

**BEST AVAILABLE COPY**

P 407 853 165

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

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

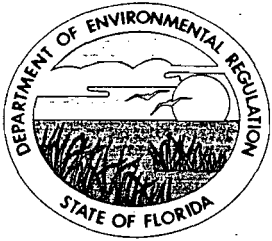
PS Form 3800, June 1985

Sent to Mr. C. T. Chapman, FSH	
Street and No. Highway 90 East	
P.O., State and ZIP Code Chattahoochee, FL 32324	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 2-22-91 Permit: AC 20-170557	

**SENDER:** Complete items 1 and 2 when additional services are desired.  
Put your address in the "RETURN TO" Space on the reverse side. Failure to do so may result in the article being returned to you. The return receipt fee will provide you the name of the addressee, the date of delivery. For additional fees the following services are available. Consult the reverse side of this form for details and check box(es) for additional service(s) requested.

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

3. Article Addressed to: Mr. C. T. Chapman Administrative Services Director Florida State Hospital Highway 90 East Chattahoochee, FL 32324	4. Article Number P 407 853 Type of Service: <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Addressee X	8. Addressee's Address requested and fee paid
6. Signature - Agent X <i>[Signature]</i>	
7. Date of Delivery 2-25-91	



# Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF PERMIT

Mr. C. T. Chapman, Administrative Services Director  
Florida State Hospital  
Highway 90 East  
Chattahoochee, Florida 32324

February 22, 1991

Enclosed is construction permit AC 20-170557 for the existing diesel engine-generator at the Florida State Hospital in Chattahoochee, Gadsden County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

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

Copy furnished to:

E. Middleswart, NWD  
J. Neubauer, NWD Branch  
F. W. Dougherty, P.E., LRW, Inc.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 2-22-91.

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

Patricia Blaney  
Clerk

2-22-91  
Date

Final Determination

Florida State Hospital  
Gadsden County  
Chattahoochee, Florida

Construction Permit Number  
AC 20-170557

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

February 18, 1991

## Final Determination

The Technical Evaluation and Preliminary Determination for the after-the-fact permitting of the existing diesel engine-generator combination at Florida State Hospital, which is located in Chattahoochee, Gadsden County, Florida, was distributed on June 4, 1990. The Notice of Intent to Issue was published in the Tallahassee Democrat on January 12, 1991. Copies of the evaluation were available for public inspection at the Department's Northwest District office and Bureau of Air Regulation office.

No comments were submitted on the Department's Intent to Issue the permit. However, the expiration date has been extended from December 31, 1990, to July 31, 1991. Therefore, the final action of the Department will be to issue construction permit AC 20-170557 as proposed in the Technical Evaluation and Preliminary Determination and with the expiration date changed.

375

# Florida Department of Environmental Regulation

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

Chiles, Governor

Carol M. Browner, Secretary

**PERMITTEE:**  
Florida State Hospital  
DHRS  
Highway 90 East  
Chattahoochee, FL 32324

Permit Number: AC 20-170557  
Expiration Date: July 31, 1991  
County: Gadsden  
Latitude/Longitude: 30°42'16"N  
84°50'10"W  
Project: Diesel Engine-Generator  
Combination

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

The purpose of this project is to permit an existing (after-the-fact) diesel engine-generator combination. The source is a 3500 HP, 16 cylinder fuel injection ALCO diesel engine driving a 2500 KVA (2000 KW) General Electric generator. The source was constructed/installed in 1970. The source is fired at a maximum of 200 gals/hr with No. 2 diesel oil having a maximum sulfur content of 0.4%, by weight. The exhaust drives a Turbo Supercharger before discharging into the air. There is no special pollution control equipment installed except for the engine trim controls, which are integral with the engine. The engine's condition is monitored by pyrometers and manifold pressure. The UTM coordinates are Zone 17, 707.4 km East and 3398.5 km North.

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

Attachments are listed below:

1. Application to Construct an Air Pollution Source, DER Form 17-1.122(1) received by the NW District on September 26, 1989.
2. Mr. C. H. Fancy's letter dated October 19, 1989.
3. Mr. T. A. Parker's letter with attachments received March 30, 1990.
4. Technical Evaluation and Preliminary Determination dated June 4, 1990.

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: July 31, 1991

**GENERAL CONDITIONS:**

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

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for 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. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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

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

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: July 31, 1991

**GENERAL CONDITIONS:**

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

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

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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



PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: July 31, 1991

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

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: July 31, 1991

**GENERAL CONDITIONS:**

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

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

**SPECIFIC CONDITIONS:**

1. The permitted hours of operation are 8 hrs/day, 7 days/wk, and 52 wks/yr (i.e., 2912 hrs/yr).
2. The visible emissions (VE) standard is less than 20% opacity pursuant to F.A.C. Rule 17-2.610(2).
3. Compliance for VE shall be demonstrated using EPA Method 9 in accordance with F.A.C. Rule 17-2.700.
4. The source is subject to F.A.C. Rules 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.
5. The source is subject to all applicable sections of F.A.C. Chapters 17-2 and 17-4.

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: July 31, 1991

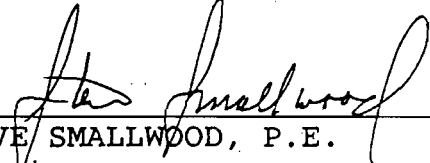
**SPECIFIC CONDITIONS:**

6. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

7. An application for an operation permit must be submitted to the Northwest District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this 21<sup>st</sup> day  
of February, 1990

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

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



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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

# Interoffice Memorandum

TO: Steve Smallwood

FROM: Clair Fancy *CF*

DATE: February 18, 1991

SUBJ: Approval of Construction Permit AC 20-170557  
Florida State Hospital-Chattahoochee

Attached for your approval and signature is an after-the-fact permit prepared by the Bureau of Air Regulation for the above mentioned company for a diesel engine-generator combination. There were no comments received during the public notice period. The expiration date has been changed from December 31, 1990, to July 31, 1991.

Day 90, after which this permit will be issued by default, is March 6, 1991.

I recommend your approval and signature.

CF/BM/rbm

Attachments

*CF*

*OK*

*NOTE the date was  
typed as 1990  
I changed it to 1991  
Be sure future  
are typed 1991.*

*[Signature]*  
*2-21-91*

PM  
1-31-91  
Chattahoochee, FL

BEST AVAILABLE COPY

File Copy

# Tallahassee Democrat PUBLISHED DAILY

## TALLAHASSEE - LEON - FLORIDA

RECEIVED

FEB 1 1991

DER-BAQM

### STATE OF FLORIDA COUNTY OF LEON:

Before the undersigned authority personally appeared Carrie Coons who on oath says that she is Legal Advertising Representative of the Tallahassee Democrat, a daily newspaper published at Tallahassee in Leon County, Florida; that the attached copy of advertising being a Legal Ad in the matter of

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF INTENT TO ISSUE  
in the  
Court, was published in said newspaper in the issues of:

JANUARY 12, 1991

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

*Carrie Coons*

Carrie Coons,  
Legal Advertising Representative

Sworn To And Subscribed Before Me  
This 14th

Day of January

A.D. 1991

(SEAL)

*Lady Perkins*  
Notary Public

Notary Public, State of Florida  
My Commission Expires Sept. 27, 1992  
Bonded thru Troy Fain - Insurance Inc.

