



# Department of Environmental Protection

Lawton Chiles  
Governor

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

Virginia B. Wetherell  
Secretary

October 10, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Russell Menke, Project Facilitator  
Air Pollution Control Retrofit Project  
Pinellas County Resource Recovery Facility  
14 S. Fort Harrison Avenue - 5th Floor  
Clearwater, Florida 34616

Dear Mr. Menke:

RE: Permit Amendment PSD-FL-011(A), PSD-FL-098(A)  
Pinellas County RRF Air Pollution Control Project

The Department hereby approves the replacement of the existing air pollution control systems on Units 1, 2, and 3 at the Pinellas County Resource Recovery Facility (PCRRF) as detailed in your three volume application dated May 19, 1995. The existing systems consisting of Electrostatic Precipitators will be replaced with spray dryer/absorbers for acid gas control followed by fabric filter baghouses for particulate emission control. Activated carbon injection will be utilized to enhance air toxics emissions reductions and removal by the baghouses.

During project construction and subsequent operation, the facility must continue to comply with the most stringent conditions of either its Prevention of Significant Deterioration (PSD) permits or its State of Florida Site Certification for PCRRF.

Compliance requirements with the State of Florida mercury rule will be incorporated into a modification of the State of Florida Site Certification. Requirements pursuant to future adoption by the State of Florida of the proposed EPA Emission Guidelines: Municipal Waste Combustors (40 CFR 60, Subpart Cb) will be incorporated into both the Certification and your Title V Operating Permit consistent with the future State Implementation Plan (SIP) revision implementing Subpart Cb.

Per the letter dated September 21, 1995 to Landers and Parsons, the U.S. Environmental Protection Agency (EPA) concurred with the proposed project as a permanent measure to reduce potential emissions of dioxin from the PCRRF.

Mr. Russell Menke  
Page Two  
October 10, 1995

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

The Petition shall contain the following information:

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

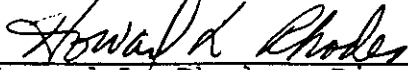
If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this amendment. Persons whose substantial interests will be affected by any decision of the Department with regard to the amendment request/application have the right to petition to become a party to the proceeding. The petition must conform to the requirements

Mr. Russell Menke  
Page Three  
October 10, 1995

specified above and be filed (received) within 14 days of receipt of this amendment in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, Florida Administrative Code.

A copy of this amendment letter shall be attached to and shall become part of Permits PSD-FL-011 and PSD-FL-098.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

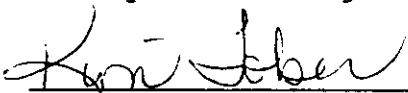
  
Howard L. Rhodes, Director  
Division Air Resources Management

CERTIFICATE OF SERVICE

This is to certify that this Permit Amendment and all copies were mailed to the listed persons before the close of business on 10-11-95.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Chapter 120.52(9), Florida Statutes, with the designated Deputy Clerk, receipt of which is hereby acknowledged.

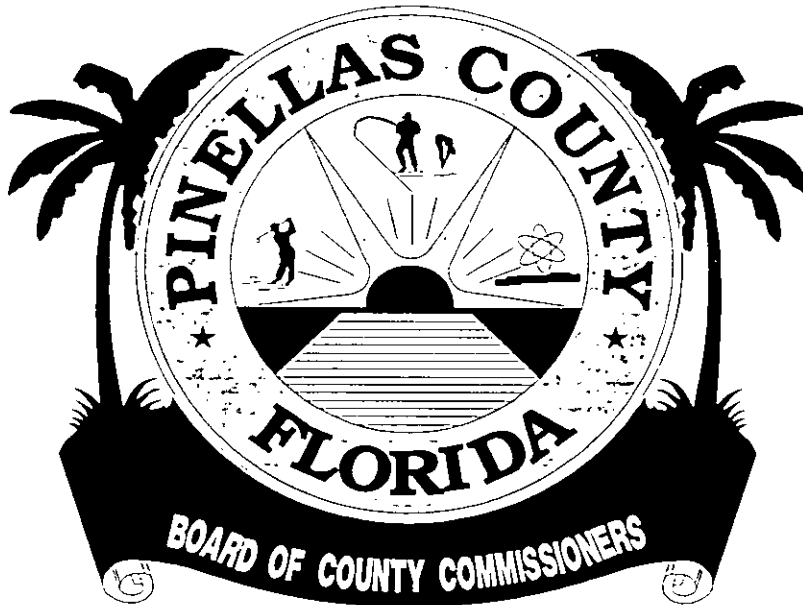
  
(Clerk) 10-11-95  
(Date)

cc: J. Harper, EPA  
J. Bunyak, NPS  
P. Hessling, PCDEM  
D. Dee, L & P  
D. Elias, RTP Environmental  
B. Thomas, SWD

