INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 13-Jan-2000 03:37pm
From: Michael Hewett TAL HEWETT_M
Dept: Air Resources Management
Tel No: 850/488-0114

Subject: Re: SWA

Scott,
Your response sounds good. 1/12/99 was the deadline for Palm Beach to comply with all the conditions of the original state plan. Once EPA approves the amendments to the state plan, there will be another deadline for the facility to comply with the three emission factors that changed slightly. However, it makes more sense to simply apply those amended emission limits now so that the facility's permit does not have to be amended at some future (and as yet unknown) date.

>>Does this response to their comment read right? Is their deadline to comply
>>with the original plan 1/12/99?
>>
>>
>>SWA Comment
>>17. Page 10, A.6. Stack Emissions: The SWA is unsure of when the emission
>>limitations required by the State Implementation Plan (SIP) are in effect.
In
>>the August 13, 1996 letter from Donald Lockhart (SWA Executive Director) the
>>SWA committed to compliance with the 111d Plan within one year of the EPA
>>approval of the plan. To our knowledge the final revised plan has not been
>>approved by EPA. The SWA requests clarification of the effective date of the
>>SIP and the new emissions limitations. Reference 40 CFR 60.39b(c)(1).
>>
>>revised RESPONSE: The original 111d Plan was approved by USEPA in the
>>November 13, 1997 Federal Register with an effective date of January 12,
1998.
>>The deadline to comply with the original plan was January 12, 1999. The
>>revised 111d Plan was submitted to USEPA on March 31, 1999. The revised plan
>>has not yet been approved USEPA.
>>
>>
>>Scott M. Sheplak, P. E. Administrator
>>Title V Section
>>Department of Environmental Protection
>>850/921-9532
>>scott.sheplak@dep.state.fl.us

file Palm Beach County

INTEROFFICE MEMORANDUM

Sensitivity: COMPANY CONFIDENTIAL

Date: 24-Feb-2000 05:22pm
From: Michael Hewett TAL
HEWETT_M
Dept: Air Resources Management
Tel No: 850/488-0114

Subject: 40 CFR 60, subpart Cb

Richard:

EPA promulgated subpart Cb on December 19, 1995. Then, each state had one year to send an implementation plan to EPA and EPA had 6 months to approve or disapprove each plan. Due to federal litigation, EPA did not publish their approval of Florida's plan until November 13, 1997 (effective date of the approval was January 12, 1998). The final compliance date for all facilities subject to subpart Cb is one year after EPA approval of Florida's plan (January 12, 1999) or no later than five years after EPA promulgation of the subpart (December 19, 2000). Any facility wanting to take longer than one year after EPA approval of the plan, had to submit a compliance schedule with enforceable increments. These schedules were made part of the state plan which was approved by EPA on January 12, 1998. In Florida's approved plan, the compliance date for the Solid Waste Authority is January 12, 1999.

Due to the aforementioned litigation, EPA published amendments to subpart Cb on August 25, 1997. Simply put, the amendments removed municipal waste combustion units with design capacity below 250 tons per day from the applicability of the subpart. Also, three emission limiting standards changed slightly (lead (Pb), hydrogen chloride (HCl) and sulfur dioxide (SO2)). The amendments did not change any of the compliance schedules. Florida adopted the subpart Cb amendments and sent the implementation plan amendments to EPA on March 31, 1999. EPA has not approved the plan amendments yet.

It is true that the amended emission limits are on a separate compliance schedule. You should already be complying with all the emission limits originally adopted by EPA on December 19, 1995. You may choose to continue to meet the old Pb, HCl and SO2 limits until one year after EPA approves Florida's implementation plan amendments. After that year you will have to comply with the amended emission limits that were adopted by EPA on August 25, 1997. However, it makes more sense to begin meeting the amended emission limits now and incorporate the amended emission limits into your permit today so that you do not have to amend your permit one or two years from now.

I hope I have clarified the issue. If you have any other questions, please call me at 850/921-9551.

Michael W. Hewett
Division of Air Resources Management

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
PROPOSED SECTION 111(d) STATE PLAN

LARGE MUNICIPAL WASTE COMBUSTORS
MARCH 31, 1999

Department of
Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Jeb Bush
Governor

David B. Struhs
Secretary

March 31, 1999

Mr. Winston Smith, Director
Air, Pesticides and Toxics Division
United States Environmental
Protection Agency - Region 4
61 Forsyth Street
Atlanta, Georgia 30303-8909

SUBJECT: Air Program - Proposed Revision to State 111(d) Plan

Dear Mr. Smith:

The enclosed revision to Florida's 111(d) State Plan for Large Municipal Waste Combustors is submitted for approval under the Clean Air Act. The proposed revision is the result of our efforts toward adopting and implementing 40 CFR 60, Subpart Cb, Emission Guidelines and Compliance Times for Large Municipal Waste Combustors That Are Constructed on or Before September 20, 1994, as amended on August 25, 1997, in 62 FR 45119. This submittal includes revisions to Rule 62-204.800, F.A.C., effective on May 20, 1998.

I certify that the public notice and hearing requirements of all applicable state and federal regulations have been satisfied. A copy of the certification of publication is included with the submittal.

We respectfully request your approval of this revision to Florida's 111(d) Plan. If you have any questions, please contact Mr. Michael Hewett of my staff by phone at 850\921-9551 or e-mail at hewett_m@dep.state.fl.us.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources Management

HLR/mh
Enclosure

flare

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

Donald L. Lockhart, Executive Director
Solid Waste Authority of Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412-2414

DEP File No. 0990234-002-AC, PSD-FL-108(D)
North County Resource Recovery Facility
Class I and III Landfill Gas Flare Upgrade
Palm Beach County

Enclosed is Final Permit Number 0990234-002-AC, PSD-FL-108(D). This permitting action will supersede the previous permit modification, PSD-FL-108(B), dated February 20, 1996, clerked February 21, 1996. The permit modification is to allow for an upgrade of the blower motors for each landfill gas flare from a permitted flow rate of 900 scfm to a permitted flow rate of 1800 scfm. This permit modification will clarify previous permit conditions and remove a limitation on the sulfur content of the landfill gas, which the applicant can not control. This permit is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5-11-99 to the person(s) listed:

Donald L. Lockhart *
Steve Palmer, DEP, Siting Coordination Office
James Stormer, PBCHD
John Bunyak, NPS

Alex H. Makled, P.E., CDM
Isidore Goldman, P.E., SED
Gregg Worley, EPA

Clerk Stamp

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

(Clerk) 5-11-99 (Date)

FINAL DETERMINATION

Solid Waste Authority of Palm Beach County
North County Resource Recovery Facility
Class I and III Landfill Gas Flare Upgrade
DEP File No. 0990234-002-AC, PSD-FL-108(D)

The Department distributed a public notice package on March 24, 1999 to allow the applicant to upgrade the blower motors for each landfill gas flare from a permitted flow rate of 900 scfm to a permitted flow rate of 1800 scfm at the Applicant's North County Resource Recovery Facility's Class I and III landfills located at 7501 North Jog Road, West Palm Beach, Palm Beach County. This permit modification will clarify previous permit conditions and remove a limitation on the sulfur content of the landfill gas, which the applicant can not control. This permitting action will supersede the previous permit modification, PSD-FL-108(B), dated February 20, 1996, clerked February 21, 1996. The Public Notice of Intent to Issue was published in The Palm Beach Post on April 6, 1999.

COMMENTS/CHANGES

No comments were received by the Department from the public, EPA, the Siting Coordination office, the Department's district office, the local program, or from the applicant.

The Department made no changes to the permit text.

CONCLUSION

The final action of the Department is to issue the final permit with no changes.

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

May 7, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Donald L. Lockhart, Executive Director
Solid Waste Authority of Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412-2414

Re: DEP File No. 0990234-002-AC, PSD-FL-108(D)
North County Resource Recovery Facility
Class I and III Landfill Gas Flare Upgrade

The applicant, Solid Waste Authority of Palm Beach County, applied on September 21, 1998, to the Department for an air construction permit for its Class I and III Landfill Gas Flare Upgrade located at the North County Resource Recovery Facility, 7501 North Jog Road, West Palm Beach, Palm Beach County. This permitting action will supersede the previous permit modification, PSD-FL-108(B), dated February 20, 1996, clerked February 21, 1996. The modification is to upgrade the blower motors for each landfill gas flare (emissions units 003 and 004) from a permitted flow rate of 900 scfm to a permitted flow rate of 1800 scfm. The Department has reviewed the applicant's request. The conditions of permit modification PSD-FL-108(B) are hereby replaced entirely with the following specific conditions.

New Specific Conditions:

1. Hours of Operation: These emissions units may operate continuously, i.e., 8,760 hours/year. [Rule 62-210.200, F.A.C., Definitions-potential to emit (PTE)]

2. Landfill Gas Collection and Control: The owner or operator shall comply with the applicable requirements of 40 CFR 60 Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills. [Rule 62-204.800(7)(b), F.A.C., and 40 CFR 60 Subpart WWW]

3. Landfill Gas Flow Rate: The owner or operator shall not allow more than 1800 scfm of landfill gas to be directed to each flare. The actual flow rate shall be determined for each flare on a monthly average basis by dividing the measured flow by the hours that each flare was operated each month. Compliance with this limitation shall be by measuring landfill gas flows to each flare and recording flows with a totalizing meter. Records of the totalizing meter values shall be recorded in an operators log monthly, or whenever the meter is reset for any purpose, whichever is more frequent. The owner or operator shall maintain a strip chart recorder to record the flow rate to each flare as a backup device in the event that the totalizer meter is not functioning; the strip chart recorder shall also be used in conjunction with an operators log to document the hours each month that each flare was operated. [Rule 62-4.070(3), F.A.C., and request of the applicant]

4. Pursuant to 40 CFR 60.18 General Control Device Requirements: The owner or operator shall comply with the following requirements for flares. [Note: The numbering of the rule has been preserved in the following condition for ease of reference.]

   (c) (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

   (2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) Flares shall be used only with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f).

(4) (iii) Nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, Vmax, as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f) (1) Reference Method 22 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$HT = K \sum_{i=1}^{n} C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C;

K = Constant, 1.740×10^{-7} (1/ppm) (g mole/scm) (MJ/kcal) where the standard temperature for (g mole/scm) is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 (Incorporated by reference as specified in 40 CFR 60.17); and

H_i = Net heat of combustion of sample component i, kcal/ g mole at 25°C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 (incorporated by reference as specified in 40 CFR 60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip

(5) The maximum permitted velocity, Vmax, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

Log10 (Vmax) = (HT+28.8)/31.7

Vmax = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

HT = The net heating value as determined in paragraph (f)(3).

[Rule 62-204.800(7)(b), F.A.C., and 40 CFR 60.18]

5. Reporting Requirements: The owner or operator shall annually determine and report the actual exit velocity of each flare using the methods specified in 40 CFR 60.18. The owner or operator shall annually analyze and report the sulfur content of the landfill gas directed to each flare using ASTM Method D1072-90, or later method. The actual exit velocity and sulfur content shall be reported to the Department as an attachment to the facility's annual operating report. [Rule 62-4.070(3), F.A.C., and requirement of previous PSD FL-108(B), dated February 20, 1996, clerked February 21, 1996]

A copy of this letter shall be filed with the referenced permit and shall become part of the permit. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit modification) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Howard L. Rhodes

Howard L. Rhodes, Director
Division of Air Resources
Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this permit modification was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 5-11-99 to the person(s) listed:

Donald L. Lockhart *
Alex H. Makled, P.E., CDM
Steve Palmer, DEP, Siting Coordination Office
Isidore Goldman, P.E., SED
James Stormer, PBCHD
Gregg Worley, EPA
John Bunyak, NPS

Clerk Stamp

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

(Clerk) (Date) 5-11-99

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF FINAL PERMIT MODIFICATION

In the Matter of an
Application for Permit Modification

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

DEP File No. PSD-FL-108C
Palm Beach County

Enclosed is the Final Prevention of Significant Deterioration Permit Modification Number PSD-FL-108C allowing stack sampling on a five year basis instead of annual testing of emissions of beryllium and fluoride emitted form the Solid Waste Authority of Palm Beach County North County Resource Recovery Facility located at 7501 North Jog Road, West Palm Beach. This permit modification is issued pursuant to Chapter 403, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

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

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL PERMIT MODIFICATION (including the FINAL permit Modification) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 8-14-97 to the person(s) listed:

Mr. M. Bruner, SWA North County RRF *
Mr. B. Beals, EPA
Mr. J. Bunyak, NPS
Mr. D. Dee, Esquire
Mr. H. Oven, PPS
Mr. I. Goldman, SED
Mr. J. Koerner, PBCPHU

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

(Clerk) 8-14-97 (Date)

FINAL DETERMINATION

SOLID WASTE AUTHORITY OF PALM BEACH COUNTY
NORTH COUNTY RESOURCE RECOVERY FACILITY
PERMIT PSD-FL-108C
Palm Beach County

An Intent to Issue a PSD permit modification to the Solid Waste Authority of Palm Beach County (SWA), for the North County Resource Recovery Facility located at 7501 North Jog Road, West Palm Beach, Palm Beach County, was distributed on June 13, 1997. The permit is to allow testing for beryllium and fluoride every five years instead of annually. The reason is that test results typically indicated emissions of these pollutants to be an order of magnitude lower than permitted or below the limits of detectability.

The Public Notice of Intent to Issue Air Construction Permit Modification was published in the Palm Beach Post on June 27, 1997. No comments were submitted during the Public Notice period.

The final action of the Department will be to issue the permit modification as drafted.

FLORIDA

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

August 14, 1997

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Donald Lockhart, Executive Director
Solid Waste Authority of Palm Beach
7501 North Jog Road
West Palm Beach, Florida 33412

Re: Permit Modification No. PSD-FL-108C
Solid Waste Authority of Palm Beach County
North County Regional Resource Facility

Dear Mr. Lockhart:

The Department has reviewed your request on behalf of the Solid Waste Authority of Palm Beach County ("Authority") to conduct stack tests for beryllium and fluoride every five years instead of annually at the three units located at the North County Resource Recovery Facility. The information provided showed emissions were either an order of magnitude below the permit emission limits or were below detection limits (annual emission test reports for the period of 1989-1996). Therefore, the referenced PSD permit is hereby modified as follows:

SPECIFIC CONDITION No. 4

Each unit shall be tested within 180 days of issuance of this permit, and annually thereafter, except for beryllium and fluoride (every five years), 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 Rules 62-204.800 and 62-297.401, F.A.C. ~~Section 17-2.700~~.

A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Sincerely,

Howard L. Rhodes, Director
Division of Air Resources
Management

HLR/th

Flare

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

June 25, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Alex H. Makled, P.E
Camp Dresser & McKee Inc.
1601 Belvedere Road, Suite 211 South
West Palm Beach, Florida 33406

RE: Solid Waste Authority of Palm Beach County
PSD-FL-108(B) Issued February 20, 1996

Dear Mr. Makled:

The Department is in receipt of your letter dated June 5, 1996 requesting clarification and confirmation of the new specific conditions added to the North County Resource Recovery Facility (NCRRF), permit No. PSD-FL-108(B). The Department has reviewed your letter and has the following comments:

Specific Condition No. 2. The Department agrees with your rationale. However as the condition states, the flame temperature shall be at a minimum of 1400 degrees Fahrenheit.

Specific Condition No. 4. The Department agrees with your rationale. The typographical error of 1.33 tons SO_2/year should be corrected. An emission limit of 7.33 tons SO_2/year shall be changed in the Title V permit.

Specific Condition No. 7. The Department will not delete this condition. This condition provides the Department with reasonable assurance that the operation of this flare system will not cause or contribute to a violation of the sulfur dioxide (SO_2) ambient air quality standard and/or that the proposed SO_2 emissions will not exceed the threshold level requiring review pursuant to Prevention of Significant Deterioration (PSD). This condition is a standard condition for recently issued permits for landfill operations.

Specific Condition No.8. See Specific Condition No.7.

The Department agrees with your rationale on Specific Conditions 5, 6, 10, 11, 14, and 15. If you have any questions, please call Ms. Teresa Heron at (904)488-1344.

Sincerely,

A. A. Linero, Administrator
New Source Review Section
Bureau of Air Regulation

cc: Isidore Goldman, SED
Buck Oven., DEP

AAL/th/t

3/29/96
Flare

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re: Palm Beach County Resource Recovery Facility Modification of Conditions of Certification PA 84-20C Palm Beach County, Florida

OGC CASE NO 94-2824.

FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

On July 29, 1986, the Governor and Cabinet, sitting as the Siting Board, issued a final order approving certification for the Palm Beach County Solid Waste Authority's Palm Beach County Resource Recovery Facility. That certification order approved the construction and operation of a 75 MW, municipal waste-fired facility and associated facilities located in Palm Beach County, Florida.

On August 11, 1995, Palm Beach County Solid Waste Authority (SWA) filed a request to amend the conditions of certification pursuant to Section 403.516(1)(b), Florida Statutes (F.S.). The SWA requested that the conditions be modified to approve the installation of a landfill gas collection and flaring system within the site boundary.

Copies of SWA's proposed modification were made available for public review in September, 1995. On September 22, 1995, a Proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. As of September 19, 1995, all parties to the original proceeding had received copies of the intent to modify. The notice specified that a hearing would be held if a party to the original certification hearing objects within 45 days from receipt of the proposed

notice of modification or if a person whose substantial interests will be affected by the proposed modification objects in writing within 30 days after issuance of the public notice. Written objections to the proposed modifications were not received by the Department. Accordingly, in the absence of any timely objection,

IT IS ORDERED:

The proposed changes to the Palm Beach County Solid Waste Authority's Resource Recovery Facility as described in the August 11, October 30, November 3 and December 4, 1995, requests for modification are APPROVED. Pursuant to Section 403.516(1)(b), F.S., the conditions of certification for the Palm Beach County Resource Recovery Facility are **MODIFIED** as follows:

Condition XIV.A. 6. Landfill Gas Collection and Flare System

a. This source shall be allowed to operate continuosly (i.e., 8760 hours per year.

b. The utility flare system shall be designed manufactured, and operated according to U.S. Environmental Protection Agency criteria as specified in 40 CFR 60.18, in order to ensure high efficiency combustion of landfill gas at the 97% level of destruction of total hydrocarbons with a flame temperature of at or above 1400^0 F.

c. There shall be no visible emissions form any individual flare, except for periods not to exceed a total of five minutes during any two consecutive hours at which visible emissions can be up to 20 percent opacity.

d. For inventory purposes, the pollutant emission rates from each of the flare systems are:

EMISSION RATE

Pollutant	Emission Factors	Pounds/Hour	Tons/Year
NOx	0.07 lb/million Btu	1.67	7.33
VOC	36 LB/millions ft^3	1.94	8.51
SO2	0.002 lb/scf	1.67	1.33
PM_{10}	1.69 E-05 lb/scf	0.91	3.99
CO	0.37 lb million Btu	9.10	39.87

e. This source shall meet the applicable requirements of 40 CFR Subpart WWW, NSPS for Municipal Solid Waste Landfills upon adoption by the Florida Department of Environmental Protection; 40 CFR 60.18, General Control Device Requirements; Chapters 62-209 through 297 and 62-4, F.A.C.

f. Compliance with the visible emissions standard shall be determined using EPA Method 22 and shall be for the duration of 2 hours. Such tests shall be conducted within 60 days of completion of construction and initial startup operation, and annually thereafter. The required visible emissions test report shall also contain the gas flow rate from the extraction wells and the flare temperature data.

g. Sulfur content of the input gas to any flare shall not exceed 0.65 pounds per hour.

h. An analysis shall be performed to determine the sulfur content of input gas to the flare, by the American Society for Testing and Materials (ASTM) test method, D 1072-90, prior to any flare startup. Additional tests shall be performed on a yearly basis, and results included as part of the facility's annual operation report.

i. Pursuant to Rule 62-296.320 (2) , F.A.C., objectionable odors caused by these sources are prohibited.

j. Total volumetric flow to any flare in the system shall be limited to 900 scfm. Total volumetric low to the aggregate of the two flares shall be limited to 1800 scfm.

k. Proper devices shall be installed at all wellheads, and at the flare station for 1) gas flow volume and gas pressure measurements, 2) gas composition analysis, 3) gas temperature and flame temperature recording, and flow control, prior to the collection and disposal of the active landfill gases. Such devices shall be properly calibrated and maintained at all times according to manufacturers written instructions. The checking and record keeping requirements specified in 40 CFR 60 Subpart WWW, NSPS for Municipal Solid Waste Landfills.

l. The net heating value of the input gas shall be 200 Btu/scf or greater. Compliance with this parameter shall be determined by methodology specified in paragraph (f) of 40 CFR 60.18. Samples shall be taken, and results reported annually.

m. Actual exit velocity of each flare shall be calculated and reported on an annual basis, using methods specified in paragraph (f) of 40 CFR 60.18.

n. The Southeast District office shall be given at least 15 days written notice prior to compliance testing.

o. Prior to placing the flare in service , the pilot gas for the flare shall be fired by propane at 25 scfh (standard cubic feet per hour). The pilot light is not required when the flame is sustained by the landfill gas alone.