Sworn to and subscribed before me  
this 31st day of January, 1991.

*Beverly D. Mabardy*  
Notary Signature

Notary Public, State of Florida  
My Commission Exp. Aug. 28, 1993  
Bonded thru PICKARD Ins. Agency

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

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Florida State Hospital, Hwy. 90 East, Chattahoochee, Florida 32324, for the permitting of the existing diesel engine generator located at the permittee's existing facility in Chattahoochee, Gadsden County, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information:

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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a part to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

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

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

Department of Environmental Regulation  
Northwest District  
160 Governmental Center  
Pensacola, Florida 32501-5794

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

JANUARY 12, 1991 AD NO: 1A640050

P 423 104 508

**RECEIPT FOR CERTIFIED MAIL**

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

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

PS Form 3800, June 1985

Sent to Mr. C. T. Chapman, Fla. State	
Street and No. Highway 90 East Hospital	
P.O. State and ZIP Code Chattahoochee, FL 32324	
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 Permit: AC 20-170557 Mailed: 6-7-90	

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

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

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

3. Article Addressed to: Mr. C. T. Chapman Administrative Services Director Florida State Hospital Highway 90 East Chattahoochee, FL 32324	4. Article Number P 423 104 508  Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Addressee X	Always obtain signature of addressee or agent and <b>DATE DELIVERED</b> .
6. Signature - Agent X <i>Jacqueline G. Neal</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery <i>6-15-90</i>	



# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

June 4, 1990

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. C. T. Chapman  
Administrative Services Director  
Florida State Hospital  
Highway 90 East  
Chattahoochee, Florida 32324

Dear Mr. Chapman:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for the permitting of the existing diesel engine-generator located at the permittee's existing facility in Chattahoochee, Gadsden County, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews.

Sincerely,

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

CHF/BM/plm

Attachments

c: E. Middleswärt, NW District  
J. Neubauer, NW District Branch  
F. W. Dougherty, P.E., LRW, Inc.

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Application for Permit by:

Florida State Hospital  
Highway 90 East  
Chattahoochee, Florida 32324

DER File No. AC 20-170557

---

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, Florida State Hospital, applied on September 26, 1989, to the Department of Environmental Regulation for a permit for the permitting of the existing diesel engine-generator. The proposed project will occur at the applicant's existing facility located in Chattahoochee, Gadsden 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 is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.



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

The Petition shall contain the following information;

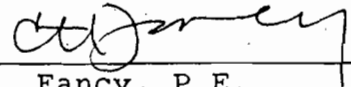
- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c)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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application(s) have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION



---

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

Copies furnished to:

E. Middleswart, NW District  
J. Neubauer, NW District Branch  
F. W. Dougherty, P.E., LRW, Inc.

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 6-7-90.

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.

Kevin J. Ober  
Clerk

6-7-90  
Date

State of Florida  
Department of Environmental Regulation  
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to Florida State Hospital, Hwy 90 East, Chattahoochee, Florida 32324, for the permitting of the existing diesel engine-generator located at the permittee's existing facility in Chattahoochee, Gadsden County, Florida. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

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

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the

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

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

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

Department of Environmental Regulation  
Northwest District  
160 Governmental Center  
Pensacola, Florida 32501-5794

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

Technical Evaluation  
and  
Preliminary Determination

Florida State Hospital  
Gadsden County  
Chattahoochee, Florida

Construction Permit Number  
AC 20-170557

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

June 4, 1990

I. Application

A. Applicant

Florida State Hospital  
Highway 90 East  
Chattahoochee, Florida 32324

B. Project

The applicant applied for a construction permit for an existing 3500 HP, 16 cylinder fuel injection ALCO diesel engine driving a 2500 KVA (2000 KW) General Electric generator. The source was constructed/installed in 1970. Therefore, this is an after-the-fact permitting action.

The UTM coordinates are Zone 17, 707.4 km East and 3398.5 km North.

C. Process and Controls

The diesel engine-generator combination is used on a stand-by basis. The diesel engine burns No. 2 fuel oil at a maximum heat input rate of  $29 \times 10^6$  Btu per hour. The maximum sulfur content is 0.4%, by weight. The applicant applied for an operating schedule of 8 hrs/day, 7 days/wk, 52 wks/yr, for a total of 2912 hrs/yr.

Pollution control systems consist of engine trim controls, which are integral with the engine. Also, the engine is monitored by pyrometers in the exhaust, visible emissions, and manifold pressure.

D. Source Industrial Classification Codes (SIC)

Florida State Hospital is classified as follows:

- 8063 Psychiatric Hospital
- 9223 Correctional Institution

E. Source Classification Codes (SCC)

The diesel engine-generator combination is classified as follows:

Internal Combustion-Commercial/Institutional: Distillate Oil (Diesel)

- 2-03-001-01 Reciprocating  $10^3$  gals burned

II. Rule Applicability

The project is subject to review in accordance with Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 17-2 and 17-4.

The application package was deemed complete on March 30, 1990.

The existing facility is located in an area designated attainment pursuant to F.A.C. Rule 17-2.420.

Since the project is for a nonprofit health facility, the emissions are exempt from PSD (Prevention of Significant Deterioration) requirements of BACT and air quality analysis. Because the source is deemed existing (after-the-fact) with no modification involved, then the emissions will be reviewed in accordance with F.A.C. Rule 17-2.520, Sources Not Subject to PSD or Nonattainment Review Requirements.

Therefore, the source shall be subject to the emission limiting standards pursuant to F.A.C. Rules 17-2.610(2): General Visible Emissions Standard; 17-2.700: Stationary Point Source Emissions Test Procedures; 17-2.250: Excess Emissions; and 17-4.130: Plant Operation-Problems.

### III. Summary of Emissions

#### A. Emission Limitations

The source is subject to a visible emissions standard contained in F.A.C. Rule 17-2.610(2):

<u>Source</u>	<u>Emission Limiting Standard</u>
Diesel engine-generator	less than 20% opacity (not $\geq$ 20% opacity)

#### B. Ambient Air Quality Analysis

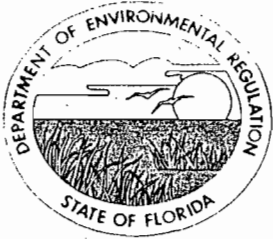
Based on a review of the proposed project, an air quality analysis was not required.

### IV. Conclusion

Based on the information provided by Florida State Hospital, the Department has reasonable assurance that the existing diesel engine-generator combination, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.







# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

PERMITTEE:  
Florida State Hospital  
DHRS  
Highway 90 East  
Chattahoochee, FL 32324

Permit Number: AC 20-170557  
Expiration Date: December 31, 1990  
County: Gadsden  
Latitude/Longitude: 30°42'16"N  
84°50'10"W  
Project: Diesel Engine-Generator  
Combination

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

The purpose of this project is to permit an existing (after-the-fact) diesel engine-generator combination. The source is a 3500 HP, 16 cylinder fuel injection ALCO diesel engine driving a 2500 KVA (2000 KW) General Electric generator. The source was constructed/installed in 1970. The source is fired at a maximum of 200 gals/hr with No. 2 diesel oil having a maximum sulfur content of 0.4%, by weight. The exhaust drives a Turbo Supercharger before discharging into the air. There is no special pollution control equipment installed except for the engine trim controls, which are integral with the engine. The engine's condition is monitored by pyrometers and manifold pressure. The UTM coordinates are Zone 17, 707.4 km East and 3398.5 km North.