*PINELLAS COUNTY, FLORIDA*

BRIEFING DOCUMENT:

**PROPOSED IMPROVEMENTS TO THE  
PINELLAS COUNTY RESOURCE RECOVERY FACILITY**



JUNE 1995

**BRIEFING DOCUMENT:  
PROPOSED IMPROVEMENTS TO THE  
PINELLAS COUNTY RESOURCE RECOVERY FACILITY**

**INTRODUCTION**

In 1983 Pinellas County built a 2,100 ton per day, mass burn, waste-to-energy facility, which is known as the Pinellas County Resource Recovery Facility (PCRRF). In 1986, the County expanded the facility's capacity to 3,150 tons per day. The construction of the PCRRF, and the subsequent expansion in 1986, were authorized by the State of Florida under the Florida Electrical Power Plant Siting Act (PPSA). The Governor and Cabinet, acting as the Siting Board, issued final orders and "conditions of certification" (i.e., permit conditions) that have governed the construction and operation of the PCRRF.

Pinellas County is considering modifications to the PCRRF so that it may continue operations in future years; however, given the compliance deadlines for retrofitting the facility to meet new federal and state air pollution requirements, it is prudent that the County place itself in a position such that if it does decide to continue operations, the permit modification requirements will have commenced so that facility construction could begin to bring the facility into compliance in a timely manner .

To come into compliance, Pinellas County will have to install new air pollution control systems that will enable the PCRRF to comply with new state and proposed federal air quality regulations. At this time, the County is not proposing to increase the PCRRF's capacity to process municipal solid waste and generate electricity.

**FACILITY DESCRIPTION**

The PCRRF is located on approximately 240 acres of land ("the Certified Site") near the intersection of 28th Street North and 114th Avenue North in Pinellas County, Florida. The PCRRF is surrounded by active and inactive landfills, which create a large buffer between the PCRRF and the nearest residential community. The PCRRF has a gross electrical generating capacity of approximately 77 megawatts.

The primary purpose of the PCRRF is to dispose of the municipal solid waste generated within the incorporated and unincorporated areas of Pinellas County. Non-combustible materials and inert ash residue resulting from the PCRRF's combustion process are placed in the Class I landfill that is located adjacent to the PCRRF. The use of the PCRRF has decreased the potential threat to groundwater from raw landfilling, has resulted in the recovery of useable materials, has generated electrical energy from the combustion of municipal solid waste, and has maximized the life of the County's only remaining Class I landfill.

## THE PROPOSED MODIFICATIONS TO THE PCRRF

If the facility is modified, Pinellas County will have to replace the existing Air Pollution Control (APC) system at the PCRRF with a "state-of-the art" APC system that will include Spray Dryer Absorbers(SDA), Fabric Filters (FF), and a Powdered Activated Carbon Injection System (PACIS). The improvements to the APC system also will include Continuous Emissions Monitoring Systems (CEMS), reagent storage and supply systems, and ancillary equipment. Each combustion unit at the PCRRF will have an independent APC system, but all three combustion units will exhaust their flue gases through separate flues in a new, common stack that will replace the two existing stacks. The County will install a Selective Non-Catalytic Reduction (SNCR) system for the control of nitrogen oxides if determined necessary by the EPA.

In addition to the replacement of the existing APC system, the County intends to significantly improve the PCRRF's existing combustion controls, furnaces, ash handling and conditioning equipment, and the metals recovery system. The County will install an auxiliary fuel supply system for natural gas that will be used during start-up and shut-down operations of the PCRRF. The County also will enclose the APC system, the ash handling equipment, the metals recovery system, and other components of the PCRRF, which will reduce some of the potential environmental impacts of the PCRRF and improve its appearance.