NOTICE OF RIGHTS

Any party to this Notice has the right to seek judicial review of the Order Pursuant to

Section 120.68, Florida Statutes, by the filing of Notice Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date that the Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this 27th day of March, 1996 in Tallahassee, Florida.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk 3/29/96 Date

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

for VIRGINIA B. WETHERELL
SECRETARY
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

CERTIFICATE OF SERVICE

I DO HEREBY certify that a true and correct copy of the foregoing has been sent by U.S. Mail to the following listed persons on April 1, 1996.

Karen Brodeen, Esquire
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2100

Paul R. Golis, Esquire
Watterson Hyland, Baird & Klett
Prosperity Gardens, Suite 112
11380 Prosperity Farms Road
Palm Beach Gardens, FL 33410

Roger G. Saberson, Esquire
Treasure Coast Regional Planning Council
70 SE 4th Ave.
Delray, FL 33483-4514

Bob Elias, Esquire
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Toni M. Leidy, Esquire
South Florida Water Management District
P.O. Box 24680
West Palm Beach, FL 33416-4680

Joel T. Daves III, Esquire
Burdick & Daves
P.O. Box 790
West Palm Beach, FL 33402

Terrell K. Arline, Esquire
325 Clematis Street
Suite C
West Palm Beach, FL 33401

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Charles T. "Chip" Collette
Assistant General Counsel

3900 Commonwealth Blvd.
M.S. 35
Tallahassee, FL 32399-3000

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re: City of Lake Worth Utilities Department Unit S-5 Modification of Conditions of Certification Palm Beach County, Florida, PA 74-05B	)	OGC NO. 96-0860

FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

On May 18, 1976, the Governor and Cabinet, sitting as the Siting Board, issued a final order approving certification for the City of Lake Worth Utilities Department's Tom G. Smith Municipal Power Plant Unit S-5. That certification order approved the construction and operation of a 29.5 MW, oil-fired, steam electric generating facility located in Palm Beach County, Florida.

On September 22, 1993, The City of Lake Worth's utility Department filed a request for a determination of Reasonably Available Control Technology (RACT) for the control of Nitrogen Oxides (NOx) pursuant to Florida Administrative Code Rule 62-96.570. On January 31, 1996, the Department of Environmental Protection determined the NOx RACT for the power plant. Such a determination acts as an automatic modification of the Conditions of Certification pursuant to section 403.511(5)(a), F.S.

IT IS ORDERED:

Pursuant to Section 403.511(5)(a), F.S., the conditions of certification for the City of Lake Worth Utilities Department's Tom G. Smith Municipal Power Plant Unit S-5 are

MODIFIED as follows:

Condition I. 7. The permittee shall comply with the following emission standards for NOx.

a. Emissions of NOx from unit GT-2/S-5 shall not exceed 0.50 lb./million BTU while firing natural gas and 0.90 lb./million Btu while firing fuel oil.

b. Compliance for unit GT-2/S-5 shall be demonstrated by annual emission testing in accordance with EPA Test Method 7E. Emission testing shall be completed by February 28th of each year. Annual compliance testing while firing oil is not required for units that operated on oil for less than 400 hours in the previous federal fiscal year (ending September 30th). The permittee shall submit to the Palm Beach County Public Health Unit, Air Section, and to the Department of Environmental Protection, Southeast District Office, Air Program, written confirmation that testing while firing oil is not required, in lieu of submitting an emission test report for each unit that is not tested each year.

c. All required emission testing shall be performed no later than February 28th of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of return to service.

d. Compliance testing shall be conducted with the emission units operating at the permitted capacity (90 to 100% of the maximum permitted operation rate of the emission units). If an emission's unit is not tested at permitted capacity, the emission unit shall not be operated above 110% of the test load until a new test showing compliance is conducted. Operation of the emissions unit above 110% of the test load is allowed for no more that 15 days for the purpose of conducting additional compliance testing to regain the authority to operate at the permitted capacity. [F.A.C. Rule 62-297.310 (2)]

NOTICE OF RIGHTS

Any party to this Notice has the right to seek judicial review of the Order Pursuant to Section 120.68, Florida Statutes, by the filing of Notice Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department of Environmental Protection in the Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date that the Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this 27th day of March, 1996 in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk 3/29/96 Date

for Kenneth L. Pearce
VIRGINIA B. WETHERELL
SECRETARY
3900 Commonwealth Boulevard
Tallahassee, FL 32399-3000

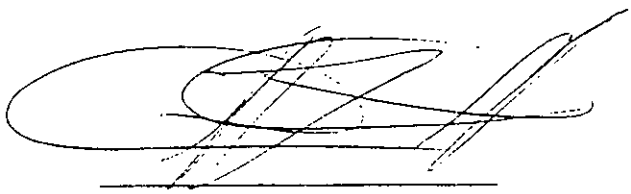
CERTIFICATE OF SERVICE

I hereby certify that a copy of the Final Order Modifying Conditions of Certification of the City of Lake Worth Utilities was sent to the following parties by Unite States mail on the 1st day of April, 1996.

Karen Brodeen, Esquire
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

Bob Elias, Esquire
Florida Public Service Commission
Gerald L. Gunter Building
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Mr. Harvey Wildscheutz, Director
City of Lake Worth Utilities Department
1900 2nd Avenue North
Lake Worth, Florida 33461-4298



Charles T. "Chip" Collette
Assistant General Counsel

State of Florida
Department of Environmental Protection
3900 Commonwealth Blvd., M.S. 35
Tallahassee, Florida 32399-3000
Telephone: (904) 488-9730

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

NOTICE OF PERMIT AMENDMENT

In the matter of an Application for Permit Amendment by:

DEP File No. PSD-FL-108(B)

Mr. David B. Lowe
Solid Waste Authority of
Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412

Enclosed is amended permit No. PSD-FL-108(B) to install a landfill collection system to control emissions from the Class I and Class III landfills at the North County Resource Recovery Facility (NCRRF). The amendment authorizes operation in Palm Beach County, Florida. This permit amendment is issued pursuant to Section 403, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 14 days from the date this Notice is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this **NOTICE OF PERMIT AMENDMENT** and all copies were mailed by certified mail before the close of business on 2-21-96 to the listed persons.

Clerk Stamp
FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Kuni Jotes — Clerk
2-21-96 — Date

Copies furnished to:

J. Kahn, SED
J. Harper, EPA
J. Bunyak, NPS
H. Oven, PPS
A. Makled, P.E.
J. Koerner, PBCHU

FINAL DETERMINATION

North County Resource Recovery Facility (NCRRF)
PSD-FL-108(B)
Solid Waste Authority of Palm Beach County

This permit amendment will add new specific conditions to the above referenced PSD permit applicable to the North County Resource Recovery Facility (NCRRF) of Palm Beach County. The new specific conditions will allow the installation of a landfill collection system and flares to control volatile organic compound (VOC) and odorous emissions from the Class I and Class III landfills at the NCRRF. Emissions from the combustion of landfill gases will not exceed the PSD significance levels for carbon monoxide, sulfur dioxide, and nitrogen oxides.

The permit amendment was distributed on December 22, 1995. The Notice of Intent to Issue was published by the applicant in The Palm Beach Post on January 19, 1996. Copies of the permit amendment evaluation were available for inspection at the office of the Division of Environmental Science and Engineering, Palm Beach County Public Health Unit and the offices of the Department of Environmental Protection in West Palm Beach and Tallahassee.

Comments were submitted by Alex Makled, Professional Engineer-of-Record, of Camp, Dresser & McKee (CDM) during the public notice period. Mr. Makled requested to change the sulfur content in the input gas from 0.045 to 0.65 lb/hr for the purpose of calculating potential emissions in Specific Condition No. 7., to increase the emission rate of VOC to 97.2 lb/hr and to revise Specific Condition No. 11 to reflect recording of data in a quarterly basis instead of a weekly basis. In addition, they also requested to delete Specific Conditions No. 14 and 17 since the Solid Waste Authority is currently preparing the Title V permit application for their waste to energy facility. The Title V permit application will include the emissions from the landfills gas system flares.

The Department considered their requests and agree to the changes as proposed except for the increase of VOC emissions to 97.2 lb/hr. The proposed LFG collection system will be installed to destroy the quantities of nonmethane organic compounds (NMOCs) by 98% by weight. Specific Condition No. 7 will change the sulfur content of the input gases to 0.65 lb per hour. Specific Condition No. 11 will reflect the recording of data on a quarterly basis instead of a weekly basis. Specific Condition No. 14 and 17 will be deleted. The permit specific conditions will be renumbered accordingly.

The final action of the Department is to issue the permit amendment as noted during the public notice period except for the changes discussed above.

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

February 20, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. David B. Lowe
Solid Waste Authority of
Palm Beach County
7501 North Jog Road
West Palm Beach, Florida 33412

Dear Mr. Lowe:

Re: North County Resource Recovery Facility (NCRRF)
PSD-FL-108(B), Solid Waste Authority of Palm Beach County

The Department received your request of August 11, 1995, and supporting information to install a landfill collection system to control emissions from the Class I and Class III landfills at the North County Resource Recovery Facility (NCRRF). This request will require adding new specific conditions to the above referenced PSD permit. This permit is amended as follows:

NEW SPECIFIC CONDITIONS:

1. This source shall be allowed to operate continuously (i.e., 8760 hours/year).

2. The utility flare system shall be designed, manufactured, and operated according to U.S. Environmental Protection Agency criteria as specified in 40 CFR 60.18, in order to ensure high efficiency combustion of landfill gas at the 98% level of destruction of total hydrocarbons, with a flame temperature of at or above 1400°F.

3. There shall be no visible emissions from any individual flare, except for periods not to exceed a total of five minutes during any two consecutive hours at which visible emissions can be up to 20 percent opacity.

4. For inventory purposes, the pollutant emission rates from each of the flare systems are:

		EMISSION RATE	
Pollutant	Emission Factors	Pounds/Hour	Tons/Year
NO_x	0.07 lb/million Btu	1.67	7.33
VOC	36 lb/million ft^3	1.94	8.51
SO_2	0.002 lb/scf	1.67	1.33
PM_{10}	1.69 E-05 lb/scf	0.91	3.99
CO	0.37 lb/million Btu	9.10	39.87

5. This source shall meet the applicable requirements of 40 CFR Subpart WWW, NSPS for Municipal Solid Waste Landfills upon adoption by the Florida Department of Environmental Protection; 40 CFR 60.18, General Control Device Requirements; Chapters 62-209 through 297 and 62-4, F.A.C.

6. Compliance with the visible emissions standard shall be determined using EPA Method 22 and shall be for the duration of 2 hours. Such tests shall be conducted within 60 days of completion of construction and initial startup operation, and annually thereafter. The required visible emissions test report shall also contain the gas flow rate from the extraction wells and the flare temperature data.

7. Sulfur content of the input gas to any flare shall not exceed 0.65 pounds per hour.

8. An analysis shall be performed to determine the sulfur content of input gas to the flare, by the American Society for Testing and Materials (ASTM) test method, D 1072-90, prior to any flare startup. Additional tests shall be performed on a yearly basis, and results included as part of the facility's annual operating report.

9. Pursuant to Rule 62-296.320(2), F.A.C., Objectionable Odors caused by these sources are prohibited.

10. Total volumetric flow to any flare in the system shall be limited to 900 scfm. Total volumetric flow to the aggregate of the two flares shall be limited to 1800 scfm.

11. Proper devices shall be installed at all wellheads, and at the flare station for 1) gas flow volume and gas pressure measurements, 2) gas composition analysis, 3) gas temperature and flame temperature recording, and 4) flow control, prior to the collection and disposal of the active landfill gases. Such devices shall be properly calibrated and maintained at all times, according to manufacturers' written instructions. The checking and recording of the gas flow, temperature, and pressure, shall be performed on a quarterly basis for all wells and on a monthly basis for the flare station.

The permittee shall keep a hard copy of the gas extraction monitoring and analysis data, as well as instrumentation history records, on site at all times. The data shall be summarized and included as part of the facility's annual operating report. These sources shall comply with recording and recordkeeping requirements specified in 40 CFR 60 Subpart WWW, NSPS for Municipal Solid Waste Landfills.

12. The net heating value of the input gas shall be 200 Btu/scf or greater. Compliance with this parameter shall be determined by methodology specified in paragraph f of 40 CFR 60.18. Samples shall be taken, and results reported annually.

13. Actual exit velocity of each flare shall be calculated and reported on an annual basis, using methods specified in paragraph f of 40 CFR 60.18.

14. The Southeast District office shall be given at least 15 days written notice prior to compliance testing.

15. Prior to placing the flare in service, the pilot gas for the flare shall be fired by propane at 25 scfh (standard cubic feet per hour). The pilot light is not required when the flame is sustained by the landfill gas alone.

A copy of this letter shall be filed with the PSD-FL-108, and shall become a part of the permit.

Sincerely,

Howard L. Rhodes
Director
Division of Air Resources Management

HLR/th/t

cc: J. Kahn, SED
J. Bunyak, NPS
A. Makled, P.E.
J. Harper, EPA
H. Oven, PPS
J. Koerner, PBCHU

Attachments available upon request:

Application to construct/modify the NCRRF facility submitted on August 11, 1995.

Additional correspondence submitted on October 30, November 3 and December 4, 1995.

August 13, 1996

YOUR PARTNER FOR
SOLID WASTE SOLUTIONS

Michael Hewett
Florida Department of Environmental Protection
Division of Air Resources Management
Policy Analysis and Program Management
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Solid Waste Authority North County Resource Recovery Facility
Power Plant Siting Certification # PA 84-20
PSD Permit # PSD-FL-108-A
40CFR60, Subpart Cb, Emission Guidelines for
Municipal Waste Combustors, 111 d Plan.

Dear Mr. Hewett,

The Solid Waste Authority, in accordance with 40 CFR 60 Subpart Cb, hereby submits the following information on how the Authority will achieve compliance with the new guidelines.

The North County Resource Recovery Facility (NCRRF) is a Refuse Derived Fuel (RDF) plant, and as such the boilers do not burn municipal solid waste (MSW) but a fuel processed from MSW. This system can result in a reduction in emissions through the removal of potentially polluting materials from the MSW prior to combustion. The boilers are also equipped with Air Pollution Control (APC) equipment consisting of Dry Scrubbers and Electrostatic Precipitators. The NCRRF current operates under Power Plant Siting Certification # PA 84-20 and PSD permit # PSD-FL-108-A. The Authority has submitted an application for a Title V permit, and is currently awaiting a response from the Department.

We have reviewed the current and past performance of the NCRRF in relation to the new emission guidelines and have determined that the facility is in substantial compliance in all applicable areas. The only pollutant of concern is nitrogen oxides (NOx). Stack tests and CEM data indicate that while the NCRRF NOx emissions are in compliance, the Authority may wish to consider some form of operational practices or controls to provide an additional margin of safety for NOx compliance. The Authority is currently evaluating options for reducing NOx emissions and may make a decision in the near future.

7501 North Jog Road, West Palm Beach, Florida 33412 (407) 640-4000 FAX 683-4067

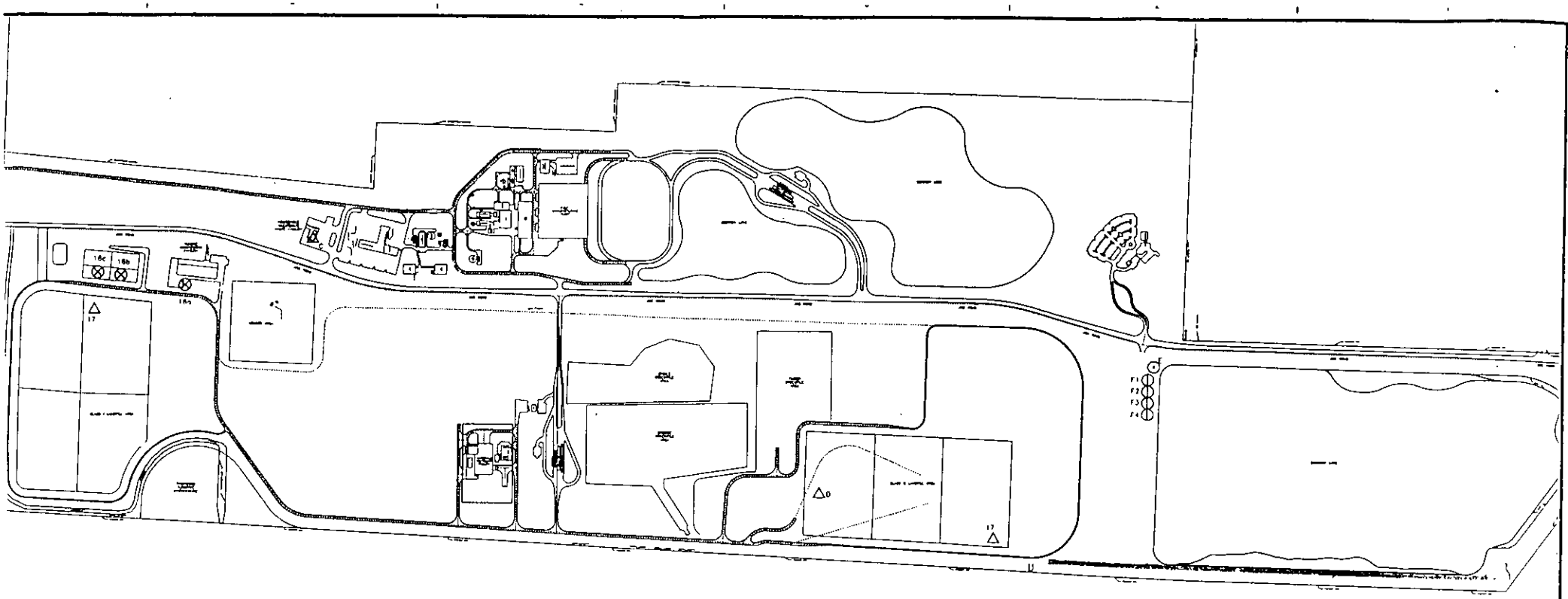
Given the fact that the facility has been, and is currently in compliance with the new emission guidelines the Solid Waste Authority intends to be in compliance within one year of the approval of the state plan by EPA, or within one year of receiving a permit modification for the existing approvals for the facility, if the Department determines that the Authority must modify the permits as a condition of the state plan, and as such will not be submitting a schedule for compliance.

If you have any questions or comments, please contact Marc Bruner or John Booth at (561) 640-4000.