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

Attachments are listed below:

1. Application to Construct an Air Pollution Source, DER Form 17-1.122(1) received by the NW District on September 26, 1989.
2. Mr. C. H. Fancy's letter dated October 19, 1989.
3. Mr. T. A. Parker's letter with attachments received March 30, 1990.
4. Technical Evaluation and Preliminary Determination dated June 4, 1990.

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: December 31, 1990

**GENERAL CONDITIONS:**

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

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for 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. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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

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

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: December 31, 1990

GENERAL CONDITIONS:

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

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

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: December 31, 1990

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

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

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: December 31, 1990

GENERAL CONDITIONS:

records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

1. The permitted hours of operation are 8 hrs/day, 7 days/wk, and 52 wks/yr (i.e., 2912 hrs/yr).
2. The visible emissions (VE) standard is less than 20% opacity (not  $\geq$  20% opacity) pursuant to F.A.C. Rule 17-2.610(2).
3. Compliance for VE shall be demonstrated using EPA Method 9 in accordance with F.A.C. Rule 17-2.700.
4. The source is subject to F.A.C. Rules 17-2.250: Excess Emissions; and, 17-4.130: Plant Operation-Problems.
5. The source is subject to all applicable sections of F.A.C. Chapters 17-2 and 17-4.

PERMITTEE:  
Florida State Hospital

Permit Number: AC 20-170557  
Expiration Date: December 31, 1990

SPECIFIC CONDITIONS:

6. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

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

Issued this \_\_\_\_\_ day  
of \_\_\_\_\_, 1990

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

---

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



STATE OF FLORIDA  
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

March 29, 1990

RECEIVED

MAR 30 1990

DER-BAQM

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

Dear Mr. Fancy;

I would like to apologize for the late reply to your October, 1989 letter, but Mr. Chapman had left the hospital and I was not aware of the letter until Mr. Fred Daugherty, P.E., doing the work on permitting of the diesel engine for us, asked about the permit.

Enclosed is the information you requested:

1. Calculation forms used for the potential pollutant emissions as projected.
2. The diesel engine was overhauled in February, 1990 and all adjustments were made by manufacturers personnel and we are in the process of getting a contract for annual preventive maintenance that will insure optimum operation for minimum pollutant emissions.
3. Enclosed is an operating and maintenance manual for the source.
4. UTM co-ordinates are:  
Zone 17-707.4 KM east and 3398.5 KM north.
5. There has not been any modifications and as stated the unit was completely rebuilt in February, 1990 by Powerway Corporation, the factory representative for ALCO.

If I can be of further assistance, please contact me at Suncom 765-7228.

Sincerely,

T. A. PARKER  
Maintenance and Construction  
Superintendent

TAP/dk

cc: B. Mitchell  
G. Preece, WW Dist  
C/F/SRP/BT

ENGINEERING CALCULATION FORM  
LIEBTAG, ROBINSON & WINGFIELD, INC.  
CONSULTING ENGINEERS

DIVISION \_\_\_\_\_  
CALCULATED BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
JOB NAME \_\_\_\_\_

JOB NO. \_\_\_\_\_  
DATE \_\_\_\_\_  
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

Per Jack Green - Diesel @ 2000 kW  
burns 200 gph

$$200 \times 149 = 29,800 \text{ Mch input}$$

$$2000 \text{ kW} = 6826 \text{ output}$$

$$\text{eff} = 6826 / 29800 = 22.9\%$$

Notes

Source not exempt per 17-2, Part II

Appears that this source falls under  
17-2.610(2) General Visible Emissions  
Standard.

Fuel Oil Specific Gravity ~ .79  
6.6 lbs/gal

Estimated Air Fuel ratio 14:1, based  
on Marks Chapter 9, Fig 65.

∴ 18,480 pph air

$$\frac{\text{FT3}}{\text{min}} = \frac{\text{lbs}}{\text{hr}} \times \frac{\text{FT3}}{\text{lb}} \times \frac{\text{hr}}{\text{min}}$$

Approx exhaust @ 400° F  $.08 \times \frac{520}{860} = .048 \frac{\text{#}}{\text{FT3}}$

$$\therefore \text{ACFM} = 18,480 \div 60 \div .048 = 6,400$$

$$\text{DSCFM} = 6,400 \times .048 / .08 = 3,850$$

H<sub>2</sub>O/Fuel From Marks, chapter 9, table 17. 1.2 lbs H<sub>2</sub>O/lb fuel



## ENGINEERING CALCULATION FORM

LIEBTAG, ROBINSON & WINGFIELD, INC.  
CONSULTING ENGINEERS

DIVISION \_\_\_\_\_

CALCULATED BY \_\_\_\_\_

CHECKED BY \_\_\_\_\_

JOB NAME \_\_\_\_\_

JOB NO. \_\_\_\_\_

DATE \_\_\_\_\_

SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_

Water vapor content  $\approx 200 \times 1.2 = 240$  ppb

specific volume of water vapor @  $400^\circ\text{F}$

$$V = 34.7 \text{ Ft}^3/\text{lb} \approx 8,300 \text{ Ft}^3 \text{ H}_2\text{O} / \text{hr}$$

$$8300/60 = 138 \text{ Ft}^3 \text{ H}_2\text{O} / \text{min}$$

$$138/6400 = .021 \quad 2.1\% \text{ H}_2\text{O}$$

in exhaust

Velocity of exhaust

$$6400 / 1.5 / 60 = 71 \text{ Fps}$$

(6400 = ACFM of exhaust

1.5 = sf of exhaust

60 = seconds/minute

TABLE 3.4-1. EMISSION FACTORS FOR STATIONARY LARGE BORE DIESEL AND DUAL FUEL ENGINES<sup>a</sup>

EMISSION FACTOR RATING: C

Engine type	Particulate <sup>b</sup>	Nitrogen oxides <sup>c</sup>	Carbon monoxide	VOC <sup>d</sup>		Sulfur dioxide <sup>e</sup>
				Methane	Nonmethane	
Diesel						
1b/10 <sup>3</sup> hph	2.4	24	6.4	0.07	0.63	2.8
g/hph	1.1	11	2.9	0.03	0.29	1.3
g/kWh	1.5	15	3.9	0.04	0.4	1.7
1b/10 <sup>3</sup> gal <sup>f</sup>	50	500	130	1	13	60
g/l	6	60	16	0.2	1.6	7.2
Dual fuel						
1b/10 <sup>3</sup> hph	NA	18	5.9	4.7	1.5	0.70
g/hph	NA	8	2.7	2.1	0.7	0.32
g/kWh	NA	11	3.6	2.9	0.9	0.43

<sup>a</sup>Representative uncontrolled levels for each fuel, determined by weighting data from several manufacturers. Weighting based on % of total horsepower sold by each manufacturer during a five year period. NA = not available.