These new state-of-the-art systems and related improvements will enable the PCRRF to meet the Emission Guidelines (40 CFR Part 60, Subpart Cb) proposed by the U.S. Environmental Protection Agency (EPA) for existing municipal waste combustors (MWC), as well as the mercury standard adopted by the Florida Department of Environmental Protection (FDEP) in Section 62-296.416(3)(a) l., F.A.C. The County has installed will also operate a Lime Softening System (LSS) and related water management systems to enable it to improve the PCRRF's water recycling capability.

## PRINCIPAL FINDINGS

If modifications are pursued, the information contained in the County's application demonstrates that the proposed modifications to the PCRRF will be designed, built, operated, maintained and monitored in a manner that will enable the PCRRF to continuously comply with all applicable Federal, State, and County standards. As modified, the PCRRF will continue to have a minimal impact on the surrounding environment.

The analyses presented in the application support the following conclusions:

- **Air Quality** - The proposed improvements to the air pollution control system will provide the PCRRF with "state-of-the-art" equipment that is similar to the equipment used at the newest and most advanced resource recovery facilities in the United States.  
  
-The improvements to the PCRRF's air pollution control system will result in significant reductions in the Facility's emissions of sulfur dioxide, hydrogen chloride,

dioxins, furans and mercury.

- Computer analyses demonstrated that, after the facility's APC system is improved, the facility's maximum impacts will be significantly less than: (a) the applicable ambient air quality standards (AAQS), which are designed to protect human health and the environment; and (b) the applicable Prevention of Significant Deterioration (PSD) increments, which are designed to protect against the degradation of ambient air quality.

- **Surface Water and Groundwater** - The proposed modifications to the PCRRF will not affect the existing surface water management system for the Certified Site. All of the surface and groundwater on the Certified Site is isolated from surrounding water bodies by a slurry wall. The surface water management system is designed to retain all of the stormwater from a 100 year storm on-site, without discharge, even after the modifications to the PCRRF are constructed.

-The proposed modifications to the PCRRF will increase non-potable water consumption slightly, primarily because the new APC system will require non-potable water for use in the Spray Dryer Absorbers. However, all of the process water for the APC system and the other components of the PCRRF will be obtained from on-site stormwater, retention basins or reclaimed domestic wastewater. The use of this non-potable water at the PCRRF will provide several indirect environmental benefits, including the reduction of wastewater flow to the County sewer system.

- Potable water consumption at the PCRRF will be reduced approximately 62 percent because the County will use onsite surface water runoff for boiler water makeup requirements.

- **Aesthetics** - Pinellas County intends to enclose portions of the APC system. It also will enclose all of the ash handling system and materials recovery facility. These modifications will reduce some of the PCRRF's potential impacts (e.g., noise, dust) and help make the facility more aesthetically pleasing to the public.
- **Land Use and Zoning** - The Siting Board previously ruled that the use of the Certified Site for the PCRRF is consistent and in compliance with existing land use plans and zoning ordinances. The proposed modifications to the PCRRF are consistent with the previously approved uses of the Certified Site and, further, they will help reduce the potential impacts of the PCRRF.
- **Noise** - The Certified Site is located on highly disturbed terrain which has been used for landfilling operations for more than 20 years. Noise from incoming trucks and heavy equipment has been commonplace. In addition, the Certified Site and adjacent areas are within the aircraft approach zone for runway 35R of the St. Petersburg/Clearwater International Airport.

-The noise generated during construction will be attenuated by the large buffer (approximately 1,300 feet) between the PCRRF and the nearest residential area, thus making the actual impacts minor.

- For most of its operating history, the PCRRF has had an excellent record as a good neighbor in the adjacent community. There have been relatively few noise complaints, with the majority occurring when the facility releases steam during startup and turbine trips. The County has taken an active role in identifying the source of the noise and taking corrective action by installing noise suppression equipment. In the same manner, efforts will be made during the design and procurement phase of the proposed modifications to include appropriate mitigative measures for reducing noise levels.

