

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

RECEIVED
SEP 18 1991
Division of Air
Resources Management

The Department of Environmental Regulation hereby gives notice of its intent to issue a modification to the construction permit to authorize the existing boilers to operate at their full design capacity for the North County Regional Resource Recovery Facility located near the intersection of the Beeline Highway and the Florida Turnpike in Palm Beach County, Florida. A determination of Best Available Control Technology (BACT) was 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 a 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
Southeast District
1900 S. Congress Ave., Suite A
West Palm Beach, Florida 33406

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33406

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the Department's final determination. Furthermore, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

- BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Solid Waste Authority of
Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412

DER File No. PSD-FL-108-A

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a modification to an air 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, Solid Waste Authority of Palm Beach County, applied on November 30, 1989, to the Department of Environmental Regulation for a modification of the construction permit to allow the applicant to operate the existing boilers at their design capacity for the North County Regional Resource Recovery Facility located in Palm Beach County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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:

c: I. Goldman, SE Dist.
J. Stormer, PBCHD
G. Worley, EPA, Atlanta

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 _____.

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

Clerk

Date

Technical Evaluation
and
Preliminary Determination

Solid Waste Authority of Palm Beach County
North County Regional Resource Recovery Facility
Palm Beach County, Florida

Modification
Permit No. PSD-FL-108-A

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

May 2, 1991

I. Application

A. Applicant

Solid Waste Authority of Palm Beach County
North County Regional Resource Recovery Facility
7501 North Jog Road
West Palm Beach, Florida 33412

B. Project and Location

This project is a resource recovery facility where approximately 2,000 TPD of municipal solid waste is received and processed into refuse derived fuel (RDF) for energy recovery and into recoverable ferrous and aluminum materials. This facility is located at 7501 N. Jog Road, West Palm Beach, near the intersection of the Beeline Highway and the Florida Turnpike in Palm Beach County, Florida.

II. Project Description

The resource recovery facility consists of three major plants: the RDF manufacturing plant, the boiler plant, and the electrical generating plant.

The facility will process 2,000 TPD of municipal solid waste (MSW) with an annual throughput of 624,000 tons. Excess capacity and redundancy were built into the facility to assure that the throughput requirements can be met with both planned and unplanned outages which occur as part of normal facility operation.

The facility is equipped with three RDF processing lines, any two of which can process 2,000 TPD of MSW. Two boilers are provided, each with a capacity to burn 900 TPD of RDF at a reference heating value of 5,500 Btu/lb. The turbine-generator is rated at a nominal 62 MW and is matched to the full output of the boilers. The Solid Waste Authority anticipates the expansion of this facility to process 3,000 tons of MSW with the addition of a third boiler and a second turbine-generator in the future. However, this future expansion is not included as part of this current permit modification request.

Modifications Requested

In July 1986, the Florida Power Plant Siting Board issued a certification (No. PA 84-20) and the EPA issued a permit (PSD-FL-108) for the facility in December 1986.

At the time these permits were being finalized in 1986, the applicant met with the Department and EPA to identify several items for which the final design, and construction contract differed from the draft permit. Based on these discussions, the Department and the applicant concurred in issuing the permit as it was drafted and the applicant would accept the permit as written and submit a request for modification to conform the permit to the design at a later date. Accordingly, the technical evaluation and BACT analysis take into account both the regulations at the time the permit was issued and the recently promulgated guidelines for existing municipal waste

combustors. In addition, the applicant, at the request of the Department and EPA, delayed submittal of the request until the first stack test was completed.

On November 29, 1989 the applicant submitted a request for permit modification. Modifications requested included a change in plant capacity, and emission limits for NOx, CO, Sulfuric acid mist, Lead and Mercury. In subsequent discussions with the Department, the applicant withdrew the request for changes in lead and mercury limits.

A summary comparison of the current permit limits and the requested modifications is as follows:

<u>Current Permit Language</u>	<u>Requested Modification</u>
NOx: 0.32 lbs/MMBtu	0.56 lbs/MMBtu
CO: 400 PPMDV (3 hr. avg.) @ 12% CO ₂	200 PPMDV (4 hr. avg.) @ 12% CO ₂ 400 PPMDV (1 hr. avg.) @ 12% CO ₂
Sulfuric Acid Mist: 0.32 x 10 ⁻⁵ lbs/MBtu	Delete
Plant Capacity: The incinerator boilers shall not be loaded in excess of their rated capacity of 58,333 pounds of RDF per hour each or 360 MMBtu/hour each.	The maximum boiler heat input shall not exceed 412.5 MMBtu per hour. This corresponds to the name plate rating of 324,000 pounds per hour steam capacity.

III. Rule Applicability

As stated in the previously issued PSD-FL-108 and PA 84-20 permits, the North County Regional Resource Recovery Facility is in an area designated as nonattainment for ozone and attainment for all other criteria pollutants and is subject to Chapters 17-2, 17-4 and 403 of Florida Administrative Code and 40 CFR 52, 60 and 61.

A BACT determination has been completed for NOx and CO. This was done taking into consideration the stack test results which were conducted during the week of October 23, 1989. In addition, the BACT analysis has taken into consideration the recent guidelines that have been promulgated for existing municipal waste combustors. Since the Department had limited experience/data available on RDF facilities at the time the original application was reviewed, these BACT determination values are more realistic.

IV. Source Impact Analysis

A. Emission Limitations

A detailed evaluation of the new emission limits can be found in the Specific Conditions.

B. Air Quality- Impacts -

See the following memo from Mr. Tom Rogers.

V. Conclusion

Based on the information provided by Solid Waste Authority of Palm Beach County, the Department has reasonable assurance that the proposed modification of the North County Regional Resource Recovery Facility, 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.

PERMITTEE:
Solid Waste Authority of Palm
Beach County
North County Regional
Resource Recovery Facility
7501 North Jog Road
West Palm Beach, FL 33412

Permit Number: PSD-FL-108-A
Expiration Date: None
County: Palm Beach
Latitude/Longitude: 26⁰46',00"N
80⁰08',45"W
Project: North County Regional
Resource Recovery Facility

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 operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

The North County Regional Resource Recovery Facility is authorized to operate the two (2) existing RDF boilers to their maximum design input rating of 412.5 MMBtu's per hour with a maximum steam rating of 324,000 lbs. per hour, subject to the General and Specific Conditions stated herein.

The Resource Recovery Facility consists of three major plants: the RDF manufacturing plant, the boiler plant and the electric generating plant.

The facility is designed to process 2,000 TPD of municipal solid waste (MSW) with an annual throughput of 624,000 tons. The RDF manufacturing plant is equipped with three MSW processing lines, any two of which can handle 2,000 TPD of incoming MSW. Excess capacity and redundancy were built into the processing plant to assure that the throughput requirements could be met with one processing line down for planned or unplanned maintenance.

The boiler plant includes two B&W boilers, each designed to combust up to 900 TPD of RDF with a reference heating value of 5,500 Btu/lb (412.5 MMBtu/hr). Actual RDF heating values typically range from 4,500 to 6,200 Btu/lb respectively.

Emissions from each boiler are controlled by a Joy Technologies spray dryer absorber followed by a Joy/BSH Krefeld four field electrostatic precipitator. Each precipitator has a gas flow rating of 198,000 ACFM and is designed to operate with three of four fields in service.