<sup>b</sup>Emission Factor Rating: E. Approximation based on test of a medium bore diesel. Emissions are minimum expected for engine operating at 50 - 100% full rated load. At 0% load, emissions would increase to 30 g/l. Reference 2.

<sup>c</sup>Measured as NO<sub>2</sub>. Factors are for engines operated at rated load and speed.

<sup>d</sup>Nonmethane VOC is 90% of total VOC from diesel engines but only 25% of total VOC emissions from dual fuel engines. Individual chemical species within the non-methane fraction are not identified. Molecular weight of nonmethane gas stream is assumed to be that of methane.

<sup>e</sup>Based on assumed sulfur content of 0.4 weight % for diesel fuel and 0.46 g/scm (0.20 gr/scf) for pipeline quality natural gas. Dual fuel SO<sub>2</sub> emissions based on 5% oil/95% gas mix. Emissions should be adjusted for other fuel ratios.

<sup>f</sup>These factors calculated from the above factors, assuming heating values of 40 MJ/l (145,000 Btu/gal) for oil and 41 MJ/scm (1100 Btu/scf) for natural gas, and an average fuel consumption of 9.9 MJ/kWh (7000 Btu/hph).

#### References for Section 3.4

1. Standards Support And Environmental Impact Statement, Volume I: Stationary Internal Combustion Engines, EPA-450/2-78-125a, U. S. Environmental Protection Agency, Research Triangle Park, NC, July 1979.
2. Telephone communication between William H. Lamason, Office Of Air Quality Planning And Standards, U. S. Environmental Protection Agency, Research Triangle Park, NC, and John H. Wasser, Office Of Research And Development, U. S. Environmental Protection Agency, Research Triangle Park, NC, July 15, 1983.

## 3.4 STATIONARY LARGE BORE DIESEL AND DUAL FUEL ENGINES

### 3.4.1 General

The primary domestic use of large bore diesel engines, i.e., those greater than 560 cubic inch displacement per cylinder (CID/CYL), is in oil and gas exploration and production. These engines, in groups of three to five, supply mechanical power to operate drilling (rotary table), mud pumping and hoisting equipment, and may also operate pumps or auxiliary power generators. Another frequent application of large bore diesels is electricity generation for both base and standby service. Smaller uses include irrigation, hoisting and nuclear power plant emergency cooling water pump operation.

Dual fuel engines were developed to obtain compression ignition performance and the economy of natural gas, using a minimum of 5 to 6 percent diesel fuel to ignite the natural gas. Dual fuel large bore engines (greater than 560 CID/CYL) have been used almost exclusively for prime electric power generation.

### 3.4.2 Emissions and Controls

The primary pollutant of concern from large bore diesel and dual fuel engines is  $\text{NO}_x$ , which readily forms in the high temperature, pressure and excess air environment found in these engines. Lesser amounts of carbon monoxide and hydrocarbons are also emitted. Sulfur dioxide emissions will usually be quite low because of the negligible sulfur content of diesel fuels and natural gas.

The major variables affecting  $\text{NO}_x$  emissions from diesel engines are injection timing, manifold air temperature, engine speed, engine load and ambient humidity. In general,  $\text{NO}_x$  emissions decrease with increasing humidity.

Because  $\text{NO}_x$  is the primary pollutant from diesel and dual fuel engines, control measures to date have been directed mainly at limiting  $\text{NO}_x$  emissions. The most effective  $\text{NO}_x$  control technique for diesel engines is fuel injection retard, achieving reductions (at eight degrees of retard) of up to 40 percent. Additional  $\text{NO}_x$  reductions are possible with combined retard and air/fuel ratio change. Both retarded fuel injection ( $8^\circ$ ) and air/fuel ratio change of five percent are also effective in reducing  $\text{NO}_x$  emissions from dual fuel engines, achieving nominal  $\text{NO}_x$  reductions of about 40 percent and maximum  $\text{NO}_x$  reductions of up to 70 percent.

Other  $\text{NO}_x$  control techniques exist but are not considered feasible because of excessive fuel penalties, capital cost, or maintenance or operational problems. These techniques include exhaust gas recirculation (EGR), combustion chamber modification, water injection and catalytic reduction.

#-3

~~CHP~~  
JKP  
~~BT~~

FYI

PA

P 938 762 718

RECEIPT FOR CERTIFIED MAIL

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

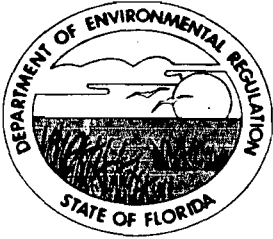
PS Form 3800, June 1985

Sent to	
Mr. C. T. Chapman, FL State	
Street and No. Highway 90 E Hospital	
P.O., State and ZIP Code Chattahoochee, FL 32324	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
Mailed: 10-19-89	
Permit: AC 20-170557	

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

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

<b>3. Article Addressed to:</b> Mr. C. T. Chapman <i>William Duncan</i> Administrative Services Director Florida State Hospital Highway 90 East Chattahoochee, FL 32324	<b>4. Article Number</b> P 938 762 718 <b>Type of Service:</b> <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
<b>5. Signature - Address</b> X	Always obtain signature of addressee or agent and DATE DELIVERED. <b>8. Addressee's Address (ONLY if requested and fee paid)</b>
<b>6. Signature - Agent</b> X <i>Melanie Register</i>	
<b>7. Date of Delivery</b>	



# Florida Department of Environmental Regulation

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

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

October 19, 1989

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. C. T. Chapman  
Administrative Services Director  
Florida State Hospital  
Highway 90 East  
Chattahoochee, Florida 32324

Dear Mr. Chapman:

Re: Completeness Review of the Application Package  
AC 20-170557

The Department has reviewed the application package submitted to the Northwest District office and received September 26, 1989. After a technical review of the material, it has been determined that a construction permit will have to be issued on the source in order to establish federally enforceable conditions, since one had never been issued previously, and that the application package is incomplete. Therefore, please submit to the Department the following information, including all assumptions, reference material and calculations, and the status will, again, be ascertained:

1. For the potential pollutant emissions projected in Section III.C. of the application, please submit their calculations and any particulars.
2. Provide the operational parameters that will be used to minimize pollutant emissions.
3. Provide an operation and maintenance manual for the source. If one exists from the vendor, please provide it if it is different from one established by the Engineering Department.
4. Provide the UTM coordinates.
5. Has the source been modified or reconstructed since October 3, 1977? If so, please provide all particulars (i.e., date(s), modification, etc.).

Mr. C. T. Chapman  
Page Two  
October 19, 1989

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

Sincerely,

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

CHF/BM/t

cc: E. Middleswart, NW District  
J. Neubauer, NW District Branch  
F. W. Dougherty, P.E., LRW, Inc.

APPLICATION TRACKING SYSTEM

09/27/89

APPL NO:170557

APPL RECVD:09/26/89 TYPE CODE:A0 SUBCODE:28

LAST UPDATE:10/10/89

DER OFFICE RECVD:PEN DER OFFICE TRANSFER TO: *hls*

APPLICATION COMPLETE:00/00/00

DER PROCESSOR: ~~PREECE, JACK~~ THOMAS, BILL

APPL STATUS:AC DATE:09/26/89 (ACTIVE/DENIED/WITHDRAWN/EXEMPT/ISSUED/GENERAL)

RELIEF: (SSAC/EXEMPTIONS/VARIANCE)

(Y/N) N MANUAL TRACKING

DISTRICT:10 COUNTY:20

(Y/N) DNR REVIEW REQD?