- **Traffic** - Traffic associated with the construction and operation of the proposed modifications to the PCRRF should not have any significant or unacceptable impacts on the existing road network in Pinellas County. There will be no reduction in the level of service for the existing roadways.
- **Socio-Economic Benefits** - The proposed modifications to the PCRRF will produce direct economic benefits of approximately \$58 million in construction costs through local jobs and the purchase of construction materials. An estimated \$235 million in indirect benefits will result from increased sales and jobs in industries which supply the various construction firms and construction labor force.

After installation of the proposed modifications, the direct benefits of the PCRRF are estimated to be \$19 million annually through provision of local jobs and the purchase of services and equipment. The indirect benefits are estimated to be \$76 million annually through increased sales and jobs in industries which sell goods and services to the Operator and its employees.

- **Socio-Economic Costs** - Construction of the proposed modifications will not require any additional commitments of land because existing equipment will be demolished to provide space for erection of the new systems. However, the cost of permitting, site preparation, equipment demolition, design and construction of the new air pollution control equipment and ancillary systems, and other engineering, legal, administrative and financing expenses is estimated to be approximately \$73 million. It is anticipated that the County will finance these costs through the issuance of revenue bonds. The County may be required to raise the tipping fees charged at the PCRRF to pay for the proposed modifications.



## **BOND REQUIREMENTS**

If all of the costs are financed, the proposed modifications to the PCRRF are estimated to require a \$82 million bond issue, which includes construction costs, engineering and design, permitting, legal counsel, bond issuance costs and debt service reserve funds. Total annual costs, which also include operating and maintenance costs, are estimated to be approximately \$12.7 million.

## **PROJECT IMPLEMENTATION**

The proposed modifications to the PCRRF, if pursued, will be constructed and operated by a full-service vendor under a long-term contract with the County. The selected vendor will have to guarantee compliance with all applicable environmental regulations, including the conditions of certification for the PCRRF, as modified in this proceeding. It is currently envisioned that construction of the proposed modifications will begin in 1996.

*PINELLAS COUNTY, FLORIDA*  
**Cost of Improvements to the**  
**Pinellas Resource Recovery Facility**

**(December 1994 Dollars)**

**BOND REQUIREMENTS:**

Capital Costs	\$66,500,000
Permitting, Legal, Contracts	\$6,500,000
Debt Service Reserve Fund	\$7,300,000
Bond Issuance Costs	<u>\$1,460,000</u>
Total Bond Issue	\$81,760,000
Lost Electric Revenues	\$252,000
Replacement Landfill	\$51,650
Bond Payments	\$6,856,400
Additional O & M Costs	<u>\$5,585,000</u>
Total Annual Costs	\$12,745,050
Tons Available	890,000