Flue gas emissions (opacity, O₂, SO₂, CO and NO_x) from each unit are monitored with an Enviroplan CEM system.

The turbine-generator plant has a nominal output rating of 62 MW, and is matched to the full output capacity of the boilers.

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

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Solid Waste Authority of Palm
Beach County

Permit Number: PSD-FL-108-A
Expiration Date: None

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.
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

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Permit Number: PSD-FL-108-A
Expiration Date: None

facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

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

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

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

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

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

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

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 prescribed by Sections 403.73 and 403.11, 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.

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Beach County

Permit Number: PSD-FL-108-A
Expiration Date: None

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 Rule 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. This permit also constitutes a Determination of Prevention of Significant Deterioration (PSD).

14. 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 and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the data 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

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee

PERMITTEE:
**Solid Waste Authority of Palm
Beach County**

Permit Number: PSD-FL-108-A
Expiration Date: None

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. Before the third unit commences construction, a new PSD construction permit must be submitted to the DER, since more than 18 months have elapsed from the date construction permit PSD-FL-108 was issued on December 16, 1986.
2. The Solid Waste Authority's North County Regional Resource Recovery Facility shall be allowed to operate continuously (i.e., 8,760 hrs/yr).
3. Stack emissions from each unit shall not exceed the following limits.
 - a. Particulate matter: 0.015 grains per dscf corrected to 7% O₂.
 - b. NO_x: 0.48 lbs/MMBtu.
 - c. Carbon Monoxide: 400 ppm_{dv} corrected to 7% O₂ (1-hour average); 200 ppm_{dv} corrected to 7% O₂ (4 hour average).
 - d. Lead: 4.0×10^{-4} lbs/MMBtu.
 - e. Mercury: 3.6×10^{-4} lbs/MMBtu.
 - f. Beryllium 7.3×10^{-7} lbs/MMBtu.
 - g. Fluoride: 0.0032 lbs/MMBtu.
 - h. VOC: 0.023 lbs/MMBtu.
 - i. SO₂: 70% removal or 30 ppm_{dv} at 7% O₂ (24-hour geometric mean).
 - j. Hydrogen Chloride: 90% removal or 25 ppm_{dv} at 7% O₂ (3 run test average).
 - k. The opacity from each unit shall not exceed 15%, 6 minute average.
4. Each unit shall be tested within 180 days of issuance of this permit, and annually thereafter, to demonstrate compliance with emission standards mentioned in specific condition No. 3, using the following EPA test methods contained in 40 CFR 60, Appendix A, and in accordance with F.A.C. Section 17-2.700:
 - a. Method 1 for selection of sample site and sample traverses.
 - b. Method 2 for determining stack gas flow rate when converting concentrations to or from mass emission limits.

PERMITTEE:
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Beach County

Permit Number: PSD-FL-108-A
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- c. Method 3 or 3A for gas analysis when needed for calculation of molecular weight or percent CO₂.
- d. Method 4 for determining moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.
- e. Method 5 for concentration of particulate matter and associated moisture content. One sample shall constitute one test run.
- f. Method 9 for visible determination of the opacity of emissions.
- g. Method 6, 6C or 8 for concentration of SO₂, or other Methods approved by DER. Two samples, taken at approximately 30 minute intervals, shall constitute one test run.
- h. Method 7, 7A, 7B, 7C, 7D or 7E for concentration of nitrogen oxides, or other Methods approved by DER. Four samples, taken at approximately 15 minute intervals, shall constitute one test run.
- i. Method 26 for determination of hydrochloric acid concentration or other Methods approved by DER and EPA.
- j. Method 10 (continuous) for determination of CO concentrations. One sample constitutes one test run.
- k. Method 12 for determination of lead concentration and associated moisture content, or other Methods approved by DER. One sample constitutes one test run.
- l. Method 13A or 13B for determination of fluoride concentrations and associated moisture content, or other Methods approved by DER. One sample constitutes one test run.
- m. Method 19 for determination of "F" factors in determining compliance with heat input emission rates.
- n. Method 101A for determination of mercury emission rate and associated moisture content, or other Methods approved by DER. One sample shall constitute one test run.
- o. Method 104 for determination of beryllium emission rate and associated moisture content, or other Methods approved by DER. One sample shall constitute one test run.
- p. Method 25 or 25A for determination of volatile organic compounds, or other Methods approved by DER. One sample shall constitute one test run.

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Beach County

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Expiration Date: None

5. The permittee shall submit a stack test report to the Department within 45 days of testing.
6. The temperature at the exit of the dry scrubber shall not exceed 300⁰F (4 hour block average). Appropriate instrumentation shall be installed, if not already installed, within 180 days of issuance of this permit, at a proper location to continuously monitor and record these operating temperatures.
7. During boiler start up, the auxiliary gas burners shall be operating at their maximum capacity prior to the introduction of RDF to the boilers, and shall remain in operation until the lime spray dryer and particulate control device are fully operational.
8. During normal, non-emergency boiler shut down, the auxiliary gas burners shall be operated at their maximum capacity until all RDF has been combusted.
9. The annual capacity factor for the auxiliary gas burners, as determined by 40 CFR 60.43B(d), shall be less than 10%.
10. Open storage of solid waste outside of a building is prohibited.
11. The Solid Waste Authority's North County Regional Resource Recovery Facility shall utilize municipal solid waste as stated in the permit application. No sludge from sewage treatment plants shall be used as fuel. Use of alternate fuels would necessitate application for a modification to this permit.
12. During the compliance stack tests, RDF shall be analyzed by at least two separate labs, approved by the Department, using split samples for the Btu and moisture contents.
13. The lbs/hr of steam produced, corrected for pressure and temperature, shall be continuously monitored and recorded on a 4 hour block average. This monitor and data record shall be properly calibrated and maintained at all times.
14. Continuous Monitoring Program: The owner or operator of this source shall install (if not already installed), maintain, operate, and submit reports of excessive emissions for the SO₂, NO_x, CO, oxygen, and opacity. The permittee shall also continuously monitor temperature at the dry scrubber exit, and steam production. The facility shall be operated by personnel properly trained for the equipment herein. The permittee shall provide a copy of the operation and maintenance manual for the Continuous Emissions Monitoring System to the Department within 180 days of issuance of this permit.

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Expiration Date: None

The permittee shall provide written notice to the Department 15 days prior to formal staff training sessions, and allow Department representatives to attend said training sessions.

15. Continuous monitoring data shall be collected and recorded during periods of startup, shutdown and malfunction. Emissions during periods of startup, shutdown and malfunction shall be excluded from averaging calculations, and from determinations of compliance with emissions limits of this permit provided, however, that the duration of startups, shutdowns or malfunctions shall not exceed three hours per occurrence.

- a. The startup period as stated in this condition shall mean the period when the boilers begin continuous burning of RDF, and does not include any warm up period when only the auxiliary gas burners are utilized, and no RDF is being combusted.
- b. Malfunction shall mean any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal and usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

16. The Department's Tallahassee office and the West Palm Beach District office, along with the PBCHD, shall be notified at least 30 days prior to the first annual stack tests. After the first stack tests are completed, the permittee shall give at least 15 days written notice prior to future annual stack testing to the West Palm Beach District and PBCHD offices.