LAT/LONG:30.42.16/84.50.10

(Y/N) N PUBLIC NOTICE REQD?

BASIN-SEGMENT: . . .

(Y/N) N GOV BODY LOCAL APPROVAL REQD?

CDE #: . . .

(Y/N) Y LETTER OF INTENT REQD? (I/ISSUE D/DENY)

ALT#: . . .

PROJECT SOURCE NAME:STATIONARY LARGE BORE DIESEL

STREET:U.S. 90 EAST

CITY:CHATTAHOOCHEE

STATE:FL ZIP: . . .

PHONE: . . .

APPLICATION NAME:FL STATE HOSPITAL AT CHATTAHOOCHEE

STREET:NOT GIVEN

CITY:CHATTAHOOCHEE

STATE:FL ZIP: . . .

PHONE:904-663-4311

AGENT NAME:DOUGHERTY, FRED W. 15124

STREET:2571 EXECUTIVE CIR CIR E. #102 CITY:TALLAHASSEE

STATE:FL ZIP:32301

PHONE:904-877-7409

FEE #1 DATE PAID: / / AMOUNT PAID: NO FEE RECEIPT NUMBER: . . .

B	DATE APPLICANT INFORMED OF NEED FOR PUBLIC NOTICE	- - -	1	1
C	DATE DER SENT DNR APPLICATION/SENT DNR INTENT	- - - - -	1	1
D	DATE DER REQ. COMMENTS FROM GOV. BODY FOR LOCAL APP.	- .	1	1
E	DATE #1 ADDITIONAL INFO REQ--REC FROM APPLICANT	- - - -	1	1
E	DATE #2 ADDITIONAL INFO REQ--REC FROM APPLICANT	- - - -	1	1
E	DATE #3 ADDITIONAL INFO REQ--REC FROM APPLICANT	- - - -	1	1
E	DATE #4 ADDITIONAL INFO REQ--REC FROM APPLICANT	- - - -	1	1
E	DATE #5 ADDITIONAL INFO REQ--REC FROM APPLICANT	- - - -	1	1
E	DATE #6 ADDITIONAL INFO REQ--REC FROM APPLICANT	- - - -	1	1
F	DATE GOVERNING BODY REQUESTED SURVEY RESULTS/REPORTS	- -	1	1
G	DATE FIELD REPORT WAS REQ--REC	- - - - -	1	1
H	DATE DNR REVIEW WAS COMPLETED	- - - - -	1	1
I	DATE APPLICATION WAS COMPLETE	- - - - -	00	00
J	DATE GOVERNING BODY PROVIDED COMMENTS OR OBJECTIONS	- -	1	1
K	DATE NOTICE OF INTENT WAS SENT--REC TO APPLICANT	- - - -	1	1
L	DATE PUBLIC NOTICE WAS SENT TO APPLICANT	- - - -	1	1
M	DATE PROOF OF PUBLICATION OF PUBLIC NOTICE RECEIVED	- -	1	1
N	DATE WAIVER DATE BEGIN--END (DAY 90)	- - - - -	1	1

COMMENTS:

*3 apps*

*10 TLH 20 000409*



DEPARTMENT OF ENVIRONMENTAL REGULATION

**ROUTING AND TRANSMITTAL SLIP**

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

*BILL THOMAS, CAPS*

Initial

Date

2.

*BAQM*

Initial

Date

3.

*DER*

*TALLAHASSEE*

Initial

Date

4.

**RECEIVED**

Initial

Date

REMARKS:

OCT 11 1989

INFORMATION

*I have transferred this to CAPS*

DER-BAQM

Review & Return

Review & File

Initial & Forward

*Per telephone conversation of this date*

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

*Sorry about using up part of your 30 day clock*

*I kept a copy of application for our file*

FROM:

*Janet Kress*

DATE

*10/10/89*

PHONE

*4C 695 8364*

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT  
160 GOVERNMENTAL CENTER  
PENSACOLA, FLORIDA 32501



RECEIVED

SEP 26 1989

BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEI  
SECRETARY  
ROBERT V. KRIEGL  
DISTRICT MANAGER

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Stationary Large Bore Diesel  New<sup>1</sup>  Existing<sup>1</sup>

APPLICATION TYPE:  Construction  Operation  Modification

COMPANY NAME: Florida State Hospital at Chattahoochee COUNTY: Gadsden

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) Diesel Generator

SOURCE LOCATION: Street U.S. 90 East City Chattahoochee

UTM: East \_\_\_\_\_ North \_\_\_\_\_

Latitude 30 ° 42 ' 16 "N Longitude 84 ° 50 ' 10 "W

APPLICANT NAME AND TITLE: C. T. Chapman, Administrative Svcs. Director

APPLICANT ADDRESS: Florida State Hospital, Highway 90 East, Chattahoochee, Florida

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Florida State Hospital

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

\*Attach letter of authorization

Signed: C. T. Chapman

C. T. Chapman, Asst. Hosp. Administrator  
Name and Title (Please Type)

Date: 7/25/89 Telephone No. 904-663-4311

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

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

<sup>1</sup> 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 Fred W. Dougherty

Fred W. Dougherty, P.E.  
Name (Please Type)

Liebtag, Robinson & Wingfield, Inc.  
Company Name (Please Type)

2571 Executive Center Circle E., #102, Tallahassee, FL 32301  
Mailing Address (Please Type)

Florida Registration No. 15124 Date: 7/21/89 Telephone No. 904-877-7409

**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.

3500 HP, 16 cylinder fuel injection ALCO diesel engine driving 2500 KVA G.E. generator. Exhaust drives Turbo Supercharger before discharge to atmosphere.  
There is no special pollution control equipment installed. However, engine condition is monitored by pyrometers in the exhaust, by visual emissions, and by manifold pressure.

B. Schedule of project covered in this application (Construction Permit Application Only)  
Start of Construction \_\_\_\_\_ Completion of Construction 1970

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.)

Pollution control systems consist of engine trim controls, which are integral with engine.

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

None

E. Requested permitted equipment operating time: hrs/day 8 ; days/wk 7 ; wks/yr 52 ;  
if power plant, hrs/yr 2912; 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? no

a. If yes, has "offset" been applied? \_\_\_\_\_

b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_

c. If yes, list non-attainment pollutants. \_\_\_\_\_

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

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

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

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

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

a. If yes, for what pollutants? \_\_\_\_\_

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

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
#2 Fuel Oil	S	0.4	1320	#2 Fuel Oil

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

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

From AP42 Table 3.4-1

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	10	15	610 (2)	20% Opac.	*		EXH.
NO <sub>x</sub>	100	146	no rule	N/A			EXH.
CO	26	38	no rule	N/A			EXH.
SO <sub>2</sub>	12	17	no rule	N/A			EXH.
VOC	28	4	no rule	N/A			EXH.