Sincerely,

Donald L. Lockhart
Executive Director

cc. Buck Oven, DEP, Tallahassee
Joseph Kahn, DEP, Southeast District
Bill Arvan, B&W



LIST OF SIGNIFICANT EMISSION SOURCES

1 - BOILER NO. 1
2 - BOILER NO. 2
3 - RDF PROCESS LINE NO. A
4 - RDF PROCESS LINE NO. B
5 - RDF PROCESS LINE NO. C
6 - OBW PROCESS LINE
7 - FLY ASH STORAGE SILO NO. 1
8 - FLY ASH STORAGE SILO NO. 2
9 - LIME STORAGE SILO NO. 1
10 - LIME STORAGE SILO NO. 2
11 - CHEMICAL STORAGE SILO
12 - BOTTOM ASH LOADOUT BUILDING
13 - RDF STORAGE
14 - MATERIALS RECYCLING FACILITY (GLASS PROCESSING)
15 - AUTO SPRAY BOOTH
16a - COMPOSTING BAY AREA 1
16b - COMPOSTING BAY AREA 2
16c - COMPOSTING BAY APEA 3
17 - LANDFILL

GRAPHIC SCALE

LEGEND

⊗ BAGHOUSE
⊙ EMERGENCY DIESEL GENERATOR
⊖ GASOLINE GENERATOR
⊠ HALON
△ VENT / STACK

B	REVISIONS	6/96	TJT	JB	
A	ISSUED FOR PERMIT APPLICATION	9/94	TJT	RI	

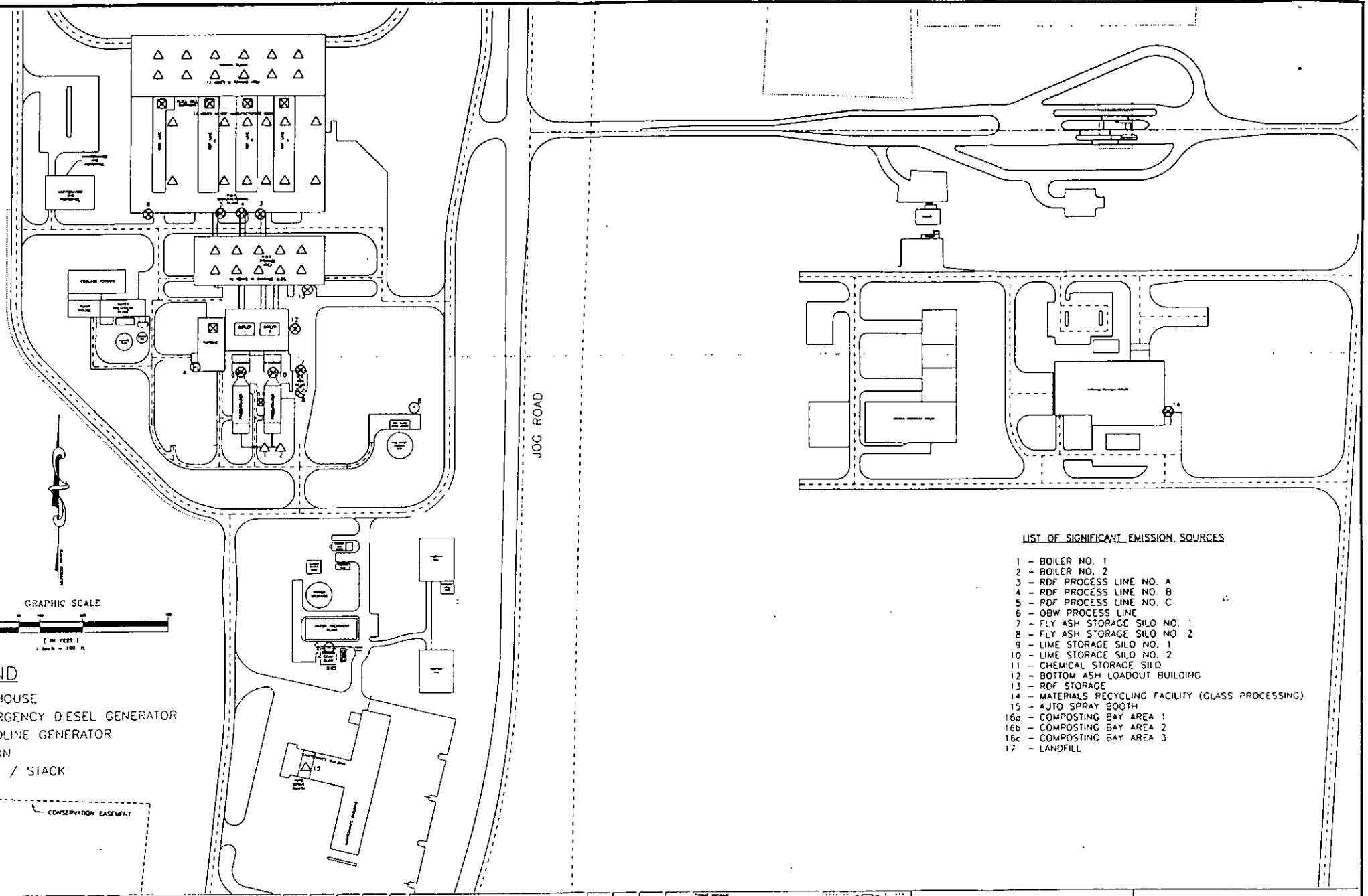
R. LARSON
J. BRITTAIN
T. TIEDEMANN

SWA SOLID WASTE AUTHORITY

NORTH COUNTY REGIONAL RESOURCE RECOVERY FACILITY
PALM BEACH COUNTY, FLORIDA

Facility Layout with Emission Sources

6/3/96
As Noted
07187-016-096
G-2
B



:END

IAGHOUSE
MERGENCY DIESEL GENERATOR
ASOLINE GENERATOR
IALON
ENT / STACK

LIST OF SIGNIFICANT EMISSION SOURCES

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16a - COMPOSTING BAY AREA 1
16b - COMPOSTING BAY AREA 2
16c - COMPOSTING BAY AREA 3
17 - LANDFILL

B	REVISIONS	8/96	TJT	JB	
A	ISSUED FOR PERMIT APPLICATION	7/96	TJT	RI	

R. LARSON
J. BRITTAIN
T. TIEDEMANN

SWA SOLID WASTE AUTHORITY

NORTH COUNTY REGIONAL
RESOURCE RECOVERY FACILITY
PALM BEACH COUNTY, FLORIDA

Facility Layout
with Emission Sources

6/3/96
As Noted
07187-016-096
G-1
B

Title V Permitting - Compliance Plan

General Description

Emission Unit		Pollutant/Parameter			Applicable Requirements		Plan	
ID No.	Description	Item No.	ID Code	Item	Section	Paragraph	Method of Compliance	Frequency
001	Unit 1 Boiler	1	PM	Particulate Matter	40 CFR 60	Appendix A	Stack Test - USEPA Method 5	Annual
					62-297 FAC			
					PSD-FL-108A			
		2	NOx	Nitrogen Oxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 7,7A,7B,7C,7D or 7E	Annual
					62-297 FAC			
					PSD-FL-108A		CEM	Continuously
		3	CO	Carbon Monoxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 10	Annual
					62-297 FAC		CEM	Continuously
					PSD-FL-108A			
		4	H110	Lead	40 CFR 60	Appendix A	Stack Test - USEPA Method 12	Annual
					62-297 FAC			
					PSD-FL-108A			
		5	H114	Mercury	40 CFR 60	Appendix A	Stack Test - USEPA Method 101A	Annual
					62-297 FAC			
					PSD-FL-108A			
		6	H021	Beryllium	40 CFR 60	Appendix A	Stack Test - USEPA Method 104	Annual
					62-297 FAC			
					PSD-FL-108A			
		7	FL	Fluoride	40 CFR 60	Appendix A	Stack Test - USEPA Method 13A or 13B	Annual
					62-297 FAC			
					PSD-FL-108A			
		8	VOC	Volatile Organic Compound	40 CFR 60	Appendix A	Stack Test - USEPA Method 25 or 25A	Annual
					62-297 FAC			
					PSD-FL-108A			
		9	SO_2	Sulfur Dioxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 6, 6C or 6B	Annual
					62-297 FAC			
					PSD-FL-108A		CEM	Continuously
		10	HCl	Hydrogen Cloride	40 CFR 60	Appendix A	Stack Test - USEPA Method 26	Annual
					62-297 FAC			
					PSD-FL-108A			
		11	Diox	Dioxin and Furans	PSD-FL-108A		Stack Test - USEPA Method 23	Annual
			O_2	Oxygen	PSD-FL-108A		CEM	Continuously
				Temp. at Scrubber Exit	PSD-FL-108A		CEM	Continuously
				Steam Production	PSD-FL-108A		CEM	Continuously
				Opacity	PSD-FL-108A	Appendix A	Stack Test - USEPA Method 9	Annual
							CEM	Continuously
				"F" Factors	PSD-FL-108A	Appendix A	Stack Test - USEPA Method 19	Annual

Title V Permitting - Compliance Plan

General Description

Emission Unit		Pollutant/Parameter			Applicable Requirements		Plan	
ID No.	Description	Item No.	ID Code	Item	Section	Paragraph	Method of Compliance	Frequency
002	Unit 2 Boiler	1	PM	Particulate Matter	40 CFR 60	Appendix A	Stack Test - USEPA Method 5	Annual
					62-297 FAC			
					PSD-FL-108A			
		2	NOx	Nitrogen Oxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 7,7A,7B,7C,7D or 7E	Annual
					62-297 FAC			
					PSD-FL-108A		CEM	Continuously
		3	CO	Carbon Monoxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 10	Annual
					62-297 FAC		CEM	Continuously
					PSD-FL-108A			
		4	H110	Lead	40 CFR 60	Appendix A	Stack Test - USEPA Method 12	Annual
					62-297 FAC			
					PSD-FL-108A			
		5	H114	Mercury	40 CFR 60	Appendix A	Stack Test - USEPA Method 101A	Annual
					62-297 FAC			
					PSD-FL-108A			
		6	H021	Beryllium	40 CFR 60	Appendix A	Stack Test - USEPA Method 104	Annual
					62-297 FAC			
					PSD-FL-108A			
		7	FL	Fluoride	40 CFR 60	Appendix A	Stack Test - USEPA Method 13A or 13B	Annual
					62-297 FAC			
					PSD-FL-108A			
		8	VOC	Volatile Organic Compound	40 CFR 60	Appendix A	Stack Test - USEPA Method 25 or 25A	Annual
					62-297 FAC			
					PSD-FL-108A			
		9	SO_2	Sulfur Dioxide	40 CFR 60	Appendix A	Stack Test - USEPA Method 6, 6C or 6B	Annual
					62-297 FAC			
					PSD-FL-108A		CEM	Continuously
		10	HCl	Hydrogen Cloride	40 CFR 60	Appendix A	Stack Test - USEPA Method 26	Annual
					62-297 FAC			
					PSD-FL-108A			
		11	Diox	Dioxin and Furans	PSD-FL-108A		Stack Test - USEPA Method 23	Annual
			O_2	Oxygen	PSD-FL-108A		CEM	Continuously
				Temp. at Scrubber Exit	PSD-FL-108A		CEM	Continuously
				Steam Production	PSD-FL-108A		CEM	Continuously
				Opacity	PSD-FL-108A	Appendix A	Stack Test - USEPA Method 9	Annual
							CEM	Continuously
				"F" Factors	PSD-FL-108A	Appendix A	Stack Test - USEPA Method 19	Annual

Title V Permitting - Compliance Plan

Standards and Status

Emission Unit		Pollutant			Compliance Standards[1]				Compliance	Monitoring/Recording	
ID No.	Description	Item No.	ID Code	Item	Units	Type	Value	Conditions	Frequency	(Y/N)	Comments
001	Unit 1 Boiler	1	PM	Particulate Matter	grains/dscf	max	0.015	@7% O_2	Annually		
		2	NOx	Nitrogen Oxide	lbs/MMbtu	24 hr block avg	0.48		Annually		
		3	CO	Carbon Monoxide	ppmdv	24 hr avg.	200	@7% O_2	Annually		
					ppmdv	1 hr avg.	400	@7% O_2	Annually		
		4	H110	Lead	lbs/MMbtu	max	4.0 x 10(E4)		Annually		
		5	H114	Mercury	lbs/MMbtu	max	2.4 x 10(E4)		Annually		
		6	H021	Beryllium	lbs/MMbtu	max	7.3 x 10(E7)		Annually		
		7	FL	Fluoride	lbs/MMbtu	max	0.0032		Annually		
		8	VOC	Volatile Organic Compound	lbs/MMbtu	max	0.016		Annually		
		9	SO_2	Sulfur Dioxide	ppmdv	24 hr Geometric Mean	30	@7% O_2	Annually		
		10	HCl	Hydrogen Cloride	ppmdv	3 run test avg	25	@7% O_2	Annually		
		11	Diox	Dioxin and Furans	ng/dscm	max	60	@7% O_2	Annually		
002	Unit 2 Boiler	1	PM	Particulate Matter	grains/dscf	max	0.015	@7% O_2	Annually		
		2	NOx	Nitrogen Oxide	lbs/MMbtu	24 hr block avg	0.48		Annually		
		3	CO	Carbon Monoxide	ppmdv	24 hr avg.	200	@7% O_2	Annually		
					ppmdv	1 hr avg.	400	@7% O_2	Annually		
		4	H110	Lead	lbs/MMbtu	max	4.0 x 10(E4)		Annually		
		5	H114	Mercury	lbs/MMbtu	max	2.4 x 10(E4)		Annually		
		6	H021	Beryllium	lbs/MMbtu	max	7.3 x 10(E7)		Annually		
		7	FL	Fluoride	lbs/MMbtu	max	0.0032		Annually		
		8	VOC	Volatile Organic Compound	lbs/MMbtu	max	0.016		Annually		
		9	SO2	Sulfur Dioxide	ppmdv	24 hr Geometric Mean	30	@7% O_2	Annually		
		10	HCl	Hydrogen Cloride	ppmdv	3 run test avg	25	@7% O_2	Annually		
		11	Diox	Dioxin and Furans	ng/dscm	max	60	@7% O_2	Annually		

[1] Except during Start-Up, Shutdown and Malfunction periods of 3 hours maximum per occurrence

Compliance Statement : I, the undersigned, am the responsible official as defined in Chapter 62-213, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Title _____ Date _____

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT[S]

In the matter of an
Application for Permit by:

DER File No. PSD-FL-108A
Palm Beach County

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

/

Enclosed is Permit Modification Number PSD-FL-108A to allow the two (2) existing RDF boilers to operate at their maximum design input rating of 412.5 MMBtu's per hour, at the North County Regional Resource Recovery Facility in Palm Beach County, Florida, issued pursuant to section(s) 403, Florida Statutes.

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

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E., Chief
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400
904-488-1344

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on 1-14-92 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to
§120.52(11), Florida Statutes,
with the designated Department
Clerk, receipt of which is hereby
acknowledged.

(Clerk) 1-14-92 (Date)

Copies furnished to:
J. Harper, EPA
S. Brooks, SE District
C. Shaver NPS
J. Stormer, HRS

Final Determination

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

Modification
Permit No. PSD-FL-108A

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

January 7, 1992

FINAL DETERMINATION

Solid Waste Authority (SWA) of Palm Beach County submitted an application for a permit modification on November 29, 1989. The North County Regional Resource Recovery Facility is currently authorized to process 2,000 tons per day of municipal solid waste with an annual throughput of 624,000 tons. The modifications requested would allow the maximum boiler heat input to increase from 360 MMBtu/hr to 412.5 MMBtu/hr. Modifications to the nitrogen oxide (NO_x) and carbon monoxide (CO) emission rates were also requested.

The Florida Department of Environmental Regulation (FDER) reviewed the application and issued a Preliminary Determination and Technical Evaluation on October 16, 1991. Modifications included raising the maximum boiler heat input rate from 360 to 412.5 MMBtu/hr, raising the NO_x emission rate from 0.32 to 0.48 lbs/MMBtu, and modifying the CO emission rate to conform with EPA's guidelines for Existing Municipal Waste Combustors. The notice of intent to issue was published in the Palm Beach Post on October 20, 1991.

The U.S. Environmental Protection Agency (EPA) submitted a letter commenting on the Preliminary Determination on November 20, 1991. The first comment made by the EPA was to modify the permit conditions for hydrogen chloride and sulfur dioxide to read the same as the federal guidelines. As a result, the words, "whichever is less stringent" were added to specific conditions 3.i and 3.j of the permit. In accordance with federal guidelines, the EPA commented that the opacity from each unit should not exceed 10%, for a 6-minute average. Specific condition 3.k was modified accordingly. The EPA also requested that the Department include an emission standard for dioxins and furans. This standard was added to the permit as specific condition 3.l and limits the emissions to 60 nanograms per standard cubic meter, corrected to 7% O_2. In accordance with this emission limitation, Method 23 has been added as specific condition 4.q.

On October 22, 1991, the Department's Southeast District (SED) office submitted a letter commenting on the Preliminary Determination. It was suggested that either an expiration date be specified or that specific condition 21 be modified to reflect some other basis for the operation permit application deadline. A review of the Preliminary Determination indicated that conditions 20 and 21 were inadvertently included in the permit (these conditions are not included for permits being reviewed under the Power Plant Siting Process). Specific conditions 20 and 21 have been removed from the permit. The SED's letter also expressed concern over the apparent increase in the mercury and VOC emission limits. After reviewing the permit history of this facility, the Department concluded that the emission limits in

the original PSD construction permit (1986) were extrapolated from the emission limits in the Power Plant Siting Certification (PPSC) in such a way as to allow higher total emissions of mercury and VOCs from the facility. The PSD permit modification (1991) used the emission limits from the PSD construction permit (1986) and not the PPSC. Compliance testing conducted for the North County Resource Recovery Facility demonstrated that neither unit tested higher than 21% of the stricter limit for mercury or 5% of the stricter limit for VOCs. As this is the case, the mercury emission limit in specific condition 3.e was changed from 0.00036 lbs/MMBtu to 0.00024 lbs/MMBtu and the VOC emission limit in specific condition 3.h was changed from 0.023 lbs/MMBtu to 0.016 lbs/MMBtu.

On November 4, 1991, the Department received a comment letter regarding the Preliminary Determination from the Palm Beach County Health Unit (PBCHU). In this letter, the PBCHU recommended including a dioxin/furan emission limit according to the federal guidelines. Also, the PBCHU concurred with the SED's comments regarding the mercury and VOC emission limits. All comments made by the PBCHU were previously addressed.

The final action of the Department will be to issue the modified permit (PSD-FL-108A) as proposed in the Technical Evaluation and Preliminary Determination except for the changes discussed above.

Florida Department of Environmental Regulation

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

Lawton Chiles, Governor

Carol M. Browner, Secretary

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

Permit Number: PSD-FL-108A
Expiration Date: None
County: Palm Beach
Latitude/Longitude: 26°46'00"N
80°08'45"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 perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

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.

This permit shall supercede the original PSD permit (PSD-FL-108) issued to the North County Regional Resource Recovery Facility.

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

ng of 198,000 ACFM and is designed to operate with three of fields in service.

gas emissions (opacity, O_2, SO_2, CO and NO_x) from each unit monitored with an Enviroplan CEM system.

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

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

chments are listed below:

Solid Waste Authority application for modification received November 29, 1989.
Solid Waste Authority letter dated October 5, 1990.
HRS letter dated October 8, 1990.
Solid Waste Authority letter dated December 3, 1990.
HRS letter dated May 24, 1991.
Solid Waste Authority letter dated July 17, 1991.
Southeast District Office letter dated October 22, 1991.
HRS letter dated October 29,1991.
Solid Waste Authority letter dated November 5, 1991.
Solid Waste Authority letter dated November 6, 1991
EPA letter dated November 20, 1991.

GENERAL CONDITIONS:

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

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

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

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

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

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

GENERAL CONDITIONS:

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

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

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

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

c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

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

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

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

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

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

GENERAL CONDITIONS:

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

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

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

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

13. This permit also constitutes:

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

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 records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for

GENERAL CONDITIONS:

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 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% O_2.

b. NO_X: 0.48 lbs/MMBtu. (24-hour block average)

c. Carbon Monoxide: 400 ppmvd corrected to 7% O_2 (1-hour average); 200 ppmvd corrected to 7% O_2 (24-hour average).

SPECIFIC CONDITIONS:

d. Lead: 4.0 x 10-4 lbs/MMBtu.

e. Mercury: 2.4 x 10-4 lbs/MMBtu.

f. Beryllium 7.3 x 10-7 lbs/MMBtu.

g. Fluoride: 0.0032 lbs/MMBtu.

h. VOC: 0.016 lbs/MMBtu.

i. SO_2: 70% removal or 30 ppmvd at 7% O_2, whichever is less stringent (24-hour geometric mean).

j. Hydrogen Chloride: 90% removal or 25 ppmdv at 7% O_2, whichever is less stringent (3 run test average).

k. The opacity from each unit shall not exceed 10%, 6 minute average. CEM readings when the process is not operating shall be excluded from averaging calculations.

l. Dioxins/Furans: Emissions of total (tetra thru octa-chlorinated dibenzo-p dioxins and dibenzofurans) shall not exceed 60 ng/dscm at 7% O_2.

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.

c. Method 3 or 3A for gas analysis when needed for calculation of molecular weight or percent CO_2.

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.

SPECIFIC CONDITIONS:

g. Method 6, 6C or 8 for concentration of SO_2, 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.

q. Method 23 for determination of dioxin/furan concentration or other Methods approved by DER and EPA.

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 300°F (4 hour block average). Appropriate instrumentation shall be installed, if not already installed, within 180 days of

SPECIFIC CONDITIONS:

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 SO_2, NO_x, CO, oxygen, and opacity. All averaging periods for emissions monitors shall be based on a midnight to midnight averaging period. 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. The

SPECIFIC CONDITIONS:

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 three years from the date of recording.

PERMITTEE:
Solid Waste Authority of Palm Beach County

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

Issued this 13th day
of January, 1992

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 Krefeld four field electrostatic precipitator. Flue gas emissions (opacity, O_2, SO_2, 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 (24 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 ppmdv at 12% CO_2 (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 ppmdv at 12% CO_2 be adjusted from 3 hours to 1 hour. In addition, the applicant has also proposed that a carbon monoxide limitation of 200 ppmdv at 12% CO_2 be established with a 24 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 ppmdv at 7% O_2 on a 24 hour average basis. As this is the case, this standard along with the short term standard proposed by the applicant (400 ppmdv at 7% O_2 on a 1 hour average basis) is judged to represent BACT for the facility.

Other Requests

The applicant has requested that the SO_2 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 ppmdv at 7% O_2 on a 24 hour geometric mean basis should be used. In addition, the EPA guideline of 90% removal or 25 ppmdv at 7% O_2 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.

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In Re:	)
	)
Palm Beach County	)
Palm Beach County Resource Recovery Facility	)
Power Plant Certification	)
Modification Request	)
No. PA 85-21	)
Palm Beach County, Florida	)
	)

FINAL ORDER
MODIFYING CONDITIONS OF CERTIFICATION

The Department of Environmental Regulation after notice and opportunity for hearing modifies the Conditions of Certification for the Palm Beach County Resource Recovery Facility pursuant to the Florida Electrical Power Plant Siting Act Section 403.516(1) Florida Statutes, and Condition XII, Modification of Conditions, which delegates authority to modify conditions to the Department.

1. On November 29, 1989, the Solid Waste Authority of Palm Beach County submitted a petition to the Department requesting modification of the Conditions of Certification and reissuance of the Prevention of Significant Deterioration Permit.

2. On May 2, 1991, the Department released a Preliminary Determination and proposed PSD permit modification for the North County Regional Resource Recovery Facility.

3. On August 2, 1991, Notice of Intent to Issue proposed Modification of Power Plant Certification was published in the Florida Administrative Weekly. Copies of the Notice were served on all parties. No hearing as been requested, therefore the Department adopts the proposed agency action as final.

4. On October 16, 1991, the Department released a revised Preliminary Determination and proposed PSD permit modification for the North County Resource Recovery Facility.