17. There shall be no objectionable odors from this facility during operation, startup, shutdown or malfunction periods.

18. The permittee shall maintain a daily log of the municipal solid waste received. Such a log must record, at a minimum, the amount of waste, the time, and the type of waste received. The permittee shall also retain records of all information resulting from monitoring activities and indicating operating parameters as specified in this permit for a minimum of two years from the date of recording.

19. All reasonable precautions shall be taken during any construction and operation of this facility to prevent and control the generation of unconfined emissions of particulate matter in accordance with the provisions of F.A.C. Rule 17-2.610(3). These provisions are applicable to any source; including, but not limited

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Beach County

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to, vehicular movement, transportation of materials, construction, alteration, demolition, or wrecking; or industrial related activities such as loading, unloading, storing, and handling.

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner
Secretary

Best Available Control Technology (BACT)
North County Regional Resource Recovery Facility
Solid Waste Authority of Palm Beach County
Palm Beach County, Florida
PSD-FL-108-A

The applicant has constructed a resource recovery facility (RRF) located near the intersection of the Beeline Highway and the Florida Turnpike in Palm Beach County, Florida. The resource recovery facility consists of three major plants: the RDF manufacturing plant, the boiler plant and the electric generating plant.

The facility is designed to process 2,000 TPD of municipal solid waste (MSW) with an annual throughput of 624,000 tons. The RDF manufacturing plant is equipped with three MSW processing lines, any two of which can handle 2,000 TPD of incoming MSW. The boiler plant includes two B&W boilers, each designed to combust up to 900 TPD of RDF with a reference heating value of 5,500 Btu/lb (412.5 MMBtu/hr). Emissions from each boiler are controlled by a Joy Technologies spray dryer absorber followed by a Joy/BSH Kerfield four field electrostatic precipitator. Flue gas emissions (opacity, O₂, SO₂, CO and NO_x) from each unit are monitored with an Enviroplan CEM system. The turbine-generator plant has a nominal output rating of 62 MW, and is matched to the full output capacity of the boilers.

The original application to construct the facility was submitted in 1985. As the permit was being finalized in 1986, the applicant met with the Department to identify several items where the proposed permit differed from the designs being finalized and the contract for construction and operation which was executed in 1986. The primary issue concerned heat input. The draft permit provided a heat input of 360 MMBtu/hr capacity for each boiler. The design allowed heat input of 412.5 MMBtu/hr. This higher boiler capacity was intended to provide more reliable operating margins. The increased capacity allows more throughput during peak waste generation periods, allows for catch up capacity after scheduled or unscheduled downtime and to account for variability in fuel heating value. The increased capacity decreases the likelihood that raw garbage would be diverted to the landfill.

In addition to permitted heat input, the applicant also identified emission limitations for some air pollutants for which the draft permit and contract differed. Based on the discussions conducted in 1986, the Department and the applicant concurred that the permit would be issued as drafted. The applicant agreed to accept the permit as drafted and submit a request for modification to conform the permit to the design at a later date.

In 1989, the applicant submitted a request to increase the permitted boiler capacity and modify the emission limitations for the pollutants nitrogen oxides, carbon monoxide, sulfur dioxide, sulfuric acid mist, lead, and mercury. Subsequently the applicant withdrew the request for modifications of emission limitations for lead and mercury. In accordance with this request, BACT has been re-evaluated for nitrogen oxides and carbon monoxide. The emission limitation for sulfur dioxide has been reviewed from the standpoint of alternative means of determining compliance, and an evaluation has been made to determine if an emission limitation is needed for sulfuric acid mist.

BACT Determination Requested by the Applicant:

Current Permit Language	Requested Modification
NO _x : 0.32 lbs/MMBtu	0.56 lbs/MMBtu
CO: 400 PPMDV (3 hr. avg.) @ 12" CO ₂	200 PPMDV (4 hr. avg.) @ 12% CO ₂ 400 PPMDV (1 hr. avg.) @ 12% CO ₂

Date of Receipt of a BACT Application:

November 30, 1989

BACT Determination Procedure:

In accordance with Florida Administrative Code Chapter 17-2, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards of BACT determinations of any other state.
- (d) The social and economic impact of the application of such technology.

With regard to the considerations outlined above, the evaluation will also take into account both the regulations as they existed in 1986 when the original permit was issued, and the emission guidelines for existing municipal waste combustors that have recently been promulgated under Section 111(d) and 129 of the Clean Air Act Amendments of 1990.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category.

If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

Nitrogen Oxides

The applicant asserted that original NO_x limit of 0.32 lb/MMBtu is too stringent. This was based on permit limitations allowing higher NO_x emissions for mass burn facilities permitted in Florida prior to or concurrently with the applicant's facility. The applicant requested the permit limit be changed from .32 lbs/MMBtu to .56 lbs/MMBtu.

A review of the BACT/LAER Clearinghouse suggest that the NO_x limit requested by the applicant is comparatively high. Although no RDF facilities have been required to use add on equipment for NO_x control, such as thermal de-NO_x, several RDF facilities have been permitted with lower than the applicant's requested NO_x limitations.

Two RDF facilities, in Huntsville, Alabama and Honolulu, Hawaii were permitted in 1987 (Palm Beach RRF was permitted in 1986). Each had NO_x emission limitations of 0.46 lb/MMBtu and 260 ppm_{dv} at 12% CO₂ (equates to approximately 0.46 lb/MMBtu for the Palm Beach Facility). Given these limitations and the stack test results, an emission level of 0.48 lb/MMBtu is viewed to be reasonable for the Palm Beach RRF and is thereby judged to represent BACT.

Carbon Monoxide

The applicant has proposed a reduction in the emission limitation for carbon monoxide as a valid criteria to demonstrate good combustion practices.

The applicant has proposed that the averaging time for the current carbon monoxide limitation of 400 ppm_{dv} at 12% CO₂ be adjusted from 3 hours to 1 hour. In addition, the applicant has also proposed that a carbon monoxide limitation of 200 ppm_{dv} at 12% CO₂ be established with a 4 hour averaging time.

Carbon monoxide emissions are generally accepted as an indicator of combustion efficiency. Limiting the emissions of carbon monoxide provides assurance that good combustion is taking place and organic emissions are being controlled. As this is the case, it is a common practice to establish both a short term and long term emission level, in which the short term limit is set higher to allow for sporadic changes in combustion.

For the long term standard, EPA has recently established guidelines for RDF facilities which limit carbon monoxide emissions to 200 ppm_{dv} at 7% O₂ on a 24 hour average basis. As this is the case, this standard along with the short term standard proposed by the applicant (400 ppm_{dv} at 7% O₂ on a 1 hour average basis) is judged to represent BACT for the facility.

Other Requests

The applicant has requested that the SO₂ emission limitation be modified to include the option of complying with either a percent removal or a mass emission rate. Currently, the standard requires a 65% removal which may not be possible when the sulfur content of the waste stream is low.

Given this situation, the Department believes that the EPA emission guideline of either 70% removal or 30 ppm_{dv} at 7% O₂ on a 24 hour geometric mean basis should be used. In addition, the EPA guideline of 90% removal or 25 ppm_{dv} at 7% O₂ based on an annual stack test, (three test run average) should be established for HCl. A review of the test results indicates that these levels should be achievable.