<sup>1</sup>See Section V, Item 2. \* READ DATED 6-2-89 IS ATTACHED

<sup>2</sup>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)

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

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

D. Control Devices: (See Section V, Item 4) None

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	200	200	29

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

Fuel Analysis:

Percent Sulfur: .4 Percent Ash: 0.75

Density: 6.6 lbs/gal Typical Percent Nitrogen:  

Heat Capacity: 22,000 BTU/lb 145,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): None

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

Annual Average 0 Maximum 0

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

None

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

Stack Height: 14' ft. Stack Diameter: 1.5 ft.  
 Gas Flow Rate: 6400 ACFM 3850 DSCFM Gas Exit Temperature: 400 \* °F.  
 Water Vapor Content: 10 % Velocity: 71 FPS

\* Estimated at turbine discharge

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) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

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

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

Brief description of operating characteristics of control devices: \_\_\_\_\_

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

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---

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

**SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

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



9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY N/A**

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

Yes  No

Contaminant	Rate or Concentration

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

Yes  No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

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

\*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: ft.    b. Diameter: ft.
- c. Flow Rate: ACFM    d. Temperature: °F.
- e. Velocity: FPS

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

1.

- a. Control Device: b. Operating Principles:
- c. Efficiency:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> 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:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>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:<sup>1</sup>
  - d. Capital Cost:
  - e. Useful Life:
  - f. Operating Cost:
  - g. Energy:<sup>2</sup>
  - 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:<sup>1</sup>
  - d. Capital Costs:
  - e. Useful Life:
  - f. Operating Cost:
  - g. Energy:<sup>2</sup>
  - 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:<sup>1</sup>
- 3. Capital Cost:
- 4. Useful Life:
- 5. Operating Cost:
- 6. Energy:<sup>2</sup>
- 7. Maintenance Cost:
- 8. Manufacturer:
- 9. Other locations where employed on similar processes:
- a. (1) Company:
- (2) Mailing Address:
- (3) City:
- (4) State:

<sup>1</sup>Explain method of determining efficiency.  
<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

10. Reason for selection and description of systems:

<sup>1</sup>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<sub>2</sub>\* \_\_\_\_\_ Wind spd/dir

Period of Monitoring \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year

Other data recorded \_\_\_\_\_

Attach all data or statistical summaries to this application.

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

2. Instrumentation, Field and Laboratory

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

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. \_\_\_\_ Year(s) of data from \_\_\_\_ / \_\_\_\_ / \_\_\_\_ to \_\_\_\_ / \_\_\_\_ / \_\_\_\_  
month day year month day year

2. Surface data obtained from (location) \_\_\_\_\_

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

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

C. Computer Models Used

1. \_\_\_\_\_ Modified? If yes, attach description.

2. \_\_\_\_\_ Modified? If yes, attach description.

3. \_\_\_\_\_ Modified? If yes, attach description.

4. \_\_\_\_\_ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO <sup>2</sup>	_____ grams/sec

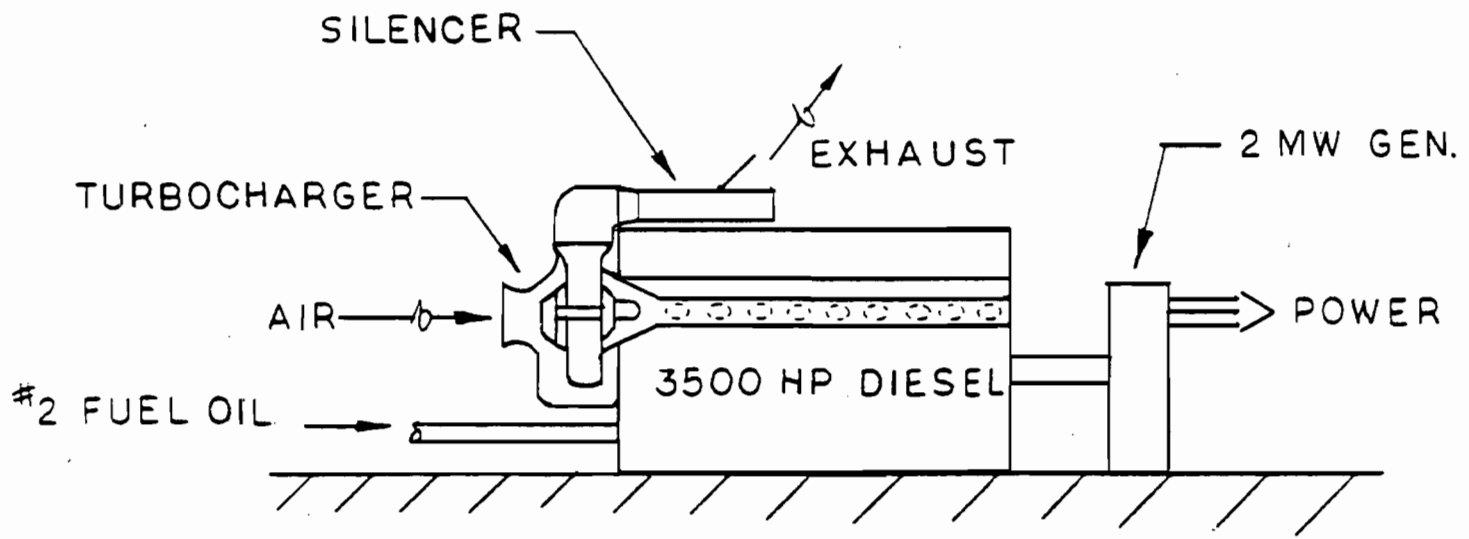
E. Emission Data Used in Modeling

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.



DIESEL ELECTRIC GENERATOR  
FLOW DIAGRAM

NTS

Company FLA STATE HOSPITAL  
 Source I.D. No. 1020000402  
 Permit No. A020-00000  
 Address HWY 90 CHATTAHOOCHEE  
FLA County GADSDEN  
 Phone No. (904) 663-7584  
 Test Date 6/2/89

Process DIESEL ELECTRIC GENERATOR  
 Fuel/Material Input #2 DIESEL OIL  
 Control Device 014 & 025  
 Operating Mode MANUAL  
 Production Rate 2,000 KW  
 Process Input Rate 175 GPH / 2.9 GPM  
 Permitted Rate 2,000 KW



Plume Background Description BRICK BUILDING  
 Wind Direction E Wind Speed 2-3 MPH Amb Temp 90°F  
 Sky Conditions CLEAR

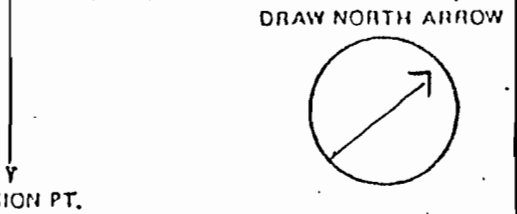
Plume Description Color LIGHT GRAY  
 Distance Visible 50 YARDS  
 Water Vapor Present?  Yes  No  
 If Yes, is Plume  Attached  Detached  
 Emissions are:  Continuous  Intermittent  Fugitive  
 Comments:

