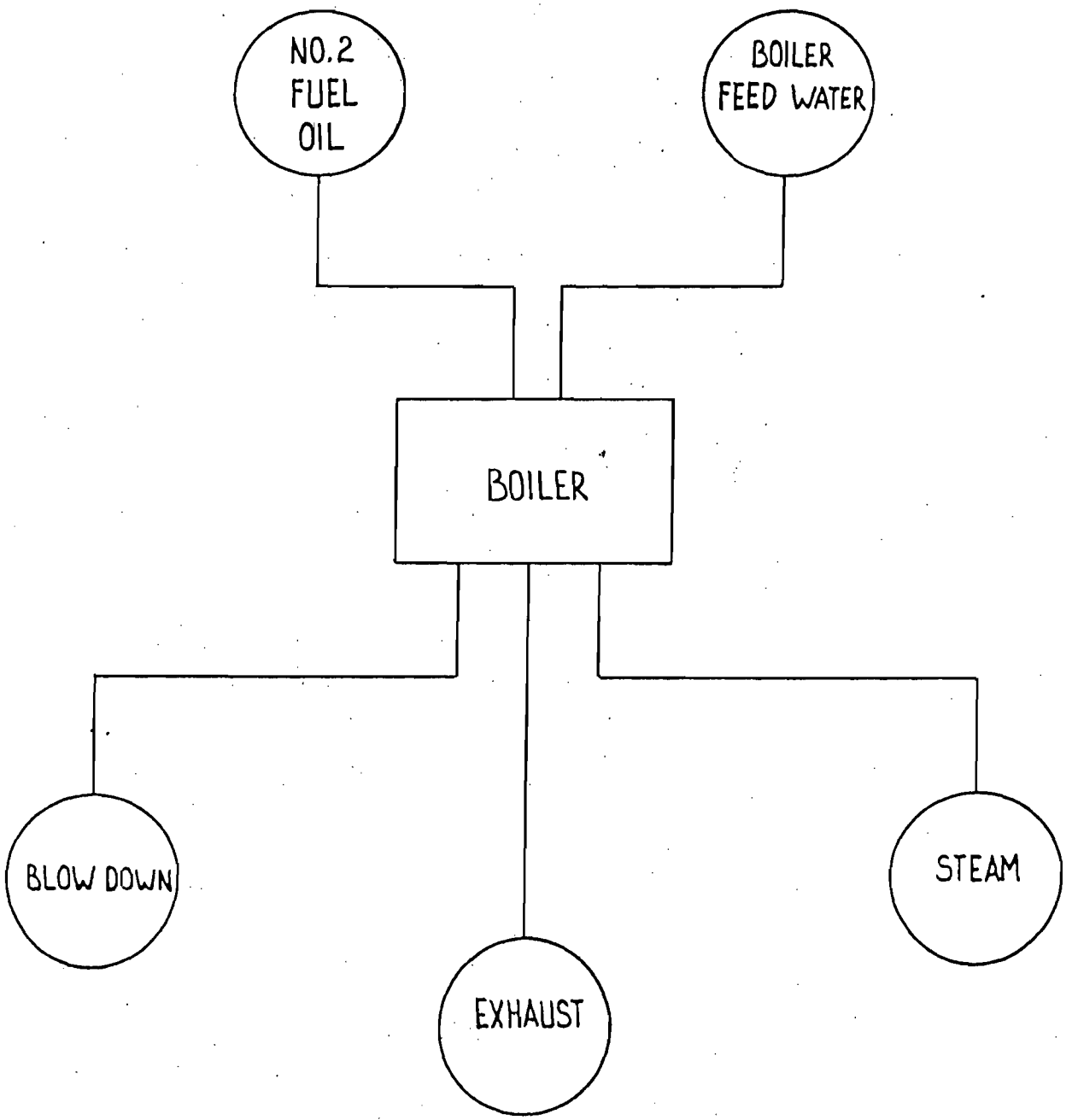


1 SITE PLAN
VE3
NO SCALE

SEABURY-BOTTORF ASSOCIATES, INC.
CONSULTING ENGINEERS
ORLANDO, FLORIDA

DRUM SERVICE CO. OF FLORIDA
ZELLWOOD, FLORIDA

DES.
DWN. RP
SCALE
DATE 11-3-78
110-4-
DRAWING NO. VE3

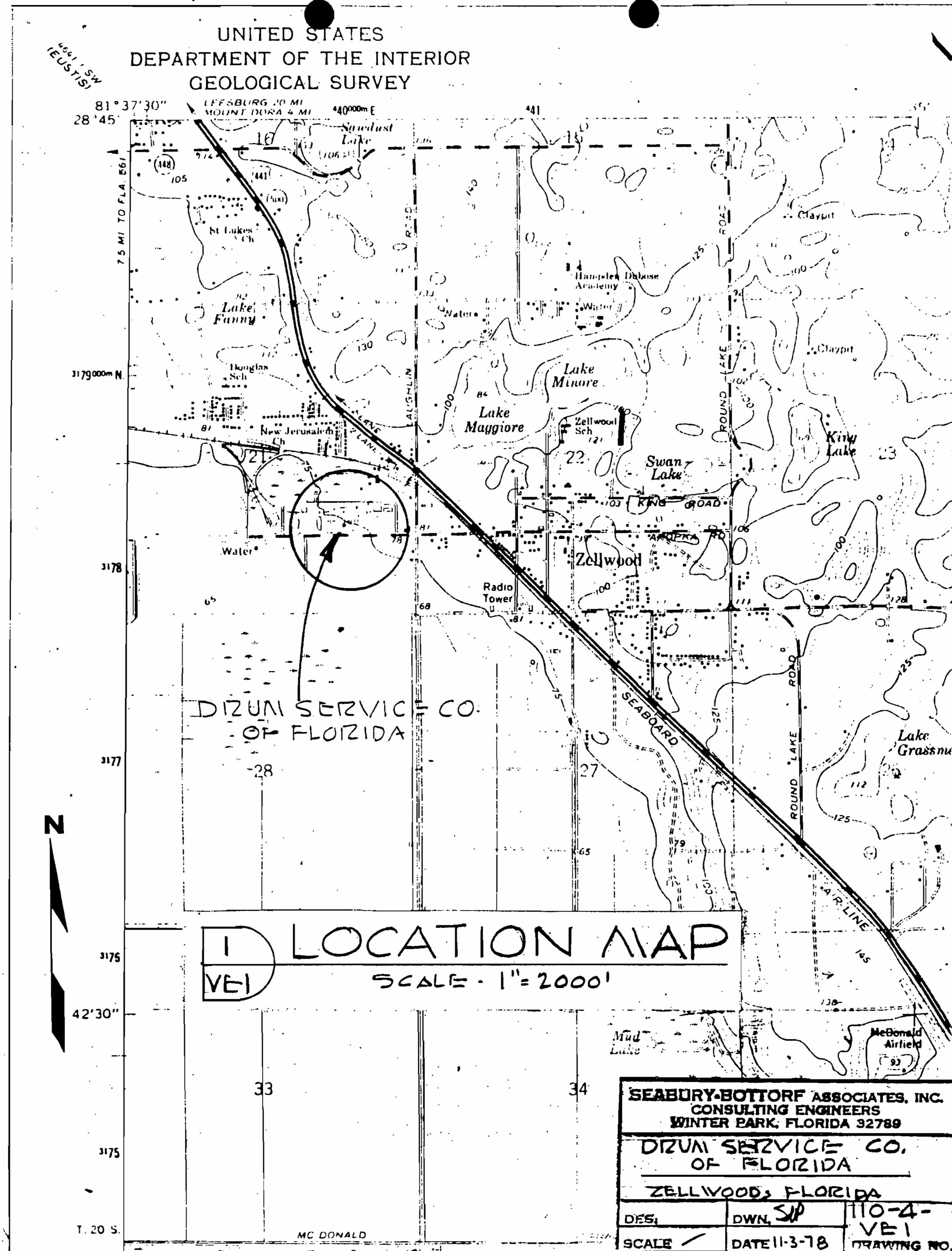


SCHEMATIC FLOW DIAGRAM

SEABURY-BOTTORF ASSOCIATES, INC.
CONSULTING ENGINEERS
ORLANDO, FLORIDA

TYPICAL BOILER

DES. N/A	DWN. TC	110-7-1
SCALE N.T.S.	DATE 9-2-86	DRAWING NO.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
81°37'30"
28°45'
LEESBURG 20 MI
MOUNT DORA 4 MI
440000m E
7.5 MI TO FLA. 561
Sawdust Lake
St Lukes Ch
Lake Fanny
Douglas Sch
New Jerusalem Ch
Hampden Dubose Academy
Water
Lake Minore
Lake Maggiore
Zellwood Sch
Swan Lake
King Lake
Claypit
KING ROAD
Zellwood
Radio Tower
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LAUGHLIN ROAD
ROUND LAKE ROAD
SEABOARD AIR LINE
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McDonald Airfield
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3175
42'30"
T. 20 S.
T. 21 S.
21
22
23
27
28
33
34
DRUM SERVICE CO.
OF FLORIDA
1
VE1
LOCATION MAP
SCALE - 1" = 2000'
N
SEABURY-BOTTORF ASSOCIATES, INC.
CONSULTING ENGINEERS
WINTER PARK, FLORIDA 32789
DRUM SERVICE CO.
OF FLORIDA
ZELLWOOD, FLORIDA
DES.
DWN. SP
SCALE
DATE 11-3-78
110-4-VE1
DRAWING NO.