*PINELLAS COUNTY, FLORIDA*

**Pinellas County Resource Recovery Facility**  
**AIR POLLUTION CONTROL EQUIPMENT**  
**ENVIRONMENTAL FUNCTION**

**EQUIPMENT:**

**FUNCTION**

- **Spray Dryer Absorber (SDA)**

**Acid Gas Removal**

- **Hydrogen Chloride**
- **Sulfur Dioxide**

**Inhibits Reformation of  
Dioxins / Furans**

- **Fabric Filter (FF)**

**Particulate Matter Removal**

**Opacity Control**

**Metals Removal**

- **Lead**
- **Cadmium**

- **Powdered Activated Carbon  
Injection System (PACIS)**

**Mercury Removal**

**Dioxin / Furans Removal**

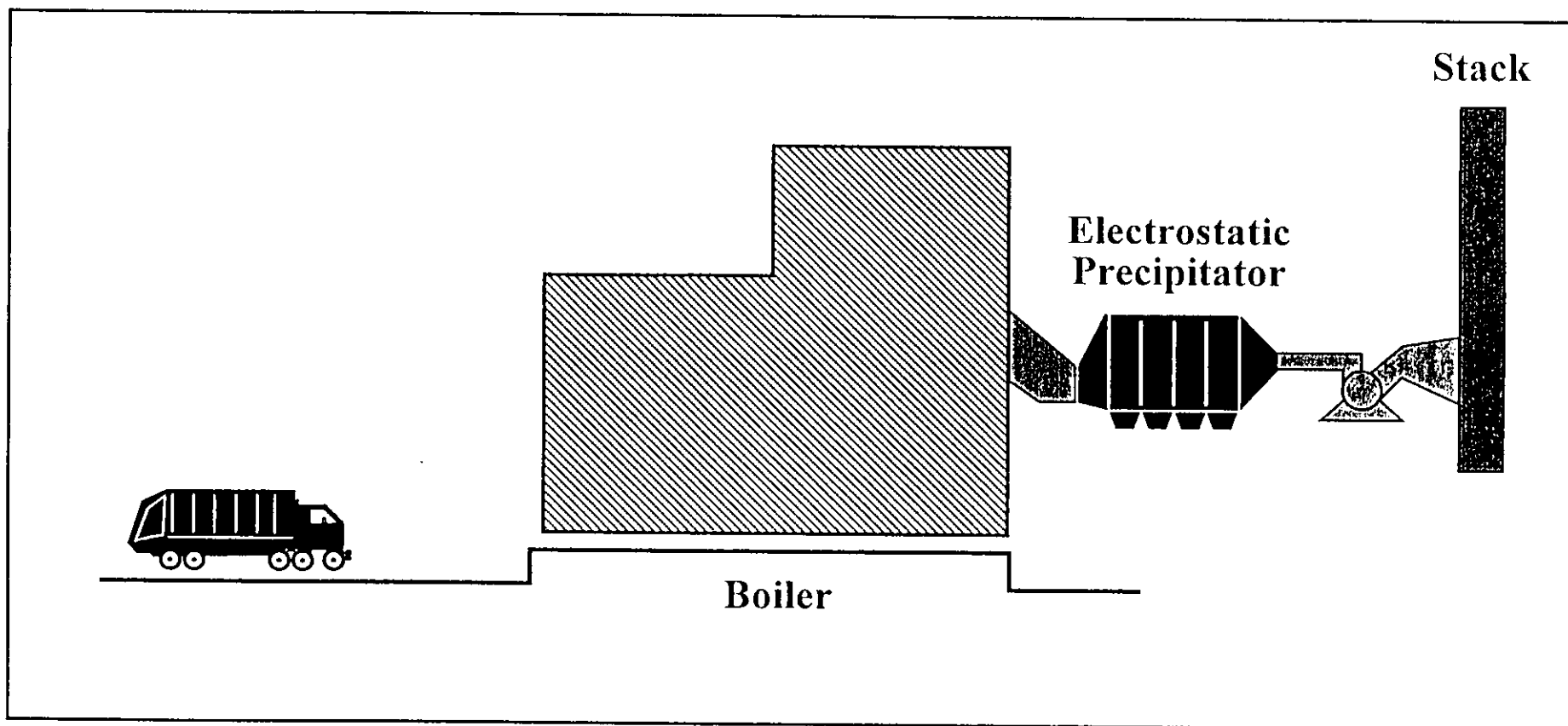
- **Selective Noncatalytic Reduction (SNCR)**