Recent RRF permits have not established an emission limitation for sulfuric acid mist. This decision is based on unreliable results that are obtained with the sulfuric acid mist testing method (Method 8) for the low concentrations that are common to these facilities. As this is the case, the request to delete the limitation for sulfuric acid mist is reasonable.

With regard to plant capacity, the Department believes that it is reasonable to modify heat rate limitations to coincide with the actual design rate. The permit will be modified to establish the maximum boiler heat input at 412.5 MMBtu per hour. This corresponds to the nameplate rating of 324,300 pounds per hour steam capacity.

Other Revisions:

To bring the Palm Beach RRF in line with other recently permitted facilities and the EPA guidelines, the Department is recommending the following revisions:

Continuous emissions monitoring for CO, NO_x, and SO₂.

Emission concentrations be corrected to 7% O₂ instead of 12% CO₂

Details of the Analysis May be Obtained by Contacting:

Barry Andrews, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

Approved by:

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

Carol M. Browner, Secretary
Dept. of Environmental Regulation

_____ 1991
Date

_____ 1991
Date

*already
planned*

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 modification to the construction permit to authorize the existing boilers to operate at their full design capacity for the North County Regional Resource Recovery Facility located near the intersection of the Beeline Highway and the Florida Turnpike in Palm Beach County, Florida. A determination of Best Available Control Technology (BACT) was 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 a 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
Southeast District
1900 S. Congress Ave., Suite A
West Palm Beach, Florida 33406

Palm Beach County Health Dept.
Division of Environmental Science
and Engineering
901 E. Evernia Street
West Palm Beach, Florida 33406

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the Department's final determination. Furthermore, a public hearing can be requested by any person. Such requests must be submitted within 30 days of this notice.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Solid Waste Authority of
Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412

DER File No. PSD-FL-108-A

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a modification to an air 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, Solid Waste Authority of Palm Beach County, applied on November 30, 1989, to the Department of Environmental Regulation for a modification of the construction permit to allow the applicant to operate the existing boilers at their design capacity for the North County Regional Resource Recovery Facility located in Palm Beach County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 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:

c: I. Goldman, SE Dist.
J. Stormer, PBCHD
G. Worley, EPA, Atlanta

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 _____.

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

Clerk

Date

Technical Evaluation
and
Preliminary Determination

Solid Waste Authority of Palm Beach County
North County Regional Resource Recovery Facility
Palm Beach County, Florida

Modification
Permit No. PSD-FL-108-A

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

May 2, 1991

I. Application

A. Applicant

Solid Waste Authority of Palm Beach County
North County Regional Resource Recovery Facility
7501 North Jog Road
West Palm Beach, Florida 33412

B. Project and Location

This project is a resource recovery facility where approximately 2,000 TPD of municipal solid waste is received and processed into refuse derived fuel (RDF) for energy recovery and into recoverable ferrous and aluminum materials. This facility is located at 7501 N. Jog Road, West Palm Beach, near the intersection of the Beeline Highway and the Florida Turnpike in Palm Beach County, Florida.

II. Project Description

The resource recovery facility consists of three major plants: the RDF manufacturing plant, the boiler plant, and the electrical generating plant.

The facility will process 2,000 TPD of municipal solid waste (MSW) with an annual throughput of 624,000 tons. Excess capacity and redundancy were built into the facility to assure that the throughput requirements can be met with both planned and unplanned outages which occur as part of normal facility operation.

The facility is equipped with three RDF processing lines, any two of which can process 2,000 TPD of MSW. Two boilers are provided, each with a capacity to burn 900 TPD of RDF at a reference heating value of 5,500 Btu/lb. The turbine-generator is rated at a nominal 62 MW and is matched to the full output of the boilers. The Solid Waste Authority anticipates the expansion of this facility to process 3,000 tons of MSW with the addition of a third boiler and a second turbine-generator in the future. However, this future expansion is not included as part of this current permit modification request.

Modifications Requested

In July 1986, the Florida Power Plant Siting Board issued a certification (No. PA 84-20) and the EPA issued a permit (PSD-FL-108) for the facility in December 1986.

At the time these permits were being finalized in 1986, the applicant met with the Department and EPA to identify several items for which the final design, and construction contract differed from the draft permit. Based on these discussions, the Department and the applicant concurred in issuing the permit as it was drafted and the applicant would accept the permit as written and submit a request for modification to conform the permit to the design at a later date. Accordingly, the technical evaluation and BACT analysis take into account both the regulations at the time the permit was issued and the recently promulgated guidelines for existing municipal waste

combustors. In addition, the applicant, at the request of the Department and EPA, delayed submittal of the request until the first stack test was completed.

On November 29, 1989 the applicant submitted a request for permit modification. Modifications requested included a change in plant capacity, and emission limits for NOx, CO, Sulfuric acid mist, Lead and Mercury. In subsequent discussions with the Department, the applicant withdrew the request for changes in lead and mercury limits.

A summary comparison of the current permit limits and the requested modifications is as follows:

<u>Current Permit Language</u>	<u>Requested Modification</u>
NOx: 0.32 lbs/MMBtu	0.56 lbs/MMBtu
CO: 400 PPMDV (3 hr. avg.) @ 12% CO ₂	200 PPMDV (4 hr. avg.) @ 12% CO ₂ 400 PPMDV (1 hr. avg.) @ 12% CO ₂
Sulfuric Acid Mist: 0.32 x 10 ⁻⁵ lbs/MBtu	Delete
Plant Capacity: The incinerator boilers shall not be loaded in excess of their rated capacity of 58,333 pounds of RDF per hour each or 360 MMBtu/hour each.	The maximum boiler heat input shall not exceed 412.5 MMBtu per hour. This corresponds to the name plate rating of 324,000 pounds per hour steam capacity.

III. Rule Applicability

As stated in the previously issued PSD-FL-108 and PA 84-20 permits, the North County Regional Resource Recovery Facility is in an area designated as nonattainment for ozone and attainment for all other criteria pollutants and is subject to Chapters 17-2, 17-4 and 403 of Florida Administrative Code and 40 CFR 52, 60 and 61.

A BACT determination has been completed for NOx and CO. This was done taking into consideration the stack test results which were conducted during the week of October 23, 1989. In addition, the BACT analysis has taken into consideration the recent guidelines that have been promulgated for existing municipal waste combustors. Since the Department had limited experience/data available on RDF facilities at the time the original application was reviewed, these BACT determination values are more realistic.

IV. Source Impact Analysis

A. Emission Limitations

A detailed evaluation of the new emission limits can be found in the Specific Conditions.

B. Air Quality Impacts- - -

See the following memo from Mr. Tom Rogers.

V. Conclusion

Based on the information provided by Solid Waste Authority of Palm Beach County, the Department has reasonable assurance that the proposed modification of the North County Regional Resource Recovery Facility, 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.

PERMITTEE:
Solid Waste Authority of Palm
Beach County
North County Regional
Resource Recovery Facility
7501 North Jog Road
West Palm Beach, FL 33412

Permit Number: PSD-FL-108-A
Expiration Date: None
County: Palm Beach
Latitude/Longitude: 26⁰46',00"N
80⁰08',45"W
Project: North County Regional
Resource Recovery Facility

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 operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

The North County Regional Resource Recovery Facility is authorized to operate the two (2) existing RDF boilers to their maximum design input rating of 412.5 MMBtu's per hour with a maximum steam rating of 324,000 lbs. per hour, subject to the General and Specific Conditions stated herein.