5. After review of the petition and supporting information, the Department grants relief to the Solid Waste Authority of Palm Beach County by making the following amendments to the Conditions of Certification:

XIV.A.1. Emission Limitations upon operation of Units 1 and 2.

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

(2) SO_2: ~~0.32 lbs/MBtu average heat input not to exceed 0.62 lbs/MBtu heat input one hour average~~ 70% removal or 30 ppmvd at 7% O_2, whichever is less stringent (24-hour geometric mean). ~~Compliance with SO_2 emission limits shall be determined by annual stack tests. The average of three or more stack tests runs shall determine the average value.~~

(3) Nitrogen Oxides: ~~0.32~~ 0.48 lbs/MBtu heat input.

(4) Carbon Monoxide: 400 ppmvd corrected to 7% O_2 (1-hour average); 200 ppm ppmvd corrected to 7% O_2 (24-hour average)

(8) Visible Emmissions: ~~opacity shall be no greater than 35% except that visible emissions with no more than 20% opacity may be allowed for up to three consecutive minutes in any one hour except during start up or upsets when the provisions of 17 2.250, FAC, shall apply. Opacity compliance shall be demonstrated in accordance with Florida Administrative Code Rule 17 2.700(6)(a)9., DER Method 9~~ The opacity from each unit shall not exceed 10%, six minute average. CEM readings shall be excluded from averaging calculations when the process is not operating.

(12) ~~Sulfuric Acid Mist: 0.2 E 5 lb/Mbtu heat input.~~ Hydrogen Chloride: 90% removal or 25 ppmvd at 7% O_2, whichever is less stringent (24 hour average).

(13) Dioxins/Furans: Emissions of Total dioxins/furans (Tetra thru Octa-chlorinated dibenzo-p dioxins and dibenzofurans shall not exceed 60 ng/dscm at 7% O_2.

XIV.A.1.c. The maximum boiler heat input shall not exceed 412.5 MBtu per hour. This corresponds to a name plate rating of 324,000 pounds per hour steam capacity.

XIV.A.1.e. Compliance with the limitations for particulates, sulfur oxides, nitrogen oxides, carbon monoxide, fluoride, ~~sulfuric--acid-mist~~ HCL, VOC, mercury, dioxins and furans, and lead shall be determined in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 1, 2, 3, and 40 CFR 60, Appendix A, Methods 5, 6 or 6C, 7, 8, (modified with prefilter), 10, 12, 13A or 13B (or modified Method 5 for fluorides), ~~and~~ 18, 19, 23, 26, and 101A or other methods as approved by the DER. The stack test for each unit shall be performed at ±10% of the maximum heat input rate of ~~360~~ 412.5 x 10^6 Btu per hour or the maximum charging rate of ~~58,333~~ 66,840 pounds of MSW per hour. ---

XIV.A.3. Air Monitoring Program

a. The Permittee shall install and operate continuously monitoring devices for flue gas oxygen, SO_2, NO_x, CO, and opacity. ----

Any party to the this Order has a right to seek judicial review of this Order pursuant to Section 120.67, Florida Statutes by the Filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, and by filing a copy of the Notice of Appeal accompanied by the Applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Order is filed with the clerk of the Department.

DONE AND ORDERED this 13th day of January, 1992, in Tallahassee, Florida.

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

Clerk

1-13-92
Date

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Carol M. Browner
Secretary

Certificate of Service

I hereby certify that a copy of the Final Order Modifying Conditions of Certification of the Palm Beach County Resource Recovery Facility, Power Plant Site Certification was sent to the following parties by United States mail on January 14, 1992.

Elizabeth D. Ross, Esquire
South Florida Water
Management District
Post Office Box 24680
West Palm Beach, Florida
33416-4680

Peter J. Henn
Greenberg, Traurig, et al
500 East Broward Blvd.
Ft. Lauderdale, FL 33394

Alfred J. Malefatto
Shapiro & Bregman
Phillips Point
777 South Flagler Drive
Suite 310 East
West Palm Beach, FL 33401

Herbert C. Gibson, Esq.
Gibson and Adams
303 First Street, Suite 400
Post Office Box 1629
West Palm Beach, FL 33402

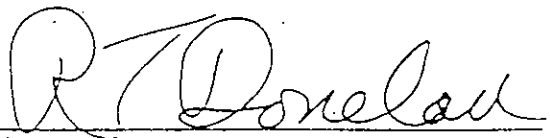
Joel T. Daves, III, Esq.
Burdick & Daves
Post Office Box 790
West Palm Beach, FL 33402

Roger G. Saberson, Esq.
110 East Atlantic Avenue
Delray Beach, FL 33444

Terrell K. Arline, Esq.
325 Clematis Street
Suite C
West Palm Beach, FL 33401

Kathryn Funchess, Esquire
Department of Community
Affairs
2740 Center View Drive
Tallahassee, FL 32399-2100

Michael Palecki, Esquire
Florida Public Service
Commission
Fletcher Building
101 East Gaines Street
Tallahassee, FL 32399-0863



Richard T. Donelan
Assistant General Counsel

State of Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone: (904) 488-9730

STATE OF FLORIDA

Department of Administration

Division of Administrative Hearings

Oakland Building, 2009 Apalachee Parkway

TALLAHASSEE

32301

Sharyn L. Smith
Director

Bob Graham
Governor

Nevin G. Smith
Secretary of Administration

May 21,1986

Honorable Bob Graham
Governor
State of Florida
The Capitol
Tallahassee, Florida 32301

Honorable Doyle Conner
Commissioner of Agriculture
The Capitol
Tallahassee, Florida 32301

Honorable Bill Gunter
Insurance Commissioner and
Treasurer
The Capitol
Tallahassee, Florida 32301

Honorable Gerald Lewis
Comptroller
The Capitol
Tallahassee, Florida 32301

Honorable Jim Smith
Attorney General
The Capitol
Tallahassee, Florida 32301

Honorable Ralph Turlington
Commissioner of Education
The Capitol
Tallahassee, Florida 32301

Honorable George Firestone
Secretary of State
The Capitol
Tallahassee, Florida 32301

Re: Palm Beach County Resource Recovery Project,
Power Plant Siting Certification Application
PA 84-20 (Case No. 85-2032).

Dear Members of Siting Board:

Enclosed is my Recommended Order in the referenced proceedings. Under separate cover, I am forwarding the Exhibits and transcript of the certification hearing to Mr. Hamilton Oven of the Department of Environmental Regulation for transmittal to you.

Please furnish the Division of Administrative Hearings with a copy of the Final Order rendered in this proceeding so that our files will be complete.

Very truly yours,

WILLIAM J. KENDRICK
Hearing Officer

/cc
Enclosure
xc: Steve Tribble
Victoria Tschinkel
Glenn Robertson, Jr.
C. Lawrence Keesey, Esq.
Terrell K. Arline, Esq.
Julia D. Cobb, Esq.
Elizabeth D.Ross, Esq.
Joel T. Daves, Esq.
Herbert C. Gibson, Esq.
Roger G. Saberson, Esq.

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

PALM BEACH COUNTY RESOURCE RECOVERY PROJECT, POWER PLANT SITING CERTIFICATION APPLICATION PA 84-20	)	Case No. 85-2032 (Certification Hearing)

RECOMMENDED ORDER

Pursuant to notice, the Division of Administrative Hearings, by its duly designated Hearing Officer, William J. Kendrick, held a public hearing in the above styled case on March 17-21, 1986, in West Palm Beach, Florida.

APPEARANCES

For Palm Beach County Solid Waste Authority:	Herbert C. Gibson, Esq. Thela J. White, Esq. Kathy Loggins, Esq. Gibson and Adams 303 First Street, Suite 400 Post Office Box 1629 West Palm Beach, Florida 33402
For the Department of Environmental Regulation:	Julia D.Cobb, Esq. Karen A. Brodeen,Esq. Department of Environmental Regulation 2600 Blair Stone Road Tallahassee, Florida 32301
For the Department of Community Affairs:	C. Lawrence Keesey, Esq. Department of Community Affairs 2571 Executive Center Circle, East Tallahassee, Florida 32301
For the South Florida Water Management District:	Elizabeth D. Ross, Esq. Irene K. Quincey, Esq. South Florida Water Management District 3301 Gun Club Road West Palm Beach, Florida 33402
For the City of Riviera Beach:	Joel T. Daves, III, Esq. Burdick & Daves Post Office Box 790 West Palm Beach, Florida 33402
For Treasure Coast Regional Planning Council:	Roger G. Saberson, Esq. 110 East Atlantic Avenue Delray Beach, Florida 33444

For Anti-Dump Coalition, Inc., Concerned Citizens Against the Dyer Dump, Inc., S.P.O. Homeowners Association, Inc., and the Florida Wildlife Federation:	Terrell K. Arline, Esq. 325 Clematis Street Suite C West Palm Beach, Florida 33401

PRELIMINARY STATEMENT

On June 18, 1985, Palm Beach County Solid Waste Authority (Authority) filed its application with the Department of Environmental Regulation (DER) for power plant site certification for a resource recovery facility and landfill to be located in Palm Beach County, Florida. Pursuant to Section 403.508(1) and (2), Florida Statutes, a land use hearing was held before the undersigned Hearing Officer on September 12, 1985, and a Recommended Order was submitted to the Governor and Cabinet, sitting as the Siting Board, on November 7, 1985. By order of February 13, 1986, the Siting Board remanded the case to the Hearing Officer, and on April 25, 1986, the Hearing Officer accepted remand, withdrew his Recommended Order, and submitted an Amended Recommended Order to the Siting Board.

By Order Number 15280, issued October 21, 1985, the Florida Public Service Commission (PSC) concluded that a need existed for the electrical generating capacity to be supplied by the proposed resource recovery facility. This Order constituted the final report of the PSC required by Section 403.507(1)(b), Florida Statutes, and creates a presumption of public need and necessity, pursuant to Section 403.519, Florida Statutes.

At hearing the Authority presented the testimony of 12 witnesses and its Exhibits 1A-O, 2, 3, 3A, 4-8, 9, 9A, 10, 11, 11A, 11B, 12, 13, 13A, 14-22, 23, 23A, 24-26, 27, 27A-G, 28, 28A-G, 28I-O, 29, 29A-C, and 30-44, were received into evidence. Testifying on behalf of the Authority were Roger G. Burns, accepted as an expert in the design of resource recovery facilities, with special emphasis on combustion; Edward J. Kaplin, accepted as an expert in meteorology and air dispersion modeling; Allan H. Smith, accepted as an expert in epidemiology

and health risk assessments; Edward T. Wei, accepted as an expert in toxicology; Stanley G. Timmerman, accepted as an expert in mechanical engineering; David E. Deans, accepted as an expert in environmental engineering, with special emphasis on landfill design; Joseph E. Fluet, Jr., accepted as an expert in geosynthetic design of landfills; Vincent P. Amy, accepted as an expert hydrogeologist, with special emphasis on injection wells, water resource development, ground-water management, ground-water contamination, and aquifer exploration; Olin Braids, accepted as an expert in chemistry, with emphasis on water and soil chemistry; Marc C. Bruner, accepted as an expert in Biology, with emphasis on ecology; Jack Lauber, accepted as an expert in environmental air pollution control and air control technology; and Clair Fancy, licensed professional engineer.

Intervenors, Anti-Dump Coalition, Inc., Concerned Citizens Against the Dyer Dump, Inc., S.P.O. Homeowners Association, Inc., and the Florida Wildlife Federation (Coalition) and the City of Riviera Beach (Riviera Beach), presented the testimony of 10 witnesses. Testifying on behalf of the Intervenors were Aaron J. Teller, accepted as an expert in chemical engineering, with emphasis on diffusion, and environmental control systems; John S. Street; John A. Trefry, Jr.; Ralph Dougherty, accepted as an expert on the toxic effects of clorinated organic compounds on the reproductive systems of animals and humans, and their analysis and control; William T. Cooper, III, accepted as an expert in bio-chemistry and geo-chemistry; Jack Walden; Thomas Curtis, Jr., accepted as an expert in surface and ground water hydrology, and modeling; Nathanael Reed; Dwight Goforth, accepted as an expert in Biology; and Barry Commoner, accepted as an expert in Biology and Biochemistry, with emphasis on dioxins and risk assessment associated with municipal waste incinerators. Intervenors' Exhibits 1-9, 11, 13, and 15 were received into evidence.

DER called Hamilton S. Oven as a witness. DER Exhibits 1-3 were received into evidence. The Department of Community Affairs (DCA), South Florida Water Management District (SFWMD),

and Treasure Coast Planning Council (Treasure Coast) called no witnesses and offered no exhibits. Seven members of the public testified on their own behalf, and Hearing Officer Exhibits 1,2,5,8 and 9 were received into evidence.

The Authority, DER, the Coalition, and Riviera Beach have submitted proposed findings of fact, and they have been reviewed and considered. A ruling has been made on each proposed finding in Appendix III to this Recommended Order.

FINDINGS OF FACT

1. The Palm Beach County Solid Waste Authority (Authority),[1] proposes to construct a resource recovery facility and two landfills to meet the solid waste disposal needs of Palm Beach County. Presently, the Authority operates two landfills, the Lantana landfill and the Dyer Boulevard landfill, which accommodate 88% of the county's municipal solid waste (MSW). The Lantana landfill will reach its capacity by the middle of 1986, and the Dyer Boulevard landfill will reach its capacity by late 1987. The Authority's proposed facility will meet the county's current and expanding need for MSW disposal for more than 20 years.

The Facility

2. The facility proposed by the Authority will initially consist of three refuse derived fuel (RDF) manufacturing lines, one oversize bulky waste and ferrous processing line, two spreader-stoker boilers, one 50 megawatt turbogenerator, a cooling system, and a Class I and Class III landfill for the disposal of ash, non-processables and non-combustibles. To support the facility's operations, a maintenance building, administration building, wastewater treatment plant, potable water storage tank, hazardous waste-

[1] The Authority is an independent authority created by the Florida Legislature under the Palm Beach County Solid Waste Act, Chapter 75-473, as amended, Laws of Florida. In creating the Authority, the legislative intent was to form a county-wide authority for the coordinated management of solid waste processing and disposal.

storage and transfer building,[2] electrical substation, as well as five borrow lakes, will be constructed on site. When completed, the facility will initially dispose of up to 2,000 tons of MSW each day, and generate up to 50 megawatts of electrical power. The ultimate capacity of the facility will be 3,000 tons of MSW each day, and a generating capacity of 75 megawatts.

The Site

3. The site for the proposed RRF and landfills is a 1,320-acre parcel of land located in the unincorporated north-central area of Palm Beach County. The site is bounded on the north by the Beeline Highway (SR 710), on the east by the Florida Turnpike, on the south by a line approximately 610 feet south of 45th Street, on the west by the City of West Palm Beach Water Catchment Area, and on the northwest by a tract of privately owned property. A 73-acre parcel of land located east of the southernmost portion of the site and the Florida Turnpike, paralleling the south side of 45th Street to Haverhill Road, will serve as a corridor for a proposed 138-kilovolt (KV) transmission line from the RRF to Florida Power and Light Company's (FP&L's) existing transmission line corridor. As sited, the facility is accessible to major roadways, proximate to the solid waste centroid of Palm Beach County, and buffered from residential neighborhoods by major thoroughfares.

4. A majority of the proposed site consists of historical wetlands; however, past and present property use have changed the hydrologic regime and topography of the site in many areas. In the northeast portion of the site, there exists an 82 acre borrow lake which supports an active dredge operation. Dredged material is used for construction fill and cover material at the Dyer Boulevard Landfill located east of the Florida Turnpike. Areas to the north of this borrow lake have been scraped below natural elevations, as have areas in the east

[2] Florida law prohibits the land disposal of hazardous wastes. Any hazardous wastes discovered in the waste stream will be collected and shippped off-site for disposal in accordance with federal and Florida regulations.

central portion of the site. Three abandoned shell pit operations, encompassing approximately 171 acres, occupy the southwest corner of the site. Ditches and culverts, installed to drain the wetlands at the interior of the site, have further altered the site's historical characteristics.

5. The proposed site includes within its boundaries one of the largest nesting assemblages of wading birds catalogued within the Treasure Coast, and a roosting area for the endangered Everglades Kite. The areas most heavily utilized by the wading birds on site are the large marshes at the site's western boundary. The Everglades Kite rookery is concentrated in a series of spoil piles encompassing approximately 10 acres of the abandoned shell pit operation at the southwest corner of the site.

6. The Authority proposes to locate the RRF complex in the south-central area of the site, and the landfills along the site's eastern boundary, abutting the Florida Turnpike.[3] The RRF complex will occupy approximately 40 acres of land. The landfills associated with the facility will consist of a 121-acre Class I landfill of double-liner technology with a leachate collection system and a 192-acre Class III landfill of single-liner technology with a collection system. Borrow lakes consisting of approximately 236 acres, dug to a depth of up to 50', will be developed over the life of the landfill to provide fill for construction and cover material for the landfill. The balance of the site's acreage will be utilized for an access road (36 acres), a conservation area (460 acres), and buffer, service roads, and ditches (223 acres). The Authority's Exhibit 12, attached hereto as Appendix I, graphically illustrates the boundaries and proposed development of the site.

7. Underlying the site of the proposed RRF and landfills is the Turnpike Aquifer, the principal source of drinking water in Palm Beach County. This shallow aquifer is recharged by rainfall, and occurs in a band of sandstone several

[3] As sited, the proposed landfills are more than 3,000 feet from the water catchment area.

miles wide in the east-west direction, and extends nearly the entire length of the County in the north-south direction. Ground water flow through the aquifer is east to west at a average velocity of 0.33 feet per day in its shallow zone and 0.47 feet per day in its deeper zone. Accordingly, the water catchment area, located west of the site, lies upgradient of the proposed facility.[4]

8. Abutting the western boundary of the proposed site is the City of West Palm Beach Water Catchment Area. This catchment area, a Class I source of drinking water, consists of 11,000 acres of wetlands comprised of wet prairies and marsh interspersed with upland hammock. There is abundant wildlife in the area, including alligator, white tailed deer, bobcat, panther, and fox.

9. The catchment area drains into a canal (the M canal) which runs eastward into Lake Mangonia and Clear Lake. These lakes provide the principal source of drinking water for the City of West Palm Beach. Lake Mangonia has been designated by the Florida Fish and Game Commission as a fish management area.

Impact on Wetlands and Wildlife

10. As proposed, the site development plan will eliminate approximately 200 acres of wetland. To mitigate the impact of the removal of these wetlands, the Authority proposes to restore 178 acres of previously stressed wetlands and create a minimum of 190 acres of new wetlands on site. Additionally, the Authority has agreed to perform a detailed hydrological study,

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[4] A geologic investigation of the site established that the Pamlico Sand is present from land surface to a depth of about 12 feet. The Pamlico Sand consists predominantly of fine gray and brown sand. The Anastasia Formation underlies the Pamlico and includes the entire shallow aquifer. The Anastasia Formation is composed of gray and tan quartz sand and shells; between about 50 to 100 feet in depth, these deposits generally are cemented to form coquina or sandstone. The bottom of the shallow aquifer in the vicinity of the site lies at a depth of 125 feet. Below 125 feet, the Anastasia Formation contains fine-grained materials in a sandy limestone or sandstone, with reduced permeability. The Anastasia Formation extends to a depth of 250 feet. Beneath the Anastasia Formation are the Tamiami and Hawthorne Formations which have a low permeability and serve to confine the underlying Floridan aquifer. The top of the Floridan aquifer lies at a depth of about 1,000 feet.

install water control structures, and refurbish levees to restore the natural hydroperiods to the Florida Game and Fresh Water Fish Commission's J.W. Corbett Wildlife Management Area. This management area consists of 3,400 acres of sawgrass marsh adjacent to the L-8 Canal which, over the years, has been excessively overdrained. When completed, the Authority's mitigation plan will significantly increase wetlands habitat, wildlife populations, and acquatic productivity.

11. To minimize or eliminate any adverse impact to the wading birds which inhabit the western portion of the site, the authority will actively manage the large marsh area on the western portion of the site as a conservation area. To minimize or eliminate any adverse impact to the Everglades Kite, the Authority has agreed to retain the abandoned shell pit area as a rookery, and to screen the rookery from the proposed facility by planting cypress and other native species. The Authority's proposal provides reasonable assurances that the Everglades Kite and the wading birds will not be adversely impacted by the proposed facility.

Impact on water resources

12. The water management system proposed by the Authority provides reasonable assurances that surface and ground waters will not be adversely impacted by the proposed facility.

13. A double liner leachate collection system will underly the landfill area designed for Class I materials (garbage, putrescible waste, bottom ash, fly ash). The double liner system will consist of two layers of geosynthetic textile materials, including a geotextile filter, a geonet, and a high density polyethlene (HDPE) liner, separated by 12 inches of clean sand. [5] This system will be constructed on a base of 6 inches of recompacted select fill to prevent any puncture of the liner.

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[5] From top to bottom the liner and leachate collection system will consist of: 24 inches of clean sand (which will filter and trap leachate as well as cushion the liner below); a geotextile filter, a geonet, and a geomembrane (liner) fabricated of HDPE; another 12 inches of clean sand; and another geotextile filter, geonet, and HDPE geomembrane.