	START TIME				STOP TIME				
	0	15	30	45	0	15	30	45	
	<u>9:30 AM</u>				<u>10:30 AM</u>				
0	5	10	10	10	30	10	15	15	10
1	10	10	10	10	31	15	20	10	10
2	15	10	10	5	32	10	15	10	15
3	5	5	10	10	33	10	15	15	20
4	10	10	10	10	34	15	20	20	15
5	10	10	10	10	35	15	15	15	15
6	15	15	15	15	36	10	10	10	10
7	15	15	15	15	37	5	10	5	10
8	10	10	10	10	38	5	10	5	5
9	10	10	10	5	39	5	5	10	10
10	5	5	5	5	40	10	10	5	10
	5	10	10	10	41	5	10	15	10
12	10	10	10	10	42	15	15	10	10
13	10	10	10	10	43	15	10	15	15
14	10	10	10	10	44	10	10	10	10
15	10	10	10	10	45	10	10	10	10
16	10	10	10	10	46	10	10	10	10
17	10	15	15	15	47	10	10	10	10
18	15	15	15	15	48	10	10	10	10
19	15	15	15	15	49	10	10	10	10
20	15	15	10	10	50	10	15	15	15
21	10	10	10	15	51	15	15	15	10
22	10	10	10	10	52	10	10	5	15
23	15	10	10	10	53	10	10	10	15
24	10	15	15	10	54	15	15	15	15
25	10	10	15	15	55	15	10	10	10
26	15	15	15	15	56	5	10	10	10
27	15	10	10	10	57	10	10	10	10
28	10	10	10	10	58	15	10	15	15
29	10	10	10	10	59	15	15	15	15

Set Number	Opacity	
	Sum	Average
1	985	11.7
2	230	9.6
3	275	11.4
4	290	12.0
5	285	11.6
6	335	13.9
7	100	8.3
8	225	9.4
9	270	11.2
10	295	12.3

Emission Limit 20%  
 Averaging Period 1 HOUR  
 Average Opacity 11.2  
 Highest Average Opacity 13.9  
 % Readings Above Permitted 0  
 Compliance  Yes  No

Emission Pt. Description  
 Stack Diam 24"  
 Hgt. of Emission Pt. 15'  
 Observer to Emission Pt.:  
 Direction NE  
 Distance 100 FT.  
 Relative Height GROUND LEVEL



How Process was Determined EPA METHOD #9  
 OBSERVER'S NAME: JACK L. GREENE AFFILIATION: F.S.H. EXPIRATION OF OUR CERTIFICATION: 9/10/89  
 OBSERVER'S SIGNATURE: [Signature] DATE: 6/2/89 I HAVE RECEIVED A COPY OF THESE OBSERVATIONS SIGNATURE:

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED

NORTHWEST DISTRICT

160 GOVERNMENTAL CENTER  
PENSACOLA, FLORIDA 32501



SEP 26 1989

BOB GRAHAM  
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SECRETARY

Northwest Florida  
DER  
ROBERT V. KRIEGLER  
DISTRICT MANAGER

A020-170557

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Stationary Large Bore Diesel  New<sup>1</sup>  Existing<sup>1</sup>

APPLICATION TYPE:  Construction  Operation  Modification

COMPANY NAME: Florida State Hospital at Chattahoochee COUNTY: Gadsden

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) Diesel Generator

SOURCE LOCATION: Street U.S. 90 East City Chattahoochee

UTM: East \_\_\_\_\_ North \_\_\_\_\_

Latitude 30 ° 42 ' 16 "N Longitude 84 ° 50 ' 10 "W

APPLICANT NAME AND TITLE: C. T. Chapman, Administrative Svcs. Director

APPLICANT ADDRESS: Florida State Hospital, Highway 90 East, Chattahoochee, Florida

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Florida State Hospital

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

\*Attach letter of authorization

Signed: C. T. Chapman / [Signature]  
C. T. Chapman, Asst. Hosp. Administrator  
Name and Title (Please Type)

Date: 7/25/89 Telephone No. 904-663-4311

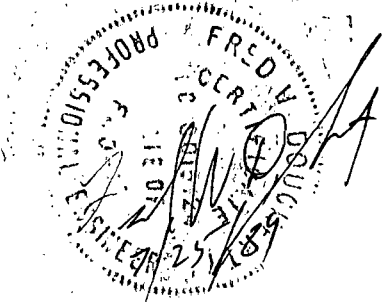
B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

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

<sup>1</sup> 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 Fred W. Dougherty  
Fred W. Dougherty, P.E.  
Name (Please Type)

Liebtag, Robinson & Wingfield, Inc.  
Company Name (Please Type)

2571 Executive Center Circle E., #102, Tallahassee, FL 32301  
Mailing Address (Please Type)

Florida Registration No. 15124 Date: 7/21/89 Telephone No. 904-877-7409

**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.

3500 HP, 16 cylinder fuel injection ALCO diesel engine driving 2500 KVA G.E. generator. Exhaust drives Turbo Supercharger before discharge to atmosphere.

There is no special pollution control equipment installed. However, engine condition is monitored by pyrometers in the exhaust, by visual emissions, and by manifold pressure.

B. Schedule of project covered in this application (Construction Permit Application Only)  
Start of Construction \_\_\_\_\_ Completion of Construction 1970

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.)

Pollution control systems consist of engine trim controls, which are integral with engine.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.  
None

E. Requested permitted equipment operating time: hrs/day 8 ; days/wk 7 ; wks/yr 52 ;  
if power plant, hrs/yr 2912; 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? no

a. If yes, has "offset" been applied? \_\_\_\_\_

b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_

c. If yes, list non-attainment pollutants. \_\_\_\_\_

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

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

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

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

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

a. If yes, for what pollutants? \_\_\_\_\_

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

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

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
#2 Fuel Oil	S	0.4	1320	#2 Fuel Oil

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

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

From AP42 Table 3.4-1

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	10	15	610 (2)	20% Opac.	*		EXH.
NO <sub>x</sub>	100	146	no rule	N/A			EXH.
CO	26	38	no rule	N/A			EXH.
SO <sub>2</sub>	12	17	no rule	N/A			EXH.
VOC	28	4	no rule	N/A			EXH.

<sup>1</sup>See Section V, Item 2. *\* READ DATED 6-2-89 IS ATTACHED*

<sup>2</sup>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)

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

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

D. Control Devices: (See Section V, Item 4) None

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	200	200	29

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

Fuel Analysis:

Percent Sulfur: .4 Percent Ash: 0.75

Density: 6.6 lbs/gal Typical Percent Nitrogen:  

Heat Capacity: 22,000 BTU/lb 145,000 BTU/gal

Other Fuel Contaminants (which may cause air pollution): None

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

Annual Average 0 Maximum 0

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

None

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

Stack Height: 14' ft. Stack Diameter: 1.5 ft.  
 Gas Flow Rate: 6400 ACFM 3850 DSCFM Gas Exit Temperature: 400 \* °F.  
 Water Vapor Content: 10 % Velocity: 71 FPS

\* Estimated at turbine discharge

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) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

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

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

Brief description of operating characteristics of control devices: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

**SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

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

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY N/A**

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

Yes  No

Contaminant	Rate or Concentration

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

Yes  No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

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

\*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: ft.    b. Diameter: ft.
- c. Flow Rate: ACFM    d. Temperature: °F.
- e. Velocity: FPS

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

1.