The Resource Recovery Facility consists of three major plants: the RDF manufacturing plant, the boiler plant and the electric generating plant.

The facility is designed to process 2,000 TPD of municipal solid waste (MSW) with an annual throughput of 624,000 tons. The RDF manufacturing plant is equipped with three MSW processing lines, any two of which can handle 2,000 TPD of incoming MSW. Excess capacity and redundancy were built into the processing plant to assure that the throughput requirements could be met with one processing line down for planned or unplanned maintenance.

The boiler plant includes two B&W boilers, each designed to combust up to 900 TPD of RDF with a reference heating value of 5,500 Btu/lb (412.5 MMBtu/hr). Actual RDF heating values typically range from 4,500 to 6,200 Btu/lb respectively.

Emissions from each boiler are controlled by a Joy Technologies spray dryer absorber followed by a Joy/BSH Krefeld four field electrostatic precipitator. Each precipitator has a gas flow rating of 198,000 ACFM and is designed to operate with three of four fields in service.

Flue gas emissions (opacity, O₂, SO₂, CO and NO_x) from each unit are monitored with an Enviroplan CEM system.

The turbine-generator plant has a nominal output rating of 62 MW, and is matched to the full output capacity of the boilers.

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

PERMITTEE:
Solid Waste Authority of Palm
Beach County

Permit Number: PSD-FL-108-A
Expiration Date: None

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.
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

PERMITTEE:
Solid Waste Authority of Palm
Beach County

Permit Number: PSD-FL-108-A
Expiration Date: None

facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

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

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

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

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

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

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

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 prescribed by Sections 403.73 and 403.11, 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.

PERMITTEE:
Solid Waste Authority of Palm
Beach County

Permit Number: PSD-FL-108-A
Expiration Date: None

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 Rule 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. This permit also constitutes a Determination of Prevention of Significant Deterioration (PSD).

14. 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 and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

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

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee

PERMITTEE:
**Solid Waste Authority of Palm
Beach County**

Permit Number: PSD-FL-108-A
Expiration Date: None

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. Before the third unit commences construction, a new PSD construction permit must be submitted to the DER, since more than 18 months have elapsed from the date construction permit PSD-FL-108 was issued on December 16, 1986.

2. The Solid Waste Authority's North County Regional Resource Recovery Facility shall be allowed to operate continuously (i.e., 8,760 hrs/yr).

3. Stack emissions from each unit shall not exceed the following limits.

a. Particulate matter: 0.015 grains per dscf corrected to 7% O₂.

b. NO_x: 0.48 lbs/MMBtu.

c. Carbon Monoxide: 400 ppm_{dv} corrected to 7% O₂ (1-hour average);
200 ppm_{dv} corrected to 7% O₂ (4 hour average).

d. Lead: 4.0×10^{-4} lbs/MMBtu.

e. Mercury: 3.6×10^{-4} lbs/MMBtu.

f. Beryllium 7.3×10^{-7} lbs/MMBtu.

g. Fluoride: 0.0032 lbs/MMBtu.

h. VOC: 0.023 lbs/MMBtu.

i. SO₂: 70% removal or 30 ppm_{dv} at 7% O₂ (24-hour geometric mean).

j. Hydrogen Chloride: 90% removal or 25 ppm_{dv} at 7% O₂ (3 run test average).

k. The opacity from each unit shall not exceed 15%, 6 minute average.

4. Each unit shall be tested within 180 days of issuance of this permit, and annually thereafter, to demonstrate compliance with emission standards mentioned in specific condition No. 3, using the following EPA test methods contained in 40 CFR 60, Appendix A, and in accordance with F.A.C. Section 17-2.700:

a. Method 1 for selection of sample site and sample traverses.

b. Method 2 for determining stack gas flow rate when converting concentrations to or from mass emission limits.

PERMITTEE:
Solid Waste Authority of Palm
Beach County

Permit Number: PSD-FL-108-A
Expiration Date: None

- c. Method 3 or 3A for gas analysis when needed for calculation of molecular weight or percent CO₂.
- d. Method 4 for determining moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.
- e. Method 5 for concentration of particulate matter and associated moisture content. One sample shall constitute one test run.
- f. Method 9 for visible determination of the opacity of emissions.
- g. Method 6, 6C or 8 for concentration of SO₂, or other Methods approved by DER. Two samples, taken at approximately 30 minute intervals, shall constitute one test run.
- h. Method 7, 7A, 7B, 7C, 7D or 7E for concentration of nitrogen oxides, or other Methods approved by DER. Four samples, taken at approximately 15 minute intervals, shall constitute one test run.
- i. Method 26 for determination of hydrochloric acid concentration or other Methods approved by DER and EPA.
- j. Method 10 (continuous) for determination of CO concentrations. One sample constitutes one test run.
- k. Method 12 for determination of lead concentration and associated moisture content, or other Methods approved by DER. One sample constitutes one test run.
- l. Method 13A or 13B for determination of fluoride concentrations and associated moisture content, or other Methods approved by DER. One sample constitutes one test run.
- m. Method 19 for determination of "F" factors in determining compliance with heat input emission rates.
- n. Method 101A for determination of mercury emission rate and associated moisture content, or other Methods approved by DER. One sample shall constitute one test run.
- o. Method 104 for determination of beryllium emission rate and associated moisture content, or other Methods approved by DER. One sample shall constitute one test run.
- p. Method 25 or 25A for determination of volatile organic compounds, or other Methods approved by DER. One sample shall constitute one test run.

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5. The permittee shall submit a stack test report to the Department within 45 days of testing.
6. The temperature at the exit of the dry scrubber shall not exceed 300⁰F (4 hour block average). Appropriate instrumentation shall be installed, if not already installed, within 180 days of issuance of this permit, at a proper location to continuously monitor and record these operating temperatures.
7. During boiler start up, the auxiliary gas burners shall be operating at their maximum capacity prior to the introduction of RDF to the boilers, and shall remain in operation until the lime spray dryer and particulate control device are fully operational.
8. During normal, non-emergency boiler shut down, the auxiliary gas burners shall be operated at their maximum capacity until all RDF has been combusted.
9. The annual capacity factor for the auxiliary gas burners, as determined by 40 CFR 60.43B(d), shall be less than 10%.
10. Open storage of solid waste outside of a building is prohibited.
11. The Solid Waste Authority's North County Regional Resource Recovery Facility shall utilize municipal solid waste as stated in the permit application. No sludge from sewage treatment plants shall be used as fuel. Use of alternate fuels would necessitate application for a modification to this permit.
12. During the compliance stack tests, RDF shall be analyzed by at least two separate labs, approved by the Department, using split samples for the Btu and moisture contents.
13. The lbs/hr of steam produced, corrected for pressure and temperature, shall be continuously monitored and recorded on a 4 hour block average. This monitor and data record shall be properly calibrated and maintained at all times.
14. Continuous Monitoring Program: The owner or operator of this source shall install (if not already installed), maintain, operate, and submit reports of excessive emissions for the SO₂, NO_x, CO, oxygen, and opacity. The permittee shall also continuously monitor temperature at the dry scrubber exit, and steam production. The facility shall be operated by personnel properly trained for the equipment herein. The permittee shall provide a copy of the operation and maintenance manual for the Continuous Emissions Monitoring System to the Department within 180 days of issuance of this permit.