Underlying the landfill area designated for Class III materials (yard trash, nonputrescible wastes) will be a single liner leachate collection system. Leachate from the collection system and stormwater from active areas within the landfill area will be collected and processed through an equalization basin and deep well injected. Upon completion, the landfills will be capped with an impermeable layer to prevent further generation of leachate by prohibiting rainfall from entering the landfill. This "cap" will be covered in vegetation to stabilize the landfill and prevent erosion.

14. The liners proposed by the Authority are nearly impermeable,[6] and nothing anticipated to be present in the waste deposited on the landfill is reasonably expected to degrade the collection system. The system, as proposed, exceeds DER requirements, and meets, as to the Class I landfill, EPA requirements for hazardous waste landfills.

15. As added protection that the ground waters underlying the site will not be adversely impacted, the Authority will install interceptor wells and monitor wells. The interceptor well system will consist of four wells along the eastern boundary of the proposed site and two wells along the eastern boundary of the Dyer landfill. As sited, the wells will be located down gradient of the proposed and existing landfills.

16. The primary purpose of the interceptor well system is to furnish the process water for the facility[7]; however, since the rate of withdrawal greatly exceeds the rate at which water flows beneath the landfills, the system will also serve to capture any leachate that might escape the collection system.[8]

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[6] The proposed liners have a permeability factor of 10E-12 CM/S (Centimeters per second). To permeate a substance with that permeability factor would require thousands of years.

[7] An average of 2 million gallons per day (mgd), primarily for cooling, and 0.6 mgd for irrigation of the landfills, will be needed for plant operations. A peak draw of 3.2 mdg will be needed for short periods during the dry season.

[8] Approximately 1 mgd is flowing through the aquifer beneath the landfills. Since the interceptor wells will be located downgradient of the proposed landfills, pumping in excess of 2 mgd provides reasonable assurances that the interceptor well system will capture any leachate that might escape the collection system.

An additional benefit of the interceptor well system is that it provides an economically efficient and environmentally sound method of disposing of the pollutants emanating from the Dyer landfill.[9] The wells will not only contain this problem, and prevent its eastward expansion, but will also provide water to serve the non-potable needs of the facility where it can be disposed of in an environmentally sound manner through the facility's deep well injection system.[10]

18. The surface water management plan proposed by the Authority is designed so that the 236 acres comprised of borrow lakes will be self-contained and will not contribute runoff to the conservation area or to off-site discharge. The 41-acre area comprising 45th Street, and the borrow lakes and buffer zones south of 45th Street, will likewise be self-contained. Runoff from the remaining 1,043 acres, containing landfills, the resource recovery facility, roadways, buffer areas and the conservation area, will be directed by swales and drain pipes into an on-site wetlands area. This discharge will be controlled to approximate normal hydroperiods and will provide natural treatment of the runoff prior to its ultimate discharge into the conservation area, or the EPB-10 Canal. Baffles, skimmers, or other appropriate mechanisms will be employed to preclude the discharge of petroleum products into the adjacent wetlands from parking areas or other locations in which such pollutants could be present, and a control structure will be installed at the point of discharge into the EPB-10 Canal to limit and manage the previously uncontrolled surface water discharge into the canal.

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[9] The Dyer landfill is partially unlined. There is evidence that mineralized water is leaching from the unlined portion of the landfill into the Turnpike aquifer.

[10] Two injection wells will be constructed at the facility and will be used to dispose of waste water, including cooling tower blow-down, boiler blow-down, domestic wastewater, landfill leachate, and septage. The wastewater will be injected into the "boulder zone" at an approximate depth of 3,000 feet. To monitor the deep well injection system, two annulus monitor tubes will be installed in each well. These tubes will tap both a permeable zone containing salty water located above the confining sequence that caps the boulder zone, and a shallower zone in the Floridian aquifer. Water samples from the monitor tubes will be periodically collected and analyzed.

The authority has agreed to monitor the quality of stormwater runoff.

19. Built as proposed, and subject to the conditions of certification contained in Appendix II, the proposed facility will not adversely impact water resources, and provides reasonable assurances that the requirements of Chapter 40E-4, F.A.C., relating to water quality, quantity[11] and environmental impact, will be met.

Air quality impact analysis

20. Where, as here, a proposed facility will emit a regulated pollutant at a rate equal to or greater than 100 tons per year (TPY), the facility is subject to New Source Review (NSR) - Prevention of Significant Deterioration (PSD) for all pollutants it will emit in PSD - significant amounts. [12] NSR requires an ambient air quality analysis for any pollutant for which national or state ambient air quality standards have been established (the criteria pollutants) to assure that the emission levels will not cause or contribute to a violation of ambient air quality standards (AAQS) or any applicable maximum allowable increase (a PSD - increment analysis). For non-criteria pollutants subject to NSR review, NSR requires air quality monitoring to assess ambient air quality for those pollutants in the area to be affected. Finally, NSR requires that the proposed facility apply the Best Available Control Technology (BACT) for each pollutant subject to NSR requirements.

21. Pertinent to this proceeding, the pollutants subject to NSR requirements are the criteria pollutants

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[11] The drawdown occasion by the withdrawal of the water necessary to operate the proposed facility will reduce the water level in the Water Catchment Area approximately .02 feet a year, an insignificant amount. The water level interference in the City of Riviera Beach well fields located to the east will be approximately 0.4 feet, an insignificant amount. The nominal water demands of this facility, therefore, will not cause or contribute to any detectable salt water intrusion to water resources.

[12] Table 500-2, Rule 17-2.500, F.A.C., establishes a "significant emission rate" in TPY or pounds per year (PPY) for regulated pollutants. If the anticipated emission rate of a pollutant equals or exceeds the established significant emission rate, the pollutant is subject to the NSR requirements.

particulate matter (PM), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and lead (Pb), and the non-criteria pollutants flouride (F), sulfuric acid mist, beryllium (Be), and mercury (Hg).

22. To predict the impact of the proposed facility on air quality, the Authority used DER and Environmental Protection Agency (EPA) approved air quality dispersion models. [13] These models are used to predict maximum and average ground level concentrations for gaseous and fine particulate emissions that travel as gases, and maximum and average deposition concentrations for heavy particulates which settle out. The concentration values, as modeled, represent conservative worst case scenarios,[14] and establish the point of maximum impact for heavy particulate to be located on the western boundary of the site.

23. The Authority's atmospheric dispersion modeling established that the emission rate of the criteria pollutants pertinent to this proceeding(PM, SO_2, NO_x, CO, and Pb)[15], will not cause or contribute to a violation of primary or secondary AAQS.[16] The modeling further established that the emissions from

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[13] This modeling incorporates elements for emissions, stack height and downwash, block averaging time, dispersion coefficients for plume spread, stability of the atmosphere, thermally buoyant plume dispersion, and climatology.

[14] The model assumes constant production of the emission rates and makes no allowance for downtime or variable hours of operation. Further, the model does not consider rainfall or humidity. If rain were considered it would reduce the maximum ground level concentrations because of its diluting and scrubbing effect on pollutants. Similarly, the inclusion of humidity would serve to decrease the concentration of a pollutant at the point of maximum impact.

[15] DER and EPA designate geographic areas which meet AAQS for a pollutant as "attainment," and those areas which do not meet AAQS as "nonattainment." Palm Beach County is designated as an attainment area for all criteria pollutants except ozone. Under such circumstances the Authority would normally be required to undergo "non-attainment - new source review" for the pollutant ozone. However, where, as here, less than 100 TPY of VOC (the regulated pollutant for ozone) will be emitted, nonattainment review is unnecessary.

[16] Federal and state laws establish primary AAQS to protect the public health and secondary AAQS to protect the public interest in animal and plant life, property, visibility, and atmospheric clarity.

the facility will not cause a violation of the PSD - increment standards established for SO_2 and PM.[17]

24. In addition to meeting AAQS and PSD - increment standards, NSR also requires a further air quality analysis for the non-criteria pollutants which are expected to be emitted in excess of significant emission rates unless their concentrations are predicted to fall below the "de minimus ambient impact" level established by Table 500-3, Rule 17-2.500, F.A.C. In this case, the predicted emission rates for the non-criteria pollutants are below the de minimus levels requiring further analysis.

Best Available Control Technology (BACT)

25. Although the Authority has met the monitoring and air quality analysis requirements of NSR, NSR also requires that the Authority apply the Best Available Control Technology (BACT) for each pollutant the facility will emit in excess of the significant emission rates established by Table 500-2, Rule 17-2.500, F.A.C. BACT is defined by Rule 17-2.100(22), F.A.C. as:

> An emission limitation, including a visible emissions standard, 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 and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems and techniques (including fuel cleaning or treatment or innovative fuel combustion techniques) for control of each such pollutant.

26. DER and the Authority initially differed on what emission limitations constituted BACT for the proposed facility. The Authority initially advocated, as BACT, an emission limitation achievable through design efficiencies and an electrostatic precipitator (ESP). As proposed, the facility would have met AAQS and PSD - increment standards and, with the

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[17] The PSD - increments represent the amount that new sources in an area may increase ambient ground-level concentrations of SO_2 and PM over the concentrations that existed on December 27,1977 (the "baseline date").

exception of SO_2, the emission levels of regulated pollutants would have been below de minimus impact levels which require preconstruction air quality modeling; however, the facility's emissions would still substantially exceed the significant emission rates set forth in Table 500-2, Rule 17-2.500, F.A.C. DER advocated, as BACT, an emission limitation achievable through application of a baghouse to control PM and Pb, and flue gas control equipment (dry scrubbers) to control SO_2, F, sulfuric acid mist, and hydrogen chloride (HCL). [18] Adoption of DER's limitation standards would result in a reduction of PM to .015 GR/DSCF[19] corrected to 12% CO_2; F, HCL and sulfuric acid mist (acid gases) by at least 90% of the maximum inlet concentrations; and, signficantly reduce SO_2 emission rates. At hearing, the Authority agreed to comply with the limitation standards proposed by DER as BACT, and those standards are hereby found to constitute BACT for the proposed facility.

27. Although the Authority agreed to comply with the emission limitations found to be BACT, Intervenors assert that the Authority should be compelled to utilize a baghouse/dry scrubber system instead of its proposed ESP/dry scrubber system. Intervenors' assertion is without merit. The purpose of a BACT determination is to establish emission limits, not to stipulate the type of pollution control equipment that must be used.

Impact on human health and the environment

28. Intervenors assert that the emission of acid mist, heavy metals, VOC, and dioxins from the proposed facility could adversely impact human health, the environment and state waters. While Intervenors' concerns merit consideration, competent

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[18] HCL is not a specified "regulated pollutant;" however, DER may properly regulate the discharge of any pollutant which may result in "air pollution," as defined by Rule 17-2.100(7), F.A.C. DER established that HCL is intensely corrosive and that, due to the higher percentage of plastics in future waste streams, the emission rate of HCL will increase in the future. Accordingly, in rendering its BACT determination, DER's consideration of the reduction in HCL emissions achievable through application of dry scrubbers was founded on a rational basis.

[19] Per standard cubic foot of dry gas.

substantial evidence establishes that at the facility's proposed emission rate there will be no adverse effects on human health, the environment, the ecology of the land and state waters and their wildlife and aquatic life.

29. Under the conditions of certification, this facility must achieve at least 90% removal of the maximum projected inlet concentrations of sulfuric acid mist, F, and HCL (acid gases). Acid gases emitted from the facility's stack will rise with the hot plume, disperse as do the other gaseous emissions, and will not form an acid rain or fog. At its maximum point of concentration, any acid gases will have no adverse impact on the surrounding area[20] or its population.

30. While the proposed facility will emit some metals, the level of their emission and ultimate deposition will not result in any significant adverse impacts. The Authority has selected RDF technology to dispose of the County's MSW. This technology lends itself to good pollution control since the waste stream is progressively "cleaned" to remove most non-combustables before the MSW is incinerated. Under the proposed system, 90-95 percent of the ferrous metals, along with a good portion of the tin, lead, glass, aluminum, chromium and cadmium normally found in MSW will be removed. Removal of these products, prior to combustion, significantly reduces pollutant loading of the atmosphere, provides the Authority with recyclable products for resale, and produces a homogeneous medium grade fuel which allows for optimal control and more complete combustion.

31. While extremely high levels of dioxin may cause skin eruptions, there is currently no direct evidence that dioxin is carcinogenic or toxic to humans. Dioxin emissions from resource recovery facilities can, however, be minimized and

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[20] Intervenors raised concern about the deposition of HCL in the water catchment area. Computer modeling establishes that in a worst case a scenario, assuming all the HCL emitted from the facility acts as a particulate matter as opposed to a gas, the water catchment area would receive a maximum annual deposition of 3.49 lbs/acre. The water in the catchment area has a neutralization capacity of 42-147 times the maximum projected deposition of HCL. Accordingly, the acid emissions from this facility will produce no significant change in water quality.

controlled by maintaining combustion temperatures at 1800 degrees F, with a residence time of at least one second, and through the use of an ESP. The proposed facility will incorporate these techniques to reduce and control dioxin emissions. Under a worst case scenario for the facility, a hypothetical person who never left the area of maximum residential concentration would be subjected to a dioxin dose rate of .0023 pK/Kg/day. This translates to a cancer risk of 0-0.36 cases/million/70 years, or a dosage 40,000 times lower than that which might cause 1% of laboratory animals to display effects, and 100,000 times lower than exposure rates of chemical sprayers who displayed no effects. As proposed, the surrounding area and its population will suffer no adverse impacts from dioxin emissions of this facility. [21]

32. Intervenors sought to establish, by statistical evidence, a correlation between a decrease in sperm count and the increased production of synthetic organic chemicals (VOC's).[22] The relevance, if any, of these observations to the proposed facility is speculative at best. First, the design of this facility permits even and controlled combustion to minimize the emission of VOC's. Second, even if all of the VOC's emitted were dibromochloropropane, the most potent VOC, the exposure level resulting from this facility would be 100,000 times lower than the level which produced any evidence of infertility in animals. The totality of the evidence establishes that there will be no adverse impacts associated with VOC emissions from this facility.

Agency Comments

33. The DER has filed its report as required by Section 403.507(2), Florida Statutes, and has recommended

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[21] Currently there are no concrete standards for dioxin emissions, only guidelines. The New York Department of Health accepts a dose of 2 pg/Kg/day, and the U.S. Center for Disease Control a dose of 1.8 pg/Kg/day. The proposed facility will produce a maximum dose of .004 pg/Kg/day.

[22] The regulated pollutant for ozone is hydrocarbons, measured as VOC. VOC's are an amorphous category of chemicals generally consisting of any chemical compound containing carbon, or carbon and hydrogen in combination with any other element, which have vapor pressure greater than 0.10 mm Hg under standard conditions. Rule 17-2.100 (206), F.A.C.

certification, subject to the conditions of certification attached hereto as Appendix II. The Authority has accepted and agreed to be bound by these conditions of certification.

34. The SFWMD and Treasure Coast do not object to certification, subject to the conditions of certification. The DCA has concluded that the proposed project is compatible with the State Comprehensive plan.

CONCLUSIONS OF LAW

1. The Division of Administrative Hearings has jurisdiction over the parties to, and subject matter of, these proceedings.

2. While recognizing the need and demand for increased power generation facilities, it is the policy of this State to ensure that the location and operation of electrical power plants will produce minimal adverse effects on human health, the environment, the ecology of the land and state waters and their wildlife and aquatic life. Thus the need and demand for electrical power is to be balanced with the broad interests of the public. This balancing requires a consideration of the provision of abundant, low-cost electrical energy, technically sufficient operational safeguards and the need versus environmental impacts resulting from construction and operation of the facility. Section 403.502, Florida Statutes.

3. The evidence adduced at the certification hearing established that the construction and operational safeguards for the proposed facility are technically sufficient for the welfare and protection of the citizens of Florida. If performed in accordance with the recommended conditions of certification attached hereto as Appendix II, the construction, operation and location of the proposed facility may be reasonably expected to produce minimal adverse effects on human health, the environment, the ecology of the land and its wildlife , and the ecology of state waters and their aquatic life. Certification is consistent with the premise of abundant, low-cost electrical energy and is a reasonable balance between those minimal environmental impacts

which will occur and the recognized need for the proposed facility.

RECOMMENDATION

Based on the foregoing Findings of Fact and Conclusions of Law, it is

RECOMMENDED that the Governor and Cabinet, sitting as the Siting Board, enter a Final Order granting certification for the location, construction and operation of the proposed facility, subject to the conditions of certification attached to this Recommended Order as Appendix II.

DONE AND ENTERED this 21st day of May, 1986, at Tallahasee, Florida.

WILLIAM J. KENDRICK
Hearing Officer
Division of Administrative Hearings
Oakland Building
2009 Apalachee Parkway
Tallahassee, Florida 32301
904/488-9675

FILED with the Clerk of the
Division of Administrative
Hearings this 21st day of
May, 1986

Copies Furnished:

Honorable Bob Graham
Governor
The Capitol
Tallahassee, Florida 32301

Honorable George Firestone
Secretary of State
The Capitol
Tallahassee, Florida 32301

Honorable Jim Smith
Attorney General
The Capitol
Tallahassee, Florida 32301

Honorable Gerald A. Lewis
Comptroller
The Capitol
Tallahassee, Florida 32301

Honorable Ralph Turlington
Commissioner of Education
The Capitol
Tallahassee, Florida 32301

Honorable Doyle Connor
Commissioner of Agriculture
The Capitol
Tallahassee, Florida 32301

Honorable Bill Gunter
Insurance Commissioner and
Treasurer
The Capitol
Tallahassee, Florida 32301

Steve Tribble, Clerk
Florida Public Service Commission
101 East Gaines Street
Tallahassee, Florida 32301

Victoria Tschinkel, Secretary
Department of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Glenn W. Robertson Jr.
Secretary to Florida Land
and Water Adjudicatory Commission
Office of the Governor
The Capitol
Tallahassee, Florida 32301

C. Lawrence Keesey,Esq.
Department of Community Affairs
2571 Executive Center Circle, East
Tallahassee, Florida 32301

Julia D.Cobb, Esq.
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

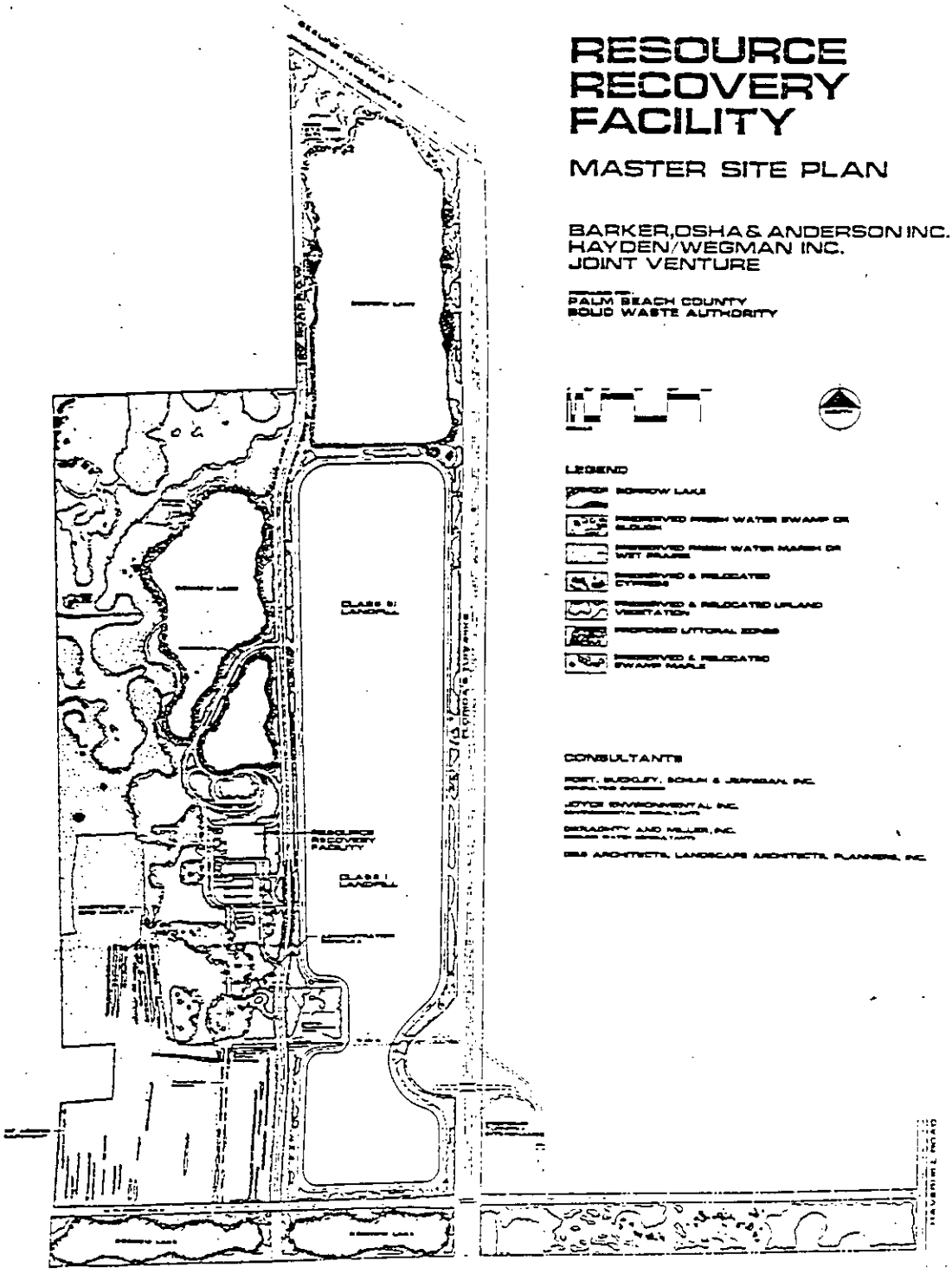
Elizabeth D. Ross, Esq.
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33402

Joel T. Daves III, Esq.
Burdick and Daves
Attorneys for City of Riviera Beach
Post Office Box 790
West Palm Beach, Florida 33402

Herbert C. Gibson, Esq.
303 First Street, Suite 400
Post Office Box 1629
West Palm Beach, Florida 33402

Roger G. Saberson, Esq.
110 East Atlantic Avenue
Delray Beach, Florida 33444

Terrell K. Arline, Esq.
325 Clematis Street
Suite C
West Palm Beach, Florida 33401



RESOURCE RECOVERY FACILITY

MASTER SITE PLAN

BARKER, OSHA & ANDERSON INC.
HAYDEN/WEGMAN INC.
JOINT VENTURE

PALM BEACH COUNTY
SOLID WASTE AUTHORITY

LEGEND

CONSULTANTS

PS EXHIBIT NO. 1:

State of Florida
Department of Environmental Regulation
Palm Beach County Resource Recovery Facility
Case No. PA 84-20
CONDITIONS OF CERTIFICATION

TABLE OF CONTENTS

State of Florida
Palm Beach County
Resource Recovery Facility
Case No. PA 84-20
CONDITIONS OF CERTIFICATION

I. CHANGE IN DISCHARGE

All discharges or emissions authorized herein shall be consistent with the terms and conditions of this certification. The discharge of any regulated pollutant not identified in the application, or more frequent than, or at a level in excess of that authorized herein, shall constitute a violation of the certification. Any anticipated facility expansions beyond the certified initial nameplate capacity of 2,000 TPD, production increases, or process modifications which may result in new, different, or increased discharges of pollutants, change in type of fuel as described in XIV.B., or expansion in steam generating capacity must be reported by submission of a supplemental application pursuant to Chapter 403, Florida Statutes.