- a. Control Device: b. Operating Principles:
- c. Efficiency:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> 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:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>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:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

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:<sup>1</sup>

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:<sup>2</sup>

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

b. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration

(8) Process Rate:<sup>1</sup>

10. Reason for selection and description of systems:

<sup>1</sup>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 \_\_\_\_\_ ISP \_\_\_\_\_ ( ) SO<sub>2</sub>\* \_\_\_\_\_ Wind spd/dir

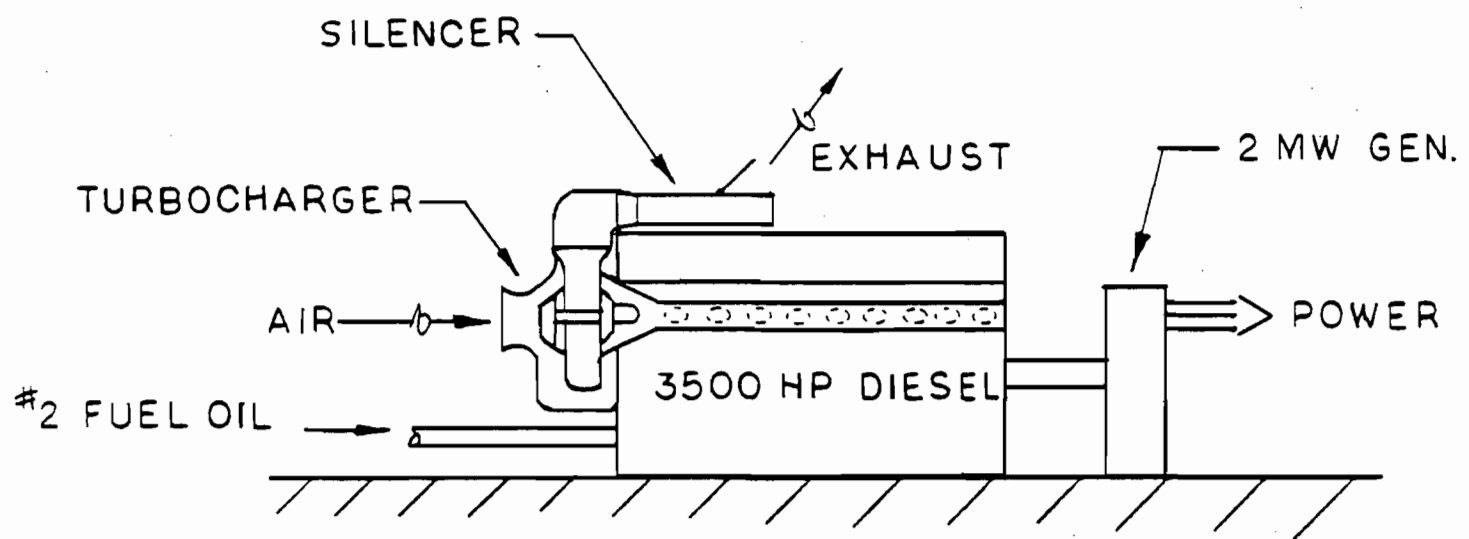
Period of Monitoring \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year

Other data recorded \_\_\_\_\_

Attach all data or statistical summaries to this application.

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





DIESEL ELECTRIC GENERATOR  
FLOW DIAGRAM

NTS

Company FLA STATE HOSPITAL  
 Source I.D. No. 1020000402  
 Permit No. A020-00000  
 Address HWY 90 CHATTAHOOCHEE  
FLA County GADSDEN  
 Phone No. (904) 663-7584  
 Test Date 6/2/89

Process DIESEL ELECTRIC GENERATOR  
 Fuel/Material Input #2 DIESEL OIL  
 Control Device 014 & 025  
 Operating Mode MANUAL  
 Production Rate 2,000 KW  
 Process Input Rate 175 GPH / 2.9 GPM  
 Permitted Rate 2,000 KW



Plume Background Description BRICK BUILDING  
 Wind Direction E Wind Speed 2-3 MPH Amb Temp 90°F  
 Sky Conditions CLEAR

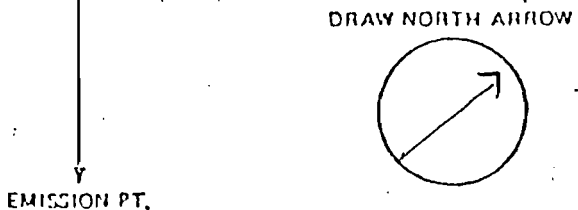
Plume Description Color LIGHT GRAY  
 Distance Visible 50 YARDS  
 Water Vapor Present?  Yes  No  
 If Yes, is Plume  Attached  Detached  
 Emissions are:  Continuous  Intermittent  Fugitive  
 Comments:

	START TIME				STOP TIME				
	<u>9:30 AM</u>				<u>10:30 AM</u>				
	0	15	30	45	0	15	30	45	
0	5	10	10	10	30	10	15	15	10
1	10	10	10	10	31	15	10	10	10
2	15	10	10	5	32	10	15	10	15
3	5	5	10	10	33	10	15	15	20
4	10	10	10	10	34	15	20	20	15
5	10	10	10	10	35	15	15	15	15
6	15	15	15	15	36	10	10	10	10
7	15	15	15	15	37	5	10	5	10
8	10	10	10	10	38	5	10	5	5
9	10	10	10	5	39	5	5	10	10
10	5	5	5	5	40	10	10	5	10
11	5	10	10	10	41	5	10	15	10
12	10	10	10	10	42	15	15	10	10
13	10	10	10	10	43	15	10	15	15
14	10	10	10	10	44	10	10	10	10
15	10	10	10	10	45	10	10	10	10
16	10	10	10	10	46	10	10	10	10
17	10	15	15	15	47	10	10	10	10
18	15	15	15	15	48	10	10	10	10
19	15	15	15	15	49	10	10	10	10
20	15	15	10	10	50	10	15	15	15
21	10	10	10	15	51	15	15	15	10
22	10	10	10	10	52	10	10	5	15
23	15	10	10	10	53	10	10	10	15
24	10	15	15	10	54	15	15	15	15
25	10	10	15	15	55	15	10	10	10
26	15	15	15	15	56	5	10	10	10
27	15	10	10	10	57	10	10	10	10
28	10	10	10	10	58	15	10	15	15
29	10	10	10	10	59	15	15	15	15

Set Number	Opacity	
	Sum	Average
1	285	11.7
2	230	9.6
3	275	11.4
4	290	12.0
5	285	11.9
6	335	13.9
7	100	8.3
8	225	9.4
9	270	11.2
10	295	12.3

Emission Limit 20%  
 Averaging Period 1 Hour  
 Average Opacity 11.2  
 Highest Average Opacity 13.9  
 % Readings Above Permitted 0  
 Compliance  Yes  No

Emission Pt Description  
 Stack Diam 24"  
 Hgt. of Emission Pt 15'  
 Observer to Emission Pt:  
 Direction NE  
 Distance 100 FT.  
 Relative Height GROUND LEVEL



How Process was Determined

EPA METHOD #9

OBSERVER'S NAME: JACK L. GREENE AFFILIATION: F.S.H. EXPIRATION OF OBS. CERTIFICATION: 9/10/89  
 OBSERVER'S SIGNATURE: [Signature] DATE: 6/2/89 I HAVE RECEIVED A COPY OF THESE OBSERVATIONS SIGNATURE: \_\_\_\_\_