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The permittee shall provide written notice to the Department 15 days prior to formal staff training sessions, and allow Department representatives to attend said training sessions.

15. Continuous monitoring data shall be collected and recorded during periods of startup, shutdown and malfunction. Emissions during periods of startup, shutdown and malfunction shall be excluded from averaging calculations, and from determinations of compliance with emissions limits of this permit provided, however, that the duration of startups, shutdowns or malfunctions shall not exceed three hours per occurrence.

- a. The startup period as stated in this condition shall mean the period when the boilers begin continuous burning of RDF, and does not include any warm up period when only the auxiliary gas burners are utilized, and no RDF is being combusted.
- b. Malfunction shall mean any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal and usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

16. The Department's Tallahassee office and the West Palm Beach District office, along with the PBCHD, shall be notified at least 30 days prior to the first annual stack tests. After the first stack tests are completed, the permittee shall give at least 15 days written notice prior to future annual stack testing to the West Palm Beach District and PBCHD offices.

17. There shall be no objectionable odors from this facility during operation, startup, shutdown or malfunction periods.

18. The permittee shall maintain a daily log of the municipal solid waste received. Such a log must record, at a minimum, the amount of waste, the time, and the type of waste received. The permittee shall also retain records of all information resulting from monitoring activities and indicating operating parameters as specified in this permit for a minimum of two years from the date of recording.

19. All reasonable precautions shall be taken during any construction and operation of this facility to prevent and control the generation of unconfined emissions of particulate matter in accordance with the provisions of F.A.C. Rule 17-2.610(3). These provisions are applicable to any source; including, but not limited

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to, vehicular movement, transportation of materials, construction, alteration, demolition, or wrecking; or industrial related activities such as loading, unloading, storing, and handling.

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Carol M. Browner
Secretary

Best Available Control Technology (BACT)
North County Regional Resource Recovery Facility
Solid Waste Authority of Palm Beach County
Palm Beach County, Florida
PSD-FL-108-A

The applicant has constructed a resource recovery facility (RRF) located near the intersection of the Beeline Highway and the Florida Turnpike in Palm Beach County, Florida. The resource recovery facility consists of three major plants: the RDF manufacturing plant, the boiler plant and the electric generating plant.

The facility is designed to process 2,000 TPD of municipal solid waste (MSW) with an annual throughput of 624,000 tons. The RDF manufacturing plant is equipped with three MSW processing lines, any two of which can handle 2,000 TPD of incoming MSW. The boiler plant includes two B&W boilers, each designed to combust up to 900 TPD of RDF with a reference heating value of 5,500 Btu/lb (412.5 MMBtu/hr). Emissions from each boiler are controlled by a Joy Technologies spray dryer absorber followed by a Joy/BSH Kerfield four field electrostatic precipitator. Flue gas emissions (opacity, O₂, SO₂, CO and NO_x) from each unit are monitored with an Enviroplan CEM system. The turbine-generator plant has a nominal output rating of 62 MW, and is matched to the full output capacity of the boilers.

The original application to construct the facility was submitted in 1985. As the permit was being finalized in 1986, the applicant met with the Department to identify several items where the proposed permit differed from the designs being finalized and the contract for construction and operation which was executed in 1986. The primary issue concerned heat input. The draft permit provided a heat input of 360 MMBtu/hr capacity for each boiler. The design allowed heat input of 412.5 MMBtu/hr. This higher boiler capacity was intended to provide more reliable operating margins. The increased capacity allows more throughput during peak waste generation periods, allows for catch up capacity after scheduled or unscheduled downtime and to account for variability in fuel heating value. The increased capacity decreases the likelihood that raw garbage would be diverted to the landfill.

In addition to permitted heat input, the applicant also identified emission limitations for some air pollutants for which the draft permit and contract differed. Based on the discussions conducted in 1986, the Department and the applicant concurred that the permit would be issued as drafted. The applicant agreed to accept the permit as drafted and submit a request for modification to conform the permit to the design at a later date.

In 1989, the applicant submitted a request to increase the permitted boiler capacity and modify the emission limitations for the pollutants nitrogen oxides, carbon monoxide, sulfur dioxide, sulfuric acid mist, lead, and mercury. Subsequently the applicant withdrew the request for modifications of emission limitations for lead and mercury. In accordance with this request, BACT has been re-evaluated for nitrogen oxides and carbon monoxide. The emission limitation for sulfur dioxide has been reviewed from the standpoint of alternative means of determining compliance, and an evaluation has been made to determine if an emission limitation is needed for sulfuric acid mist.

BACT Determination Requested by the Applicant:

Current Permit Language	Requested Modification
NO _x : 0.32 lbs/MMBtu	0.56 lbs/MMBtu
CO: 400 PPMDV (3 hr. avg.) @ 12" CO ₂	200 PPMDV (4 hr. avg.) @ 12% CO ₂ 400 PPMDV (1 hr. avg.) @ 12% CO ₂

Date of Receipt of a BACT Application:

November 30, 1989

BACT Determination Procedure:

In accordance with Florida Administrative Code Chapter 17-2, Air Pollution, this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department, on a case by case basis, taking into account energy, environmental economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that in making the BACT determination the Department shall give consideration to:

- (a) Any Environmental Protection Agency determination of Best Available Control Technology pursuant to Section 169, and any emission limitation contained in 40CFR Part 60 (Standards of Performance for New Stationary Sources) or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).
- (b) All scientific, engineering, and technical material and other information available to the Department.
- (c) The emission limiting standards of BACT determinations of any other state.
- (d) The social and economic impact of the application of such technology.

With regard to the considerations outlined above, the evaluation will also take into account both the regulations as they existed in 1986 when the original permit was issued, and the emission guidelines for existing municipal waste combustors that have recently been promulgated under Section 111(d) and 129 of the Clean Air Act Amendments of 1990.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine for the emission source in question the most stringent control available for a similar or identical source or source category.

If it is shown that this level of control is technically or economically infeasible for the source in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

Nitrogen Oxides

The applicant asserted that original NO_x limit of 0.32 lb/MMBtu is too stringent. This was based on permit limitations allowing higher NO_x emissions for mass burn facilities permitted in Florida prior to or concurrently with the applicant's facility. The applicant requested the permit limit be changed from .32 lbs/MMBtu to .56 lbs/MMBtu.

A review of the BACT/LAER Clearinghouse suggest that the NO_x limit requested by the applicant is comparatively high. Although no RDF facilities have been required to use add on equipment for NO_x control, such as thermal de-NO_x, several RDF facilities have been permitted with lower than the applicant's requested NO_x limitations.

Two RDF facilities, in Huntsville, Alabama and Honolulu, Hawaii were permitted in 1987 (Palm Beach RRF was permitted in 1986). Each had NO_x emission limitations of 0.46 lb/MMBtu and 260 ppm_{dv} at 12% CO_x (equates to approximately 0.46 lb/MMBtu for the Palm Beach Facility). Given these limitations and the stack test results, an emission level of 0.48 lb/MMBtu is viewed to be reasonable for the Palm Beach RRF and is thereby judged to represent BACT.