II. NON-COMPLIANCE NOTIFICATION

If, for any reason, the Permittee (defined as the Applicant, Palm Beach County Solid Waste Authority or assigns) does not comply with or will be unable to comply with any limitation specified in this certification, the Permittee shall notify the Southeast Florida District Office of the Department of Environmental Regulation (Southeast District Office) and the Palm Beach County Health Department (PBCHD) by telephone within a working day that said noncompliance occurs and shall confirm this in writing within seventy-two (72) hours of becoming aware of such conditions, and shall supply the following information:

A. A description of the discharge and cause of noncompliance; and

B. The period of noncompliance, including exact dates and times;

or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying event.

III. FACILITIES OPERATION

The Permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the Permittee to achieve compliance with the terms and conditions of this certification. Stoppages of landfill operations induced by weather conditions shall be allowed until the weather permits operations to resume. In the event of a malfunction of a resource recovery boiler's pollution control system that unit's furnace emissions must be shifted to the extent feasible to the remaining unit having a properly functioning pollution control system. In the event of a prolonged (thirty (30) days or more) equipment malfunction or shutdown of air pollution control equipment, operation could be permitted to continue to take place under a consent order, only if the Permittee demonstrates that such operation will be in compliance with all applicable ambient air quality standards and PSD increments, solid waste rules, domestic waste rules and industrial waste rules. Additionally, during such malfunction or shutdown, the source shall comply with all other requirements of this certification and all applicable state and federal emission standards not affected by the malfunction or shutdown which is the subject of the consent order. Administrative action will not be initiated in the event of such a malfunction for 25 days following a malfunction unless there is an imminent health threat. However, if at thirty (30) days following a malfunction compliance has not been achieved by the source, an Order for Corrective Action may be immediately imposed upon the Applicant, subject to the provisions of Chapter 120 of the Florida Statutes. Operational stoppages exceeding two hours for air pollution control systems or four hours for other systems or operational malfunctions as noted below exceeding two hours for

air pollution control systems or four hours for other systems and as defined in the operational contingency plans as specified in Condition XVII are to be reported as specified in Condition II. Identified operational malfunctions which do not stop operation but do compromise the integrity of the operation shall be reported to the Southeast District Office as specified in Condition II.

IV. ADVERSE IMPACT

The Permittee shall take all reasonable steps to minimize any adverse impact resulting from noncompliance with any limitation specified in this certification, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

V. RIGHT OF ENTRY

The Permittee shall allow during operational hours the Secretary of the Florida Department of Environmental Regulation and/or authorized representatives, upon the presentation of credentials:

A. To enter upon the Permittee's premises where an effluent source is located or in which records are required to be kept under the terms and conditions of this certification, and

B. To have access during normal business hours (Mon.-Fri., 9:00 A.M. to 5:00 P.M.) to any records required to be kept under the conditions of this certification for examination and copying, and

C. To inspect and test any monitoring equipment or monitoring method required in this certification and to sample any discharge or pollutants, and

D. To assess any damage to the environment or violation of ambient standards.

VI. REVOCATION OR SUSPENSION

This certification may be suspended or revoked for violations of any of its conditions pursuant to Section 403.512, Florida Statutes.

VII. CIVIL AND CRIMINAL LIABILITY

This certification does not relieve the Permittee from civil or criminal penalties for noncompliance with any conditions of this certification, applicable rules or regulations of the Department or Chapter 403, Florida Statutes, or regulations thereunder.

Subject to Section 403.511, Florida Statutes, this certification shall not preclude the institution of any legal action or relieve the Permittee from any responsibilities or penalties established pursuant to any other applicable State Statutes, or regulations.

VIII. PROPERTY RIGHTS

The issuance of this certification does not convey any property rights in either real or personal property, nor any exclusive privileges, nor does it authorize any injury to public or private property or any invasion of personal rights nor any infringement of Federal, State or local laws or regulations.

IX. SEVERABILITY

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

X. DEFINITIONS

The meaning of terms used herein shall be governed by the definitions contained in Chapter 403, Florida Statutes and any regulations adopted pursuant thereto. In the event of any dispute over the meaning of a term in these conditions which is not defined in such statutes or regulations, such dispute shall be resolved by reference to the most relevant definitions contained in any other state or federal statute or regulation. Words or phrases used herein dealing with conditions of the South Florida Water Management District (SFWMD) shall be defined by reference to Chapter 373, Florida Statutes or applicable rules of the SFWMD. Contaminated water shall include leachate and runoff that have been in contact with ash or solid waste.

XI. REVIEW OF SITE CERTIFICATION

The certification shall be final unless revised, revoked or suspended pursuant to law. At least every five years from the date of issuance of certification the Department shall review all monitoring data that has been submitted to it during the preceding five-year period for the purpose of determining the extent of the Permittee's compliance with the conditions of this certification and the environmental impact of this facility. The Department shall submit the results of its review and recommendations to the Permittee. Such review will be repeated at least every five years thereafter.

XII. MODIFICATION OF CONDITIONS

Pursuant to Subsection 403.516(1), F.S., the Board hereby delegates the authority to the Secretary to modify any condition of this certification dealing with sampling, monitoring, reporting, specification of control equipment, boiler capacity, related time schedules, emission limitations (subject to notice and opportunity for hearing), conservation easements, or any special studies

conducted, as necessary to attain the objectives of Chapter 403, Florida Statutes. Requests for modifications of monitoring requirements shall not be unreasonably withheld by the Department.

All other modifications to these conditions shall be made in accordance with Section 403.516, Florida Statutes.

XIII. CONSTRUCTION

The facility shall be constructed, at a minimum, pursuant to the design standards presented in the application and the standards or plans and drawings submitted and signed by an engineer registered in the state of Florida. The Applicant shall present upon request, specific facility plans, as developed, for review by the Southeast District Office, South Florida Water Management District and PBCHD prior to construction pursuant to the portions of the plans then being submitted. Specific Southeast District Office approval of plans will be required based upon a determination of consistency with approved design concepts, regulations and these Conditions prior to initiating construction of the: leachate collection system; air pollution control equipment; wastewater treatment and disposal systems, composting operations, domestic waste and septage handling and treatment systems; stormwater runoff system; landfill closure plans and hazardous, toxic or pathological handling facilities or areas. Review and action by the Southeast District Office or SFWMD on said plans shall be accomplished in no longer than ninety (90) days from the date of a complete submittal of such plans and any action may be subject to review pursuant to Chapter 120, Florida Statutes. Approvals shall not be unreasonably withheld.

A. Control Measures

1. Stormwater Runoff

To control runoff during construction which may reach and thereby pollute Waters of the State, necessary measures shall

be utilized to settle, filter, treat or absorb silt-containing or pollutant-laden stormwater to ensure against spillage or discharge of excavated material that may cause turbidity in excess of 29 Nephelometric Turbidity Units above background in Waters of the State. Control measures may consist of sediment traps, barriers, berms, and vegetation plantings. Exposed or disturbed soil shall be protected and stabilized as soon as possible to minimize silt and sediment laden runoff. The pH of the runoff shall be kept within the range of 6.0 to 8.5. The Permittee shall comply with Florida Administrative Code Chapters 17-3, 17-25 and 40E-4. The Permittee shall complete the forms required by 17-25.09(1) and 40E-4 and submit those forms and the required information to the SFWMD and Southeast District Office for approval no later than 90 days prior to start of construction including design drawings indicating flow drainage plans during facility construction and operation. To prevent the discharge of turbid water (greater than 29 NTU's above background) from the site during construction, a temporary berm with 3H:1V side slopes and an elevation sufficient to contain the 25 year, 3 day storm event shall be constructed around the resource recovery site (except for the landfill areas and Jog Road) prior to commencement of work on the facility.

2. Burning

Open burning in connection with land clearing shall be in accordance with Chapter 17-5, FAC, and Uniform Fire Code Section 33.101 Addendum. No additional permits shall be required, but prior to each act of burning, the Division of Forestry shall be contacted to determine if satsifactory conditions exist for burning. Open burning shall not occur if the Division of Forestry or Palm Beach County Fire and Rescue Department has issued a ban on burning due to fire hazard conditions.

3. Sanitary Wastes

Disposal of sanitary wastes from construction toilet

facilities shall be in accordance with applicable regulations of the appropriate local health agency.

4. Solid Wastes

Solid wastes resulting from construction shall be disposed of in accordance with the applicable regulations of Chapter 17-7, FAC.

5. Noise

Construction noise shall not exceed either local noise ordinance specifications, or those noise standards imposed by zoning.

6. Dust

The Permittee shall employ proper dust-control techniques to minimize unconfined emissions.

7. Transmission Lines

The directly associated transmission lines from the Resource Recovery Facility electric generators to the existing Florida Power and Light Company transmission system shall be cleared, maintained and prepared without the use of herbicides. Construction of a substation on the certified site east of the Turnpike shall not be allowed without a supplemental application and demonstration of compliance with sections 403.508(1) and (2), F.S.

8. Conservation Easement

Before the commencement of any construction herein authorized, the Permittee shall file and have recorded, in the same manner as any other instrument affecting the title to real

property, a conservation easement pursuant to Section 704.06, Florida Statutes, in the office of the Clerk of the Circuit Court, Palm Beach County, for the designated conservation area identified in the mitigation plan, west of Jog Road and the Resource Recovery Facility west to the Water Catchment Area excluding operational areas.

The Permittee shall pay all recording fees. The conservation easement shall be in favor of the Department of Environmental Regulation and shall restrict any activity including dredging and filling of land, cutting, eradicating or pruning of endemic vegetation beyond the scope of the approved mitigation plan indicated in Section 4.2 of the application and Condition XX. A draft conservation easement and a certified survey with a legal description shall be submitted to the Bureau of Permitting in Tallahassee for review and approval before it is filed (by the County) with the Clerk of the Circuit Court, Palm Beach County.

9. Written Notice

Written notice from the Department indicating that Conditions No. XIII.A.8 has been satisfied shall be obtained by the Permittee prior to the beginning of any construction. All mitigation in the shell pit area shall be in accordance with the time schedule outlined in the mitigation plan approved per Condition XX.

10. Time Limitations

If the proposed construction of the resource recovery facility, within the jurisdictional area has not been completed within 5 years of the date of certification, a permit application shall be resubmitted to the Department for evaluation and shall be accompanied by the appropriate fee.

11. Monitoring

The following surface water monitoring program shall be implemented during construction for:

Parameter: Dissolved oxygen, temperature (C^{o}), pH, total and fecal coliform bacteria, salmonella, iron, lead, copper, mercury, cadmium, zinc, silver and turbidity.

Frequency: Quarterly throughout the year except that the samples shall be collected monthly for April, June, August and September. Sampling shall begin at least 30 days prior to initial construction for background levels. All samples shall be taken for a 24 hour period, at 4 hour intervals beginning one hour before sunrise.

Sampling Locations:

At the discharge to the EPB-10 canal.

Analyses:

Water quality analyses should be performed at detection levels commensurate with water quality criteria for Class III waters (F.A.C. rule 17-3.121). Samples shall be collected in accordance with Standard Methods for Examination of Water and Wastewater and analyzed by a DHRS certified laboratory.

If a violation occurs for any sampled parameter, the Permittee shall, after notifying the Department, institute corrective action to abate the violation if it is the result of activities of the Permittee. Corrective action may include further monitoring to determine the extent and degree of violation. Any modifications shall be coordinated with the Southeast District Office. Department approval shall be obtained prior to any action constituting a modification of this permit.

All monitoring reports shall be submitted to the DER Bureau of Permitting, Tallahassee, Southeast District Office, PBCHD and the SFWMD under a cover letter containing the following information: (1) certification number; (2) handling, storage and methods of analysis of the samples; (3) a map indicating the

sampling locations; and (4) a statement by the individual responsible for implementation of the sampling program concerning the authenticity precision, limits of detection and accuracy of the data. Monitoring reports shall also include the following information for each sample that is taken:

(1) time of day samples taken;
(2) depth of water body;
(3) depth of sample;
(4) antecedent weather conditions;
(5) tidal stage and direction of flow; and
(6) wind direction and velocity.
(7) status of flow from site stormwater discharge structure. (flowing or not flowing)

Monitoring reports shall be submitted to the Southeast District, PBCHD and SWFMD within 2 weeks of completion of analysis for each sampling period.

12. Protection of Vegetation

The Permittee shall develop the construction site and shall develop the mitigation areas so as to retain endangered and threatened plants, or replant these plants in another suitable environment. Any endangered or threatened plants should be staked in the field or relocated, as appropriate, prior to commencement of any construction or site preparation activites.

13. Dewatering Operations

There shall be no dewatering operations during construction without approval of SFWMD pursuant to XVI.E. Such approval may be obtained by submitting an application to SFWMD at least 90 days prior to start of dewatering operations. Any

discharge of water from dewatering operations shall not violate water quality standards.

14. Borrow Material

Prior to excavation of any borrow material from the northeastern portion of the site for use on this project, a hydrogeological assessment of the effects of the existing excavation as well as continued excavation in this area shall be provided to the Department and the SFWMD. No further excavation shall take place until the Department and the SFWMD concur in writing that the location, depth, method of mining, etc., of the excavation will not pose a further threat to groundwater quality in the area.

B. Environmental Control Program

An environmental control program shall be established under the supervision of a qualified individual to assure that all construction activities conform to applicable environmental regulations and the applicable conditions of certification.

If harmful effects or irreversible environmental damage not anticipated by the application or the evidence presented at the certification hearing are detected during construction, the Permittee shall notify the Southeast District Office as required by Condition II.

C. Reporting

1. Notice of commencement of construction shall be submitted to the Southeast District Office, PBCHD and SFWMD within 15 days of initiation. Starting three (3) months after construction commences, a quarterly construction status report shall be submitted to the Southeast District Office. The report shall be a short narrative describing the progress of construction.

2. Upon or immediately prior to completion of construction of the resource recovery facility or a phase thereof and upon or immediately prior to completion of all necessary preparation for the operation of each landfill cell, the Southeast District Office, PBCHD and SFWMD will be notified of a date on which a site or facility inspection should be performed in accordance with Condition V, and the inspection shall be performed within fourteen (14) days of the date of notification by Permittee.

XIV. OPERATION

A. Air

The operation of the Resource Recovery Facility shall be in accordance with all applicable provisions of Chapter 17-2, 17-5, and 17-7, Florida Administrative Code. In addition to the foregoing, the Permittee shall comply with the following specific conditions of certification:

1. Emission Limitations upon Operation of Units 1 and 2

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

1. Emission Limitations upon Operation of Units 1 and 2

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

(1) Particulate matter: 0.015 grains per standard cubic foot dry gas corrected to 12% CO_2.

(2) SO_2: 0.32 lbs/MBtu average heat input not to exceed 0.62 lb/MBtu heat input one hour average. Compliance with SO_2 emission limits shall be determined by annual stack tests. The average of three or more stack

test runs shall determine the average value.

(3) Nitrogen Oxides: 0.32 lbs/MBtu heat input

(4) Carbon Monoxide: 400 ppmv corrected to 12% CO_2

(5) Lead: 0.0004 lbs/MBtu heat input

(6) Mercury: 3200 grams/day for the entire facility or when firing sludge or 0.00024 lbs/MBtu whichever is more stringent.

(7) Odor: there shall be no objectionable odor at the site boundary.

(8) Visible emissions: opacity shall be no greater than 15% except that visible emissions with no more than 20% opacity may be allowed for up to three consecutive minutes in any one hour except during start up or upsets when the provisions of 17-2.250, FAC, shall apply. Opacity compliance shall be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6)(a)9., DER Method 9.

(9) Fluoride: 0.0032 lb/MBtu heat input

(10) Beryllium: 7.3xE-7 lb/MBtu heat input

(11) VOC: 0.016 lb/MBtu heat input

(12) Sulfuric Acid Mist: 3.2 E-5 lb/MBtu heat input.

b. The height of the boiler exhaust stack shall not be less than 250 feet above grade.

c. The incinerator boilers shall not be loaded in excess of their rated nameplate capacity of 58,333 pounds of RDF or 360.0 x 10^6 Btu per hour each.

d. 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.

e. Compliance with the limitations for particulates, sulfur oxides, nitrogen oxides, carbon monoxide, fluoride, sulfuric acid mist, VOC and lead shall be determined in accordance

with Florida Administrative Code Rule 17-2.700, DER Methods 1,2, 3, and 40 CFR 60, Appendix A, Methods 5, 7, 8, (modified with prefilter), 10, 12, 13A or 13B (or modified method 5 for flourides), and 18 or other methods as approved by the DER. The stack test for each unit shall be performed at ±10% of the maximum heat input rate of 360.0 x 10^6 Btu per hour or the maximum charging rate of 58,333 pounds of MSW per hour. Compliance with the beryllium emission limitation shall be determined in accordance with 40 CFR 61, Method 103 or 104, Appendix B. Particulate testing shall include one run during representative soot blowing which shall be averaged proportionally to normal daily operations. Visible emission testing shall be conducted simultaneously with soot blowing and non-soot blowing runs.

2. Emission Control Equipment

a. The boiler particulate emission control devices shall be designed and constructed to achieve a maximum emission rate of 0.015 grains per dscf corrected to 12% CO_2. All other particulate control devices shall be designed to meet the provisions of section 17-2.610.

b. The fluoride, HCl and sulfuric acid mist gas controls system shall be designed to remove at least 90% of the maximum projected inlet concentrations.

c. The Permittee must submit to the Department within thirty (30) days after it becomes available, copies of technical data pertaining to the selected emissions control systems. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters. The data shall be processed and approved or denied in accordance with F.S. 120.60.

3. Air Monitoring Program

a. The Permittee shall install and operate continuously monitoring devices for flue gas oxygen and opacity. The

monitoring devices shall meet the applicable requirements of Chapter 17-2, Section 17-2.710, FAC, and 40 CFR 60.45, and 40 CFR 60.13, including certification of each device in accordance with 40 CFR 60, Appendix B, Performance Specifications and 40 CFR 60.7 (a)(5). Re-certification shall be conducted annually from initial certification. Data on monitoring equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location after the economizer or in the air pollution control equipment shall be provided to the Department for approval prior to installation.

b. The Permittee shall provide sampling ports in the air pollution control equipment outlet duct or stack and shall provide access to the sampling ports in accordance with Section 17-2.700, FAC. Drawings of testing facilities including sampling port locations as required by Section 17-2.700 shall be submitted to the Department for approval at least 120 days prior to construction of the sampling ports and stack.

c. The Permittee shall have a sampling test of the emissions performed by a commercial testing firm within 60 days after achieving the maximum rate at which the boilers will be operated but not later than 180 days of the start of operation of the boilers and annually from the date of testing thereafter. Thirty days prior notice of the initial sampling test shall be provided to the Southeast District Office and PBCHD. Fifteen days prior notice shall subsequently be provided for annual sampling tests.