**Nitrogen Oxide Removal**

- **Optional**

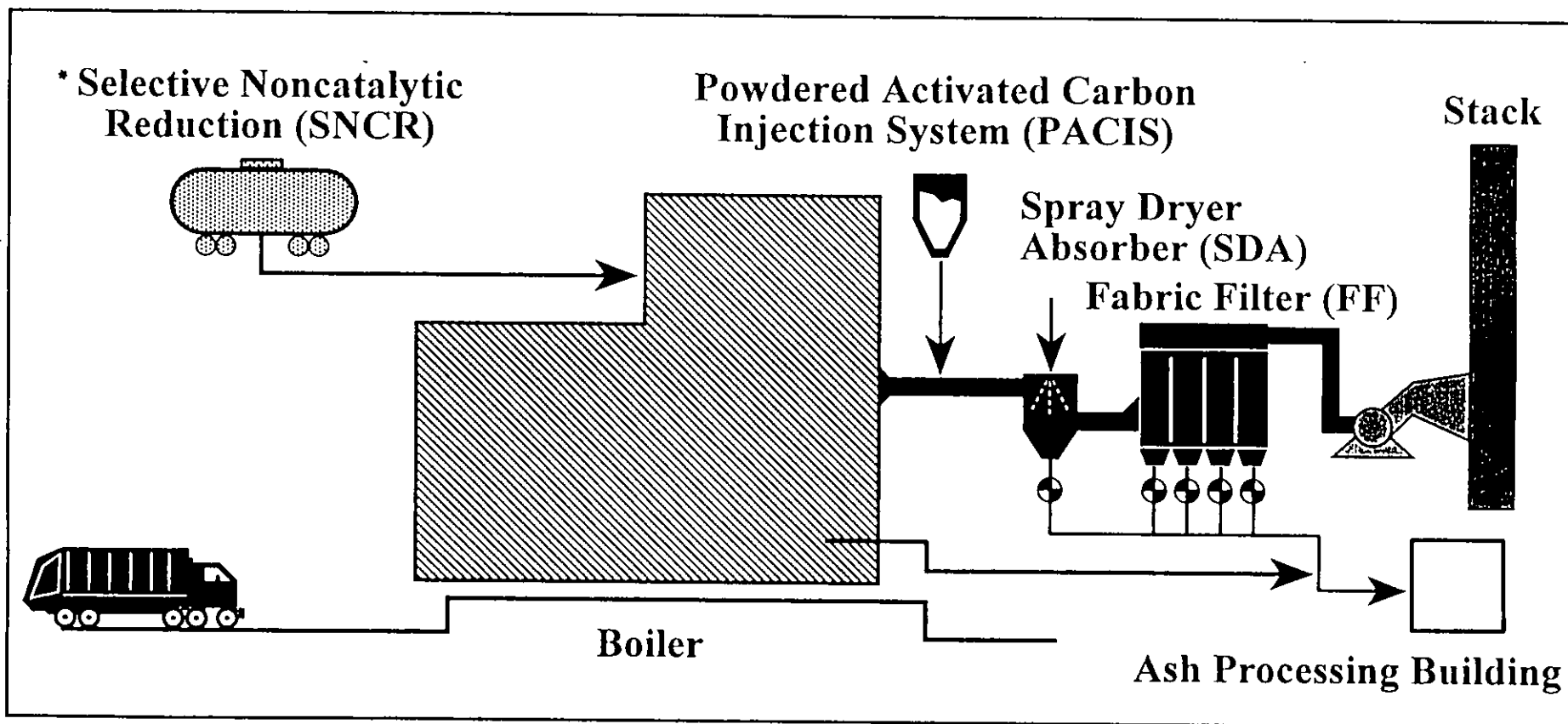
# Pinellas County Resource Recovery Facility

## *Existing Plant Configuration*



# Pinellas County Resource Recovery Facility

## *Proposed Plant Improvements*



\* Optional

#### IV. GENERAL CONDITIONS FOR THE MODIFIED FACILITY

- 1) No change from previous No. 1 To 7 Permit Conditions.
- 2) The emission limitations for the modified facility are based on the compliance methods specified for each pollutant. Any change in the specified compliance method for any pollutant shall also result in appropriate change to the emission limitation for the pollutant.

**is your RETURN ADDRESS completed on the reverse side?**

**SENDER:**

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

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

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:  
 Mr. Russell Menke, PF  
 Pinellas Co. Resource Rec. F.  
 14 S. Ft. Harrison Ave  
 5th Floor  
 Clearwater, FL 34616

4a. Article Number  
 Z 127 632 542

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

7. Date of Delivery  
 10-13

5. Signature (Addressee)  
 [Signature]

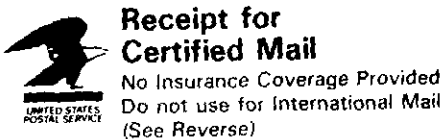
6. Signature (Agent)  
 [Signature]

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

PS Form 3811, December 1991 U.S. GPO: 1993-362-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Z 127 632 542



Sent to  
 Russell Menke  
 Pinellas Co RRF  
 Clearwater, FL

Postage \$

Certified Fee

Special Delivery Fee

Restricted Delivery Fee

Return Receipt Showing to Whom & Date Delivered

Return Receipt Showing to Whom, Date, and Addressee's Address

TOTAL Postage & Fees \$

Postmark or Date  
 PSD-FI-D11(A) 10-11-95  
 PSD-FI-048(A)

PS Form 3800, March 1993

Emission Limitation  
 OR Allow Emission  
 for Unit 43.  
 VOC - limit if any.