Carbon Monoxide

The applicant has proposed a reduction in the emission limitation for carbon monoxide as a valid criteria to demonstrate good combustion practices.

The applicant has proposed that the averaging time for the current carbon monoxide limitation of 400 ppm_{dv} at 12% CO₂ be adjusted from 3 hours to 1 hour. In addition, the applicant has also proposed that a carbon monoxide limitation of 200 ppm_{dv} at 12% CO₂ be established with a 4 hour averaging time.

Carbon monoxide emissions are generally accepted as an indicator of combustion efficiency. Limiting the emissions of carbon monoxide provides assurance that good combustion is taking place and organic emissions are being controlled. As this is the case, it is a common practice to establish both a short term and long term emission level, in which the short term limit is set higher to allow for sporadic changes in combustion.

For the long term standard, EPA has recently established guidelines for RDF facilities which limit carbon monoxide emissions to 200 ppm_{dv} at 7% O₂ on a 24 hour average basis. As this is the case, this standard along with the short term standard proposed by the applicant (400 ppm_{dv} at 7% O₂ on a 1 hour average basis) is judged to represent BACT for the facility.

Other Requests

The applicant has requested that the SO₂ emission limitation be modified to include the option of complying with either a percent removal or a mass emission rate. Currently, the standard requires a 65% removal which may not be possible when the sulfur content of the waste stream is low.

Given this situation, the Department believes that the EPA emission guideline of either 70% removal or 30 ppm_{dv} at 7% O₂ on a 24 hour geometric mean basis should be used. In addition, the EPA guideline of 90% removal or 25 ppm_{dv} at 7% O₂ based on an annual stack test, (three test run average) should be established for HCl. A review of the test results indicates that these levels should be achievable.

Recent RRF permits have not established an emission limitation for sulfuric acid mist. This decision is based on unreliable results that are obtained with the sulfuric acid mist testing method (Method 8) for the low concentrations that are common to these facilities. As this is the case, the request to delete the limitation for sulfuric acid mist is reasonable.

With regard to plant capacity, the Department believes that it is reasonable to modify heat rate limitations to coincide with the actual design rate. The permit will be modified to establish the maximum boiler heat input at 412.5 MMBtu per hour. This corresponds to the nameplate rating of 324,300 pounds per hour steam capacity.

Other Revisions:

To bring the Palm Beach RRF in line with other recently permitted facilities and the EPA guidelines, the Department is recommending the following revisions:

Continuous emissions monitoring for CO, NO_x, and SO₂.

Emission concentrations be corrected to 7% O₂ instead of 12% CO₂

BACT
NCRRRF
Page 6

Details of the Analysis May be Obtained by Contacting:

Barry Andrews, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended by:

Approved by:

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

Carol M. Browner, Secretary
Dept. of Environmental Regulation

_____ 1991
Date

_____ 1991
Date

SOLID WASTE AUTHORITY

OF PALM BEACH COUNTY

7501 North Jog Road
West Palm Beach, Florida 33412
Telephone (407) 640-4000



September 17, 1991

*already
O'Connell*

Mr. Barry Andrews
Professional Engineer Administrator
Permitting and Standards Section
Bureau of Air Regulation
Florida Department of Environmental Regulation
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Solid Waste Authority Palm Beach County
North Central Regional Resource Recovery Facility
PSD-FL-108A

Dear Mr. Andrews,

Please find the enclosed draft modifications of the air permit for the Solid Waste Authority North Central Regional Resource Recovery Facility as agreed to in the September 4, 1991 meeting between the SWA and the Department. Two versions of the document are enclosed. One is a clear copy of the proposed new language. The other is a strike through / underline comparison of the original and the proposed modifications.

The SWA requests a meeting be scheduled for 9:00 AM, October 1, 1991 at the SWA offices in West Palm Beach in order to discuss the proposed permit modifications. Please contact Richard Statom at 407/640-4000 to confirm the meeting location, time, and date.

If there are any questions or comments please do not hesitate to contact myself or Richard Statom.

Sincerely,

Marc C. Bruner, PhD.
Director of Planning & Environmental Programs

cc. J. Booth, SWA
R. Statom, SWA
M. Hammond, SWA
B. Conko, G&A
D. Burnham, B&W
R. Williams, B&W
G. Woodward, B&W
T. Lammers, B&W
N. Monroe, PBEA

Permit File Scanning Request from Lynn

Priority: -ASAP (Public Records Request, etc.)

-Place in Normal

Scanning Queue

Facility ID	Project#	Type	PSD #	Submittal Date	Batch #
0990234	DAS unknown	AC	108A		

- File Approved For Disposal
 Correspondence
 Intent
 Permit
 Draft (Title V)
 Return File to BAR
 Amendment
 Application
 OGC
 Proposed (Title V)

Document Date 12-16-86

PERMIT TO CONSTRUCT UNDER THE RULES FOR THE PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY

Pursuant to and in accordance with the provisions of Part C, Subpart 1 of the Clean Air Act, as amended, 42 U.S.C. §7470 et. seq., and the regulations promulgated thereunder at 40 CFR §52.21, as amended at 45 Fed. Reg. 52676, 52735-41 (August 7, 1980),

Palm Beach County Solid Waste Authority Resource Recovery Facility

is, as of the effective date of this permit (PSD-FL-108) authorized to construct a two unit, 360 mmBTU/hr (each), refuse derived fuel (RDF), energy recovery facility at the following location:

Near the intersection of the Beeline Highway and the Florida Turnpike in Palm Beach County, Florida.

DER
DEC 16 1986
BAQM

Upon completion of authorized construction and commencement of operation/production, this stationary source shall be operated in accordance with the emission limitations, sampling requirements, monitoring requirements and other conditions set forth in the attached Specific Conditions (Part I) and General Conditions (Part II)

This permit is hereby issued on _____ and shall become effective thirty (30) days after receipt hereof unless a petition for administrative review is filed with the Administrator during that time. If a petition is filed any applicable effective date shall be determined in accordance with 40 CFR §124.19(f)(1).

If construction does not commence within 18 months after the effective date of this permit, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time, this permit shall expire and authorization to construct shall become invalid.

This authorization to construct/modify shall not relieve the owner or operator of the responsibility to comply fully with all applicable provisions of Federal, State, and local law.

Date Signed

Regional Administrator

PART I

Specific Conditions

1. Emission Limitations

- a. Stack emissions from each unit shall not exceed the following:

- (1) Particulate matter: 0.015 grains per dry standard cubic foot corrected to 12% CO₂ (gr/dscf-12% CO₂).
- (2) Visible Emissions: Opacity of stack emissions shall not be greater than 20% opacity. Excess opacity resulting from startup or shutdown shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess opacity shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by EPA for longer duration.

Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up or shutdown shall be prohibited.