4. Reporting

a. Two copies of the results of the emissions tests for the pollutants listed in XIV.A.1.a. shall be submitted within forty-five days of the last sampling run to the Southeast District Office and PBCHD.

b. Emissions monitoring shall be reported to the Southeast District Office and PBCHD on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR, Part 60,

Subsection 60.7.

c. Notice of anticipated and actual start-up dates of each incinerator boiler shall be submitted to the DER Southeast District Office and PBCHD.

5. Unconfined Emissions

Proper dust control techniques such as water sprays or chemical wetting agents or other containment method shall be used to control visible unconfined (Fugitive) emissions to the outside air no more than 10% opacity as determined by DER Method 9 for unconfined resource recovery processes. Proper techniques shall also be used to control such emissions to prevent them from crossing the property line to no more than three (3) minutes (cumulative) in any fifteen (15) minute period as determined by 40 CFR, 60, Appendix A, Method 22, with observations being made along the property line. Visible emissions shall not include uncombined water vapor or engine exhausts.

B. Fuel

The Resource Recovery Facility shall utilize refuse such as garbage and trash (as defined in Chapter 17-7, FAC) and natural gas recovered from landfills as its fuel. Use of alternate fuels except for distillate fuel oil or natural gas in start-up burners would necessitate modification of these Conditions of Certification. Refuse as fuel shall not include "hazardous waste" as defined in Chapter 17-30, FAC. The alternate fuel shall not contain more than 0.3% sulfur and shall not be used more than required during boiler startup or shutdown.

C. Wastewater Disposal

1. Plans drawings and specifications for leachate collection systems, pumps, lift stations, sewage collection systems, sewage treatment systems, wastewater treatment systems, deep injection

wells, and wastewater collection systems shall be furnished to the Southeast District Office, PBCHD and the SFWMD for approval at least 90 days prior to start of construction for the particular of such component. All items submitted pertaining to the injection wells shall be directly distributed to the Technical Advisory Committee (TAC) for approval.

2. The deep injection well shall be designed and operated in conformance with Chapter 17-28, FAC, and all other applicable rules.

3. The injection well system bid specifications and plans shall be submitted to the Technical Advisory Committee (TAC) at the Southeast Florida District Office for review and approval prior to beginning the bidding process.

4. The surge protection system design calculations and operational features shall be submitted to all members of the department's Technical Advisory Committee (TAC) for approval prior to construction of the deep well injection system.

5. The successful bidder to construct the injection well system shall submit engineering details and drawings of the packer assembly to the TAC for approval prior to construction of the injection well system.

6. If the successful bidder chooses to use corrosion inhibitor(s) with the fresh water in the monitoring annulus surrounding the 8" injection tubing, this choice of inhibitors shall be submitted to the TAC for appoval.

7. The 40" casing for each disposal well shall be set and cemented to the base of the surficial aquifer or to the confining beds below all producing zones used for drinking water, private or public, supplied within the area of review. If the applicant proposes to set and cement the 40" casing above the Hawthorn Formation, he shall provide site specific hydrogeological

information, acceptable to the TAC, confirming that confining strata do in fact exist above the Hawthorn. These data shall be obtained by drilling a pilot hole to the top of the Hawthorn Formation prior to enlarging the hole for the 40" casing.

8. A drawing showing drilling pad dimensions and features (slopes, concrete thickness, storage tank capacities, curb height, etc.) shall be submitted to the TAC for approval prior to the drilling pad construction.

9. The applicant shall specify the disposal location for excess mud, drill cuttings, drilling fluids, etc., for approval at the preconstruction TAC meeting. Property owner's approval will be required in addition to regulatory approval.

10. The question of the timing of the temperature logging for pilot and cased holes shall be discussed at the preconstruction TAC meeting.

11. The daily drilling log shall include at least the following:

a. Information as to the volume (amount) of weighting materials used to control artesian flow.
b. Description of the lithology encountered during drilling.
c. Results of any water quality analyses.
d. Description of any problems or unusual conditions encountered during drilling and steps that have been taken to correct them.
e. Deviation survey results.
f. Any other information required by the consultant.

The report shall run from Friday to Thursday and be mailed to all TAC members on the following Friday.

12. Upon the beginning of the operation and the injection

well system, the applicant will begin a sampling and testing regimen of all individual wastewater streams for the accumulation of data anticipating adverse impacts on the injection zone, formation materials, formation fluids and well construction materials. Sampling and analysis shall also include the investigation of the chemical nature of fluids being injected with respect to hazardous waste characteristics. The parameters to be sampled for and the frequency of sampling shall be approved by the TAC before operation begins. Periodic review by the TAC will determine the need for continued sampling and/or need for additional or revised treatment before injection and/or need for revised estimates of the usable life of the injection system, increased frequency of mechanical integrity testing, etc.

13. Additional detail on proposed monitoring plans should address the following points:

a. Per 17-28.25(1)(d), FAC, within the area of review, the type, number, and location of wells to be used to monitor any potential migration of fluids into or in the direction of USDW's, and pressure in the USDU's; the parameters to be measured and the frequency of monitoring shall be submitted to DER prior to well construction. The applicant should discuss how these requirements are addressed.

b. Per 17-28.25(1)(e), FAC, the background water quality of the injection zone and the monitoring zones shall be determined prior to injection.

14. The applicant must, per 17-28.33(2)(o), FAC, submit a certificate that they have ensured, through a performance bond or other appropriate means, the resources necessary to close, plug or abandon the well.

15. The cementing program shall be designed with the use of ASTM Type II Cement. Other details of the program shall be made available upon request by the TAC or any of its members.

16. It may be assumed that since the project will be generating electric power there will never be the need for any on-site source of emergency power. The contractors design shall address the need or lack thereof for an emergency power source to maintain the continuous operation of the injection well system.

17. The application states that the injection well system will have 100% redundancy. The contractors design shall include standby pumping capability manifolded to both wells to insure continual injection capability.

18. The Contractor shall supply to the Engineer a complete list of spare parts and special tools to be included in the O & M Manual prepared for the Operating Permit Application.

19. The Contractor shall provide or have provided the means for checking grout sample density during casing cementing.

20. Cemented casings shall not be disturbed for 24 hours after the completion of cementing.

21. The TAC chairman shall be notified at least 24 hours prior to performing any mechanical integrity testing.

D. Water Discharges

1. Surface Water

a. Any discharges from the site stormwater system via the emergency overflow structure which result from an event LESS than a ten-year, 24-hour storm (as defined by the U.S. Weather Bureau Technical Paper No. 40, or the DOT drainage manual, or similar documents) shall meet applicable State Water Quality Standards, Chapter 17-3, FAC, the Standards of Chapter 17-25, FAC, and Chapter 40 E.2 and 40 E.4, FAC.

2. Monitoring Surface Water

b. Sampling of water quality in the surface water

management system shall be sampled at stations labeled 1, 2, 3, 4, 5, 6, and 7 as shown on sheets 18, 19, and 20 of 25 of Appendix 10.4 of the application dated December 3, 1985, as stated below:

Location of Stations:

1. discharge culvert at the southwest acreage of the Class I Landfill on sheet 20 of 25
2. overflow control structure at EPB-10 west of the Class I Landfill on sheet 20 of 25
3. box culvert at EPB-10 east of the Class I Landfill on sheet 20 of 25
4. discharge culvert west of the Class III Landfill on sheet 19 of 25
5. discharge culvert northwest of the Class III Landfill on sheet 19 of 25
6. return dredge line from Dyer Landfill discharging into the existing borrow lake due north of the Class III Landfill on sheet 18 of 25
7. the center of the existing dredge lake one foot above the bottom

Monitoring Type and Schedule	Parameters
1. General (Quarterly)	Total Organic Carbon, Dissolved Oxygen, pH, Turbidity, Specific Conductance, Chemical Oxygen Demand, Alkalinity, Total Suspended Solids, Ammonium N, Nitrate-N, Total Kjeldahl Nitrogen, Oil and Grease, Detergents, Total Coliform, Fecal Coliform, Fecal Streptococcus, Salmonella, Biochemical Oxygen Demand, Total Phosphorus and Chlorides
2. Metals (Semi-annual)	Aluminum, Antimony, Beryllium,

Cadmium, Copper, Cyanide, Iron, Lead, Mercury, Nickel, Selenium, Silver, Zinc, Arsenic and Chromium

c. Water quality reports shall be submitted within 30 days of receipt of analysis results to the Southeast District Office, PBCHD and SFWMD for distribution to the appropriate review personnel.

d. The monitoring program may be reviewed annually by the Department, and a determination made as to the necessity and extent of continuation of the program. Aspects of the program related to sampling, monitoring, reporting, and related time schedules may be modified in accordance with the provisions of conditions number XII.

3. Groundwaters

a. All discharges to groundwaters, such as landfill leachate, shall be collected and treated as necessary, or otherwise be of high enough quality, to be able to meet the applicable Water Quality Standards of Sections 17-3.402 and 17-3.404, FAC, within 100 feet of the landfill perimeter.

4. Groundwater Monitoring Program

a. Sampling of the shallow aquifer groundwater quality shall be conducted in at least eight well clusters and six interceptor wells in the site vicinity. At least one of these well clusters shall be up the hydrologic slope from the landfill area to provide current background data. Other wells shall be located down the hydrologic slope from the landfill areas. All wells shall be surveyed by a state certified land surveyor and the locations of each well depicted on a topographical aerial map with the appropriate elevations noted for each well.

b. Operational background monitoring shall commence at least one year prior to operation of the resource recovery

facility. Construction of monitoring wells and the collection of samples shall be in accordance with EPA recommended methods as contained in Procedures Manual for Ground Water Monitoring at Solid Waste Disposal Facilities (EPA/530/SW-611). The wells shall be deep enough to ensure that groundwater samples can be obtained with the groundwater table elevation at its estimated lowest point and shall be protected from damage and destruction. Samples shall be analyzed in accordance with the methods described in Chapter 17-4, FAC. Analyses shall be performed by laboratories which are approved by the Department of Health and Rehabilitative Services to conduct analyses pursuant to Section 403.863, F.S., the State Public Water Supply Laboratory Certification Program.

c. Sampling of groundwater quality of monitoring well clusters labeled M-1, M-2, M-3, M-4, M-5, M-6, M-7, M-8, IW-1, IW-2, IW-3, IW-4, IW-5, IW-6 as shown on Figure 4.2-1 dated December 2, 1985, shall be performed quarterly for all parameters for three years and thereafter as stated below:

Monitoring Type and Schedule	Parameters
1. General (Quarterly)	pH, Specific Conductance, Temperature, Chloride, Total Organic Carbon (TOC), Sulfate, Bicarbonate, Magnesium, Organic Nitrogen, Ammonia, Nitrate, Chemical Oxygen Demand, Color, Turbidity, Total Iron, Total Dissolved Solids (TDS), Zinc, Calcium, Manganese, Total Nitrogen, Ammonium
2. Yearly (After first three years)	M.B.A.S., Organics as listed in S.17-22.104, FAC, Trichloroethylene, Tetrachloroethylene, Carbon Tetrachloride, Vinyl Chloride, 1,1,1-Trichloro-

ethane, 1,2-Dichloroethane, Benzene, Ethylene Dibromide, Chlorinated Phenolic Compounds, Chlorides, Sodium, Lead, Copper, Nickel, Chromium, Cadmium, Iron, Mercury, Arsenic, Selenium, Barium, Silver, COD, Chemical Oxygen Demand, Total Coliform, Fecal Coliform, Fecal Streptococcus

d. Water quality monitoring reports shall be sumbitted within 30 days of receipt of analysis results to the Southeast District Office, the PBCHD and SFWMD for distribution to the appropriate review personnel.

e. The monitoring program may be reviewed annually by the Department, and a determination made as to the necessity and extent of continuation of the program. Aspects of the program relation to sampling, monitoring, reporting, and related time schedules may be modified in accordance with the provisions of condition number XII.

E. Solid/Hazardous Waste

1. Operation of the associated landfill shall be done in accordance with all applicable portions of Chapter 17-7, FAC, including prohibitions, procedures for closing of the landfill, and final cover requirements, or, as provided in this condition (XIV.E.) in its entirety. The plans of the final landfill design shall be provided to the Department for review and approval at least 90 days prior to start of construction. The final plans for this facility shall include provisions for the isolated temporary handling of suspected hazardous, toxic or pathological wastes.

2. No suspected or known hazardous, toxic, or infectious wastes as defined by federal, state or local statutes, rules,

regulations or ordinances shall be burned or landfilled at the site. The Permittee shall prepare and submit for approval to the South Florida District Office and PBCHD a written training program on the detection and handling of hazardous, toxic or infectious wastes.

3. Rodent and insect control shall be provided as necessary to protect the health and safety of site employees and the public. Pesticides used to control rodents, flies, and other vectors shall be as specified by the Florida Department of Agriculture and Consumer Services.

4. Storage of putrescible waste for processing shall not exceed storage capacity of the refuse bunker or tipping floor as designed on the approved plan, or be stored on the tipping floor for more than 48 hours.

5. Ash prior to transport to the landfill shall be stored in an enclosed building on an impervious surface or other method approved by the Southeast District Office. Final disposal of the ash shall be into the lined landfill or other method approved by the Southeast District Office. Any leachate generated within the building shall be collected and disposed of by a method approved by the Southeast District Office. The Southeast District Office shall notify the SFWMD of the plans and specifications regarding the above referenced method.

6. A monthly report shall be prepared detailing the amount and type (putrescible, special wastes, boiler residue, etc.) of materials landfilled at the site, and the treatment provided (see condition XIV.E.2. above). These reports shall be furnished to the Southeast District Office and PBCHD quarterly, commencing 120 days after the Resource Recovery Facility becomes operational and is producing residues.

7. The temporary hazardous waste storage and transfer facility shall be designed, constructed and operated in conformance with section 17-30.171, FAC. The design of the facility operational procedures, personnel training program, contingency plans and closure plans shall be submitted to the department, PBCHD and SFWMD for review and approval.

8. All cells or disposal areas will be constructed to promote leachate drainage to provide for effective leachate collection; all leachate collection in active or inactive cells shall be pumped or transported to the leachate collection system for transmission to the treatment system. Leachate collected above the primary liner shall be monitored quarterly for conductivity, pH, copper, arsenic, zinc, phenols, oil and grease and total organic halogens. Results of such monitoring shall be reported to the Southeast District Office and PBCHD. Leachate collected between the primary and secondary liners shall be monitored quarterly for conductivity, chlorides, ammonia, iron, sulfur, nitrates, and zinc. Results will be reported to the Southeast District Office and PBCHD quarterly. The monitoring parameters set forth herein may be modified dependent upon the type of liners utilized and the manufacturer's recommendations to protect the integrity of the liners due to the classes of chemical constituents in the leachate which will be in contact with the liner(s). The Permittee shall provide the Southeast District Office with a certified letter from the liner manufacturer stating what classes of chemical constituents could damage the liners' integrity and include those parameters as part of the quarterly monitoring program noted above.

9. An EP toxicity analysis of the ash residue being landfilled for the chemicals listed and using the prescribed method as set forth in 40 CFR s261, Appendix II, shall be conducted within 30 days after commencement of commercial operation. In addition, said ash residue shall be tested for dioxin (2, 3, 7, 8 - TCDD) content.

10. Results from said residue analysis shall be sent to the Southeast District Office and the PBCHD within 30 days of receipt. Results will be used to determine whether or not these materials constitute a "Hazardous Waste" as defined by applicable Federal or state regulations. Results of these analyses may also be used for correlation with groundwater monitoring information and in any subsequent modification of conditions.

11. If residue materials are determined to be a "Hazardous Waste", then measures shall be taken to treat or dispose of the residues pursuant to rule promulgated by Federal, State or Local authorities, as may be applicable.

12. If the nature of materials received at the facility becomes altered, either due to modification of conditions, i.e., the facility is allowed to incinerate already known hazardous wastes such as pesticides, or if groundwater monitoring reveals abnormal groundwater conditions which may be attributable to the landfilling of this residue, then a subsequent analysis may be required at that time.

13. There shall be no discharge to waters of the State of polychlorinated biphenyl compounds.

14. The Permittee shall provide the Southeast District Office and the PBCHD with a set of full-sized (24"x 36") engineering drawings and supporting information, signed and sealed by an engineer registered in the State of Florida for the operational and closure phases of the landfill for review and approval at least 90 days prior to implementation of those phases. Within 90 days after completion on the closure phase of the project, the Permittee shall submit certified as-built plans signed and sealed by a Florida Registered Professional Engineer.

15. To ensure that the bottom liners are continuous through-

out the cell, the liners will be installed either under the supervision of the manufacturer or by a competent experienced lining contractor according to the manufacturer's specifications. In addition, as part of quality control measures, field seams between in-place liner and newly installed liner will be tested according to ASTM specifications to ensure integrity between materials and certified in writing by the liner manufacturer, contractor, and engineer of record to the Southeast District Office and PBCHD. Top liners, if required, shall be installed in accordance with Closure requirements of the Southeast District Office, PBCHD and SFWMD.

16. The extension of the EPB-10 canal shall be placed in properly designed and constructed reinforced concrete culverts. The landfill height above the culvert shall not exceed 40 feet.

F. Operational Safeguards

The overall design and layout of the facilities shall be such as to mitigate potential adverse effects to humans and the environment. Security control measures shall be utilized to prevent exposure of the public to hazardous conditions. The Federal Occupational Safety and Health Standards will be complied with during construction and operation. The safety standards specified under Section 440.56, Florida Statutes, by the Industrial Safety Section of the Florida Department of Commerce will be complied with during operation.

G. Transmission Lines

The directly associated transmission lines from the Resource Recovery Facility electric generators to the Florida Power and Light Company transmission system shall be kept cleared without the use of herbicides.

H. Noise

Operational noises shall not exceed local noise ordinance limitations nor those noise standards imposed by zoning.

I. Potable Water System

The potable water system (wells, pipes, pumps and treatment facilities) shall be designed, constructed and operated in conformance with the applicable provisions of Chapters 17-21 and 17-22, FAC. Plans and specifications for these facilities shall be provided to the Southeast District Office and the Palm Beach County Health Department for review and approval 90 days prior to construction.

XV. WATER MANAGEMENT DISTRICT CONDITIONS - GENERAL

A. The Solid Waste Authority shall prosecute the work authorized under the Certification in a manner so as to minimize any adverse impact of the works on fish, wildlife, natural environmental values, and water quality. The Solid Waste Authority/Vendor shall institute necessary measures during the construction period, including full compaction of any fill material placed around newly installed structures, to reduce erosion, turbidity, nutrient loading and sedimentation in the receiving waters.

B. The operational phases of the surface water management system authorized under this Certification shall not become effective until a Florida registered professional engineer certifies upon completion of each phase that these facilities have been constructed in accordance with the design approved by the District. Within 30 days after completion of construction of each phase, the Authority shall submit the engineer's certification, and notify the District that the facilities are ready for inspection and approval.

C. All road centerlines shall be set at or above the flood elevation generated by a three-year, twenty-four hour storm event,

in accordance with Palm Beach County criteria, as may be amended, and in accordance with the South Florida Water Management District's Rule 40.E-4., as may be amended.

D. All building floors shall be set at or above flood elevations generated by a three-day, one hundred year storm event, in accordance with Palm Beach County criteria, as may be amended, and in accordance with the South Florida Water Management District's Rule 40.E-4., as may be amended.

E. Off-site discharges during construction and development shall be made only through the discharge structures authorized by this Certification.

F. No construction authorized herein shall commence until the Permitee has agreed, in writing, by letter or resolution, that it will be responsible for the construction, operation, and perpetual mainentance of the entire surface water management system, both during operation of the facility and following the closure of the whole or any part of the facility. Responsibility for the operation and maintenance of the surface water management system shall not be assigned or delegated without prior written approval of the District.

G. This Certification is based on the applicant's submitted information to the District which reasonably demonstrates that adverse off-site water resource related impacts will not be caused by the authorized activities. The plans, drawings, and design specifications submitted by the applicant shall be considered the minimum standards for compliance. It is also the responsibility

of the Permittee to ensure that adverse offsite water resource related impacts do not occur during construction.

H. The Permittee shall secure a well construction permit prior to construction, repair, or abandonment of any wells as described in Chapter 40E-3, F.A.C.

I. In the event of a declared water shortage, water use reductions may be ordered by the SFWMD in accordance with the Water Shortage Plan, Chapter 40E-21, F.A.C.

J. This project must be constructed in compliance with and meet all requirements set forth in Chapter 373, Florida Statutes, and Chapter 40E-2, 40E-3, and 40E-4, FAC.

K. The Permittee shall hold and save the SFWMD harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance or use of any facility authorized by this Certification, to the extent permitted under Florida law.

L. Authorized representatives of the District shall be allowed to enter the premises to inspect and observe the operation of the surface water management system and associated landfill facilities, mitigation areas, and monitoring wells in order to determine compliance with the conditions of this Certification, as provided in Condition V.