- (3) VOC: 0.023 lb/mmBTU heat input
- (4) SO₂: 65% removal (0.32 lb/mmBTU heat input max.)
- (5) Nitrogen Oxides: 0.32 lb/mmBTU heat input
- (6) Carbon Monoxide: 400 ppmv corrected to 12% CO₂
- (7) Lead: 0.0004 lb/mmBTU heat input
- (8) Fluorides: 0.0032 lb/mmBTU heat input
- (9) Beryllium: 7.3×10^{-7} lb/mmBTU heat input
- (10) Each of the emission limits in conditions (1) and (3) through (9) is to be expressed as a 3-hour average based on the expected length of time for a particulate compliance test.
- (11) Mercury: 3200 grams/day
- (12) Sulfuric Acid Mist: 3.2×10^{-5} lb/mmBTU heat input

- (13) The units are subject to 40 CFR Part 60, Subpart E and Subpart Db, New Source Performance Standards (NSPS), except that where requirements in this permit are more restrictive, the requirements in this permit shall apply.
- (14) There shall be no fugitive emissions from the refuse bunker and the ash handling and loadout. The potential for dust generation by ash handling activities will be mitigated by quenching the ash prior to loading in ash transport trucks. Additionally, all portions of the proposed facility including the ash handling facility which have the potential for fugitive emissions will be enclosed. Also, those areas which have to be open for operational purposes, e.g., tipping floor of the refuse bunker while trucks are entering and leaving, will be under negative air pressure.
- (15) Only natural gas will be used as an auxiliary fuel and the annual capacity factor for use of natural gas, as determined by 40 CFR §60.43b(d), shall be less than 10%.

b. Compliance Tests

- (1) Compliance tests for particulate matter, SO₂, nitrogen oxides, CO, fluorides, mercury and beryllium shall be conducted in accordance with 40 CFR §60.8(a), (b), (d), (e), and (f), and 40 CFR Part 60, Subpart Db. An annual test will be conducted for particulate matter. Compliance tests for opacity will be conducted simultaneously during each compliance test run for particulate matter.

Compliance tests shall be conducted as specified herein by EPA and as required by 40 CFR §60.8. The permittee shall make available to EPA such records as may be necessary to determine the conditions of the performance tests and the methods to be used in obtaining representative RDF samples for ultimate analyses required in Method 19, Appendix A.

- (2) The following test methods and procedures from 40 CFR Parts 60 and 61 shall be used for compliance testing:
 - a. Method 1 for selection of sample site and sample traverses.
 - b. Method 2 for determining stack gas flow rate when converting concentrations to or from mass emission limits.
 - c. Method 3 for gas analysis when needed for calculation of molecular weight or percent CO₂.
 - d. Method 4 for determining moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.
 - e. Method 5 for concentration of particulate matter and associated moisture content. One sample shall constitute one test run.
 - f. Method 9 for visible determination of the opacity of emissions.
 - g. Method 6 for concentration of SO₂. Two samples, taken at approximately 30 minute intervals, shall constitute one test run.
 - h. Method 7 for concentration of nitrogen oxides. Four samples, taken at approximately 15 minute intervals, shall constitute one test run.

- i. Method 8 for determination of sulfuric acid mist concentration and associated moisture content. One sample shall constitute one test run.
 - j. Method 10 (continuous) for determination of CO concentrations. One sample constitutes one test run.
 - k. Method 12 for determination of lead concentration and associated moisture content. One sample constitutes one test run.
 - l. Method 13A or 13B for determination of fluoride concentrations and associated moisture content. One sample shall constitute one test run.
 - m. Method 19 for determination of "F" factors in determining compliance with heat input emission rates and sulfur dioxide removal in Special Condition 1.a.(4).
 - n. Method 101A for determination of mercury emission rate and associated moisture content. One sample shall constitute one test run.
 - o. Method 104 for determination of beryllium emission rate and associated moisture content. One sample shall constitute one test run.
 - p. Method 25 or 25A for determination of volatile organic compounds. One sample shall constitute one test run.
2. The height of the boiler exhaust stack shall be 250 feet above ground level at the base of the stack.
 3. The incinerator boilers shall not be loaded in excess of their rated capacity of 58,333 pounds of RDF per hour each or 360.0×10^6 Btu per hour each.
 4. The incinerator boilers shall have a metal name plate affixed in a conspicuous place on the shell showing manufacturer, model number, type waste, rated capacity and certification number.
 5. The permittee must submit to EPA and DER within fifteen (15) days after it becomes available to the County, copies of technical data pertaining to the incinerator boiler design, to the electrostatic precipitator design, and to the fuel mix that can be used to evaluate compliance of the facility with the preceding emission limitations.

6. Grease, scum, grit screenings or sewage sludge shall not be charged into the solid waste to energy facility boilers.

7. Air Pollution Control Equipment

The permittee shall install, continuously operate, and maintain the following air pollution controls to minimize emissions. Controls listed shall be fully operational upon start-up of the proposed equipment.

- a. Each boiler shall be equipped with a particulate emission control device for the control of particulates.
- b. Each boiler shall be equipped with an acid gas control device designed to remove at least 90% of the acid gasses.

8. Stack Monitoring Program

The permittee shall install and operate continuous monitoring devices for oxygen and stack opacity. The monitoring devices shall meet the applicable requirements of Rule 17-2.710, FAC, 40 CFR Part 60, Subparts A and Db, Sections 60.13 and 60.48b respectively, except that emission rates shall be calculated in units consistent with emission limits in this permit. The conversion procedure shall be approved by EPA.

9. Reporting

- a. A copy of the results of the stack tests shall be submitted within forty-five days of testing to the DER Southeast Florida District Office, Palm Beach County and EPA Region IV.
- b. Stack monitoring shall be reported to the DER Southeast District Office and EPA Region IV on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR Part 60, Sections 60.7 and 60.49b.

10. Fuel

The Resource Recovery Facility shall utilize refuse such as garbage and trash (as defined in Chapter 17-7, FAC) but not sludge from sewage treatment plants as its fuel. Use of alternate fuels would necessitate application for a modification to this permit.

11. Addresses for submitting reports are:

- a. EPA - Region IV

Chief, Air Compliance Branch
U.S. Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

b. DER

Chief, Compliance and Ambient Monitoring
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

c. Southeast District Office of DER

District Manager
Department of Environmental Regulation
3301 Gun Club Road
P. O. Box 3858
West Palm Beach, FL 33402

PART II

General Conditions

1. The permittee shall comply with the notification and record-keeping requirements codified at 40 CFR Part 60, Subpart A, § 60.7.
2. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.
3. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide EPA with the following information in writing within five (5) days of such conditions:
 - (a) description of noncomplying emission(s)
 - (b) cause of noncompliance,
 - (c) anticipated time the noncompliance is expected to continue, or, if corrected, the duration of the period of noncompliance,
 - (d) steps taken by the permittee to reduce and eliminate the noncomplying emission, and
 - (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of the aforementioned information does not constitute a waiver of the emission limitations contained within this permit.

4. Any proposed change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that would result in new or increased emissions or ambient air quality impact must be reported to EPA. If appropriate, modifications to the permit may then be made by EPA to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein. Any construction or operation of the source in material variance with the application shall be considered a violation of this permit.
5. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit and EPA of the change in control of ownership within 30 days.

6. The permittee shall allow representatives of the state and local environmental control agency or representatives of the EPA upon the presentation of credentials:
 - (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;
 - (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Clean Air Act;
 - (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;
 - (d) to sample at reasonable times any emissions of pollutants; and
 - (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

7. The conditions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.