XVI. WATER MANAGEMENT DISTRICT - SITE SPECIFIC STANDARDS

A. Prior to construction of any phase of either the Solid Waste Energy Resource Recovery Facility or the ash residue/unprocessable materials landfill, a complete set of paving, grading, and drainage plans with supporting calculations for the 40-acre Resource Recovery Facility and Jog Road must be submitted to the South

Florida Water Management District for review and written approval that the plans are in compliance with Chapters 40E-2 and 40E-4, F.A.C. Said plans shall include the following:

1. Paving, grading and drainage plans with special attention to perimeter site grading; and

2. Drainage calculations including:

a. Design storms used including depth, duration and distribution;

b. Stage-storage computations for the project and stage-discharge computations for the outfall structure(s);

c. Acreages and percentage of property proposed as:

(1) impervious surfaces (excluding water bodies)

(2) pervious surfaces (green areas)

(3) lakes, canals, retention areas, etc.

(4) total acreage of the project

d. Runoff routing calculations showing discharges, elevations, and volumes detained during applicable storm events; and

e. Calculations required for determination of minimum building floor and road elevations.

B. Any subsequent modifications to the drawings and supporting calculations submitted to the South Florida Water Management District which alters the quantity or quality of discharge of water offsite shall be pursuant to Section 403.516, F.S., and Rule 17-17.211, F.A.C. Such modifications shall be submitted to the District for a determination that the modifications are in compliance with Chapters 40E-2 and 40E-4, F.A.C. This includes modification of the discharge route.

C. Minimum standard 24" x 36" surface water management construction plans for the project as proposed as well as any modifications shall be submitted to this District for review and written

approval 30 days prior to the commencement of construction.

D. Prior to use and/or connection with any District works, the District shall be notified and the Permittee shall obtain written approval pursuant to Chapter 40E-6.041, F.A.C.

E. Prior to lowering of water levels in excavation sites, the following conditions shall be met:

1. Withdrawal rates, and depending on the methods proposed, well construction details, well and pump capacities and locations, and the data from the groundwater monitoring network shall be provided to the District for review and written approval;
2. The impacts of the proposed withdrawals shall be assessed and provided to the District;
3. No dewatering discharge shall be allowed to drain from the property and
4. The District concurs in writing that there will be no adverse impacts as a result of the proposed withdrawals under sections 373.223(A)-(C) of the Florida Statutes.

F. Final water use rates for process and irrigation and well locations shall be submitted to the Distict for review and written approval prior to well construction when a Vendor and final plant design are determined.

G. Prior to closure, detailed closure plans pursuant to Chapter 17-7, F.A.C., shall be submitted to the District for review and written approval.

H. On-site areas which are dedicated for the fire station and Turnpike Interchange are considered by this District as separate from the Certification, and therefore subject to permitting requirements, pursuant to Chapter 373, F.S.

I. Any on-site hazardous materials temporary storage and transfer facility constructed at this site pursuant to the Water Quality Assurance Act should be considered separate from the Certification process and subject to regulatory permits. The design of the building and related infrastructure should be submitted to this District for review and verification that the proposed facility has been designed to prevent any stored or transferred hazardous materials from coming in contact with the surface water management system.

J. If modification and/or realignment of Northern Palm Beach County Water Control District's Canal EPB 10 is necessary, a modification must be obtained for Surface Water Management Permit No. 50-01347-S.

K. Prior to construction of either the Solid Waste Resource Recovery Facility or the ash/residue/unprocessable materials landfills, a phasing plan for the landfills shall be submitted to the District for review and written approval, including detailed drawings and supporting calculations showing how leachate will be separated from runoff in the working area (temporary berms, diversion dikes, cover material, etc.).

L. Surface Water Management plans shall be revised to include spreader swales (or District approved equivalent) to approximate sheetflow discharge into the wetland areas. In addition, a sedimentation "trap" shall be designed, subject to District approval of calculations and discharge locations into the wetlands.

M. Discharge structures shall include a baffle, skimmer, or other mechanism suitable for preventing oil, grease, or other floatable materials from discharging to and/or from retention/detention areas.

N. Prior to landfill construction, a screw gate shall be installed on the water control structure at EPB 10, capable of

restricting discharge of poor quality surface water, up to and including the 25 year, 3 day level.

O. Critical areas, including the conveyance and perimeter swales, and areas adjacent to the let down pipes or conduits shall be stabilized to prevent erosion.

P. Energy dissipators shall be used whenever let down pipes discharge into perimeter swales, or the let down pipes or conduits meet the terraces.

Q. Water quality samples shall be taken at the discharge surface water discharge structure locations of the water management system into EPB 10 during periods of discharge according to the schedule below. Flow shall be measured continuously at the discharge location into EPB 10 by means of a recording flow meter. A laboratory certified by the State of Florida shall be responsible for all water quality analyses. Chain of custody documentation shall be maintained for all sampling. Reports of water quality results and discharge rates shall be submitted to this District for review and written approval on a semi-annual basis. Results of any additional stormwater quality sampling required by the Florida Department of Environmental Regulation shall be provided to the District. Monitoring requirements will be evaluated by this District following two years of data collection.

Monitoring Type Schedule	Parameters
A. General (Quarterly)	Total Organic Carbon, Dissolved Oxygen, pH, Turbidity, Specific Conductance, Chemical Oxygen Demand, Alkalinity, Total Suspended Solids, Ammonium N, Nitrate N, Total Kjeldahl Nitrogen
B. Organics (Semi-annual)	Trichloroethylene, Tetrachloroethylene, Carbon Tetrachloride, Vinyl Chloride, 1,1,1,-Trichloroethane, 1,2-Dichloroethane, Benzene, Ethylene Dibromide
C. Metals (Semi-annual)	Aluminum, Antimony, Beryllium, Cadmium, Copper, Cyanide, Iron, Lead, Mercury, Nickel, Selenium, Silver, and Zinc

R. Any Northern Palm Beach County Water Control District facilities which have been permitted (Surface Water Management Permit No. 5001347-S) by this District and are not yet constructed but would be affected by this project must be fully operational prior to commencement of stormwater discharge from this project. The additional 60" CMP at Florida Power and Light's transmission crossing of EPB-10, and one 72" CMP at the confluence of EPB-10 and C-17 shall be so constructed.

S. There shall be a quarterly groundwater monitoring frequency for the groundwater monitoring network. The District shall be copied on the data results of the network, and any other groundwater monitoring data required by the Florida Department of Environmental Regulation.

T. At least 60 days prior to the commencement of construction, the District staff must have received and reviewed any pertinent additional information required to be submitted under the District's site specific standards and the conditions of certification. Written approval for the desired construction must be obtained prior to commencement of construction.

U. Sixty days prior to the commencement of construction of the transmission line, the permittee shall provide the District with the location of areas in which fill and associated facilities will be placed. Written confirmation that the fill and associated facilities will not cause adverse off-site impacts shall be received form the District prior to commencement of construction.

XVII. OPERATIONAL CONTINGENCY PLANS

A. Operating Procedures

The permittee shall develop and furnish the Southeast District a copy of written operating instructions for all aspects of the operation which are critical to keeping the facility working properly. The instructions shall also include procedures for the handling of suspected hazardous, toxic and infectious wastes.

B. Contingency Plans

The Permittee shall develop and furnish the Southeast District Office written contingency plans for the continued operation of the system in event of breakdown. Stoppages which compromise the integrity of the operations must have appropriate contingency plans. Such contingency plans should identify critical spare parts to be maintained on site.

C. Current Engineering Plans

The Permittee shall maintain a complete current set of modified engineering plans, equipment data books, catalogs and documents in order to facilitate the smooth acquisition or fabrication of spare parts or mechanical modifications.

D. Application Modifications

The permittee shall furnish appropriate modifications to drawings and plot plans submitted as part of the application, including operational procedures for isolation and containment of hazardous wastes.

XVIII. TRANSFER OR ASSIGNMENTS OF RIGHTS, DUTIES, OR OBLIGATIONS

If contractural rights are transferred under this certification, Notice of such transfer or assignment shall immediately be submitted to the Department of Environmental Regulation and South

Florida Water Management District by the previous certification holder (Permittee) and Assignee. Included within the Notice shall be the identification of the entity responsible for compliance with the certification. Any assignment or transfer shall carry with it full responsibility for the limitations and conditions of this certification.

XIX. PROPRIETARY DOCUMENTS OR INFORMATION - CONFIDENTIALITY

Proprietary or confidential data, documents or information submitted or disclosed to any agency shall be identified as such by the Permittee and shall be maintained as such pursuant to applicable Florida law.

XX. MITIGATION

A. On-Site Restoration and Mitigation.

1. Within ninety (90) days of certification issuance, the Palm Beach Solid Waste Authority shall submit and on-site restoration and mitigation plan (hereinafter "The Plan"). The purpose of the Plan and its implementation being the mitigation of the impact of the project on the site's wetlands and values associated therewith. The Plan shall indicate in a detailed manner the on-site measures and improvements necessary to accomplish all restoration and mitigation, (i) set forth in the application as amended, (ii) as required below and (iii) as may be required by the department of Environmental Regulation.

2. The Plan shall include but not be limited to a specification of the commencement and completion dates of all anticipated restoration and mitigation work including a specification of all revegetation of the shell pit mining areas, creation of littoral zones around all lakes, interconnection of wetland areas, areas of wetlands to be created (including the type and extent threof which shall be not less than 190 acres), dredge and fill volumes, elevations, methods of construction, nature and extent of required improvements to accomplisht he above referenced work, and planting schedules together with methods to insure vegetative survival for each area. As part of the plan it shall

also be required that (i) littoral zones will be constructed around all existing and proposed borrow lakes, (ii) where it can be done with a reasonable probability of success, cypress trees proposed for elimination shall be transplanted to areas of wetland creation or roost enhancement, and (iii) willow, cypress and other hardwood species shall be planted on the spoil windrows of the abandoned pit South of the roost area to provide future roost availability, and the existing roost shall be monitored over a seven year period.

3. The Plan shall be submitted to the Department of Environmental Regulation, the Florida Game and Fresh Water Fish Commission, the U.S. Fish and Wildlife Service, Treasure Coast Regional Planning Council, and other appropriate governmental authorities or agencies.

4. The Department of Environmental Regulation shall review the Plan and it shall be subject to the approval of the Department of Environmental Regulation in consultation with the Florida Game and Fresh Water Fish Commission, U.S. Fish and Wildlife Service and Treasure Coast Regional Planning Council. The Palm Beach County Solid Waste Authority in the event of disapproval of the Plan by the Department of Environmental Regulation shall include such revisions therein as may be required by the Department of Environmental Regulation.

5. The Palm Beach County Solid Waste Authority shall complete all restoration and mitigation work set forth in the Plan approved by the Department of Environmental Regulation in accordance with the time schedules set forth in the approved Plan.

B. Off-Site Restoration and Mitigation.

1. The off-site restoration and mitigation area, is an area of approximately 3400 acres in the L-8 Marsh area of the J. W. Corbett wildlife management area designated by the Florida Game and Fresh Water Fish Commission and shown on Exhibit A attached hereto and made part hereof (hereinafter referred to as the "preservation area").

2. The Solid Waste Authority shall perform a detailed hydrological study the scope and content of which shall be subject to approval by the Department of Environmental Regulation in

consultation with the Florida Game and Fresh Water Fish Commission, U.S. Fish and Wildlife Service and Treasure Coast Regional Planning Council. The purpose of the hydrological study shall be to identify and detail those modifications and improvements that would be necessary to the preservation area in order to restore a hydroperiod to this area which approximates the natural wetland hydroperiod. The Solid Waste Authority shall pay all costs, engineering and otherwise for such study and the study shall be completed within two years from the date that certification has been issued. The Solid Waste Authority will at its sole cost and expense make such modifications and improvements to the preservation area including but not limited to payment of all engineering and permitting fees, all costs of labor, material, equipment and physical improvements (all of the foregoing being collectively hereinafter referred to as the "improvements") as identified in the approved hydrological sutyd to restore a hydroperiod to the preservation area which approxidmates the natural wetland hydroperiod for such area.

3. The hydrological study shall be submitted to the Department of Environmental Regulation, the Florida Game and Fresh Water Fish Commission, U.S. Fish and Wildlife Service and Treasure Coast Regional Planning Council and other appropriate governmental authorities or agencies.

4. The Department of Environmental Regulation shall review the hydrological study and the proposed implementation thereof. The study and the implementation thereof shall be subjet to the approval of the Department of Environmental Regulation in consultation with the Florida Game and Fresh Water Fish Commission, U.S. Fish and Wildlife Service and Treasure Coast Regional Planning Council.

5. The Palm Beach County Solid Waste Authority in the event of disapproval of the recommendations contained in the hydrological study by the Department of Environmental Regulation shall include such revisions therein as may be required by the Department of Environmental Regulation.

6. In the event that the improvements required by the approved hydrological study are projected to significantly exceed

$420,000.00 plus the inflation factor as set forth below then the Palm Beach County Solid Waste Authority may apply to the Department of Environmental Regulation for considration to (i) reduce the size and scope of the mitigation and restoration project or (ii) utilize alternative methods to accomplish the required mitigation and restoration as set forth above. The fact that the cost of the improvements in the approved hydrological study are projected to significantly exceed the amount set forth above, shall not, entitle the Palm Beach County Solid Waste Authority, as a matter of right, to reduce or modify the mitigation required herein. Whether, and the extent to which, the mitigation or restoration requirements shall be reduced or modified shall rest solely in the discretion of the Department of Environmental Regulation in consultation with the Florida Game and Fresh Water Fish Commission, U.S. Fish and Wildlife Service and Treasure Coast Regional Planning Council.

7. The Palm Beach County Solid Waste Authority shall complete all restoration and mitigation work set forth in the approved hydrological study including the implementation measures contained therein, within five years from the date of certification issuance.

6. Inflation Factor:

In paragraph B(6) the sum of $420,000.00 is referred to. The actual number to be utilized in place of $420,000.00 in condition B(6) shall be a sum using $420,000.00 as a base and adding any increase in the index thereto; i.e., in the event there has been a 10% incrase in the index from December 3, 1985 through the end of the time period under consideration then there shall be an increase of 10% in the sum of $420,000.00. The Solid Waste Authority shall make no application for modification of the mitigation and restoration until after the completion of the approved hydrological study. For purposes of projecting and determining the actual amount to be utilized in condition B(6) with reference to the $420,000.00, as to improvements to be constructed in the future, there shall be added to the $420,000.0 the following (i) a sum which represents the percentage increase in the index from December 3, 1985 through the date of

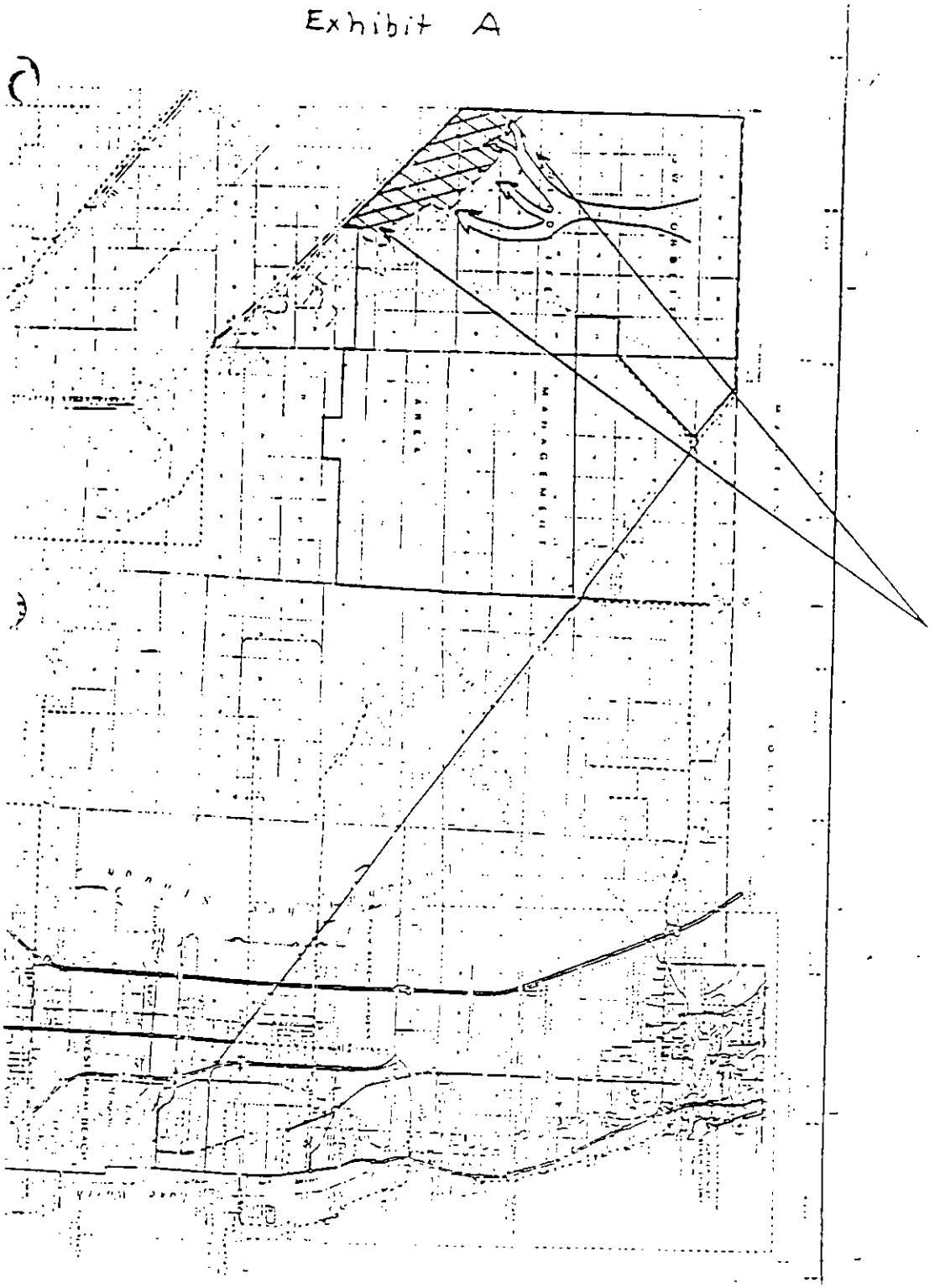
approval of the hydrological study and (ii) a sum representing the estimated percentage increase in the index through the date a specific improvement is projected to be ocnstructed in the approved hydrological study. The estimated percentage increase shall be the average annual increase in the index from December 3, 1985 through the date of approval of the hydrological study; i.e., if the average annual increase has been 10% and a specific improvement is to be constructed nine months after the approval of the hydrological study there shall be added (in addition to the amount referred to in (i)) to the $420,000.00 the sum of $31,500.00 representing three quarters of the 10% increase.

Index:

The term index as utilized herein shall mean: The Engineering News-Record, Construction Cost Index, published by McGraw-Hill, Inc.

In the event that the Construction Cost Index is discontinued then the Department of Environmental Regulation shall choose another index similar in nature, to utilize in connection with this off-site mitigation and restoration condition.

Exhibit A



PROJECT LOCATION

FIGURE 1

Appendix III

The Authority's proposed findings of fact are addressed as follows:

1. Addressed in paragraph 1, and the Preliminary Statement.

2. Addressed in paragraph 3 & 4.

3. Addressed in paragraph 3.

4. Not relevant.

5. Addressed in paragraph 2.

6. Addressed in paragraph 1 and the Preliminary Statement.

7. Addressed in paragraph 30.

8. Addressed in paragraphs 12-17, and 33.

9. Addressed in paragraph 2.

10. Addressed in paragraph 7.

11. Addressed in paragraphs 13&14.

12. Addressed in paragraphs 15&16.

13. Addressed in paragraph 15.

14. Addressed in paragraph 17.

15. Addressed in paragraph 17.

16. Addressed in paragraph 19.

17. Addressed in paragraph 18.

18.-19. Addressed in paragraphs 10&11.

20. Addressed in paragraphs 20&21.

21. Addressed in paragraphs 22&29.

22. Addressed in paragraphs 23&24.

23. Addressed in paragraphs 25-27.

24. Addressed in paragraph 29.

25. Addressed in paragraph 30.

26. Addressed in paragraph 32.

27. Addressed in paragraph 31.

28. Addressed in paragraph 28.

29. Addressed in paragraphs 8, 19&29.

30. Addressed in paragraphs 10,11,28-32.

31. Addressed in paragraph 33.

DER's proposed findings of facts are addressed as follows:

1. Addressed in paragrah 26.

2-3.Addressed in paragaph 31.

4. Addressed in paragraph 26.

The Coalition's and Riviera Beach's proposed findings of fact are addressed as follows:

1. Addressed in paragraphs 2&6.

2. Addressed in paragraphs 1,2,3,13.

3-4. Addressed in paragraphs 13&27.

5. Addressed in paragraph 18.

6. Addressed in paragraph 17.

7. Addressed in paragraph 3.

8. Addressed in paragaph 8.

9. Addressed in paragraph 9.

10. Addressed in paragraph 5.

11. The parties have stipulated that Intervenors have standing.

12-13. Addressed in paragraphs 7&19.

14-16. Addressed in paragraphs 3 &12-19.

17. Addressed in paragraph 32.

18. Addressed in paragraphs 31 & 32.

19. Addressed in paragraph 29.

20. Addressed in paragraphs 31 & 32.

21. Addressed in paragraphs 12-17&31.

22. Addressed in paragraph 30.

23-25. Addressed in paragraphs 7 & 12-17.