

Preliminary Determination  
and Draft Permit

Pinellas County Resource Recovery Facility Unit 3

Pinellas County, Florida

PSD-FL-098

Prevention of Significant Deterioration

40 CFR 52.21

Review performed by Florida Department of Environmental  
Regulation

June 11, 1986

## I. INTRODUCTION

Pursuant to Section 403.505, Florida Statutes, Pinellas County applied to the Florida Department of Environmental Regulation (DER) in August 1983 for certification of a steam electric generating, solid waste energy recovery facility at a site about one mile east of the town of Pinellas Park on the county's existing Bridgway Acres. After a thorough review by DER, including public hearings, the Florida Power Plant Siting Board issued a site certification to the County. At that time, DER believed that such a site certification constituted a legal prevention of significant deterioration (PSD) permit under Chapter 17-2.500 of the Florida air pollution regulations which had been approved by the U.S. Environmental Protection Agency (EPA) on December 22, 1983. In the summer of 1985, EPA became aware that the Florida Electrical Power Plant Siting Act (PPSA) under which the site certification was issued, restricts the authority of the State of Florida to implement any regulation pertaining to power plants other than those set out in the Act. Consequently, EPA determined that the Florida PSD regulations are superceded by the PPSA, and could not legally be approved by EPA as part of the State Implementation Plan (SIP) since the PPSA does not comply in part (as to PPSA covered sources) with EPA PSD regulations both procedurally and substantively. Thus, EPA concluded that the Pinellas County resource recovery facility (RRF), which was under construction, did not possess a valid PSD permit. EPA's remedy for this situation was to issue an Order under Section 167 of the Clean Air Act for Pinellas County to either cease construction or apply for a federal PSD permit under 40 CFR 52.21. EPA plans to issue in the near future a Federal Register notice clarifying its retention of PSD permitting authority as to sources subject to the PPSA. See also 51 Fed. Reg. 58 (Jan. 2, 1986).

On December 16, 1985, Pinellas County applied to DER for a PSD permit. (By that time, DER had been given authority by EPA to conduct the technical and administrative steps of the federal PSD permitting process.) In conducting the PSD review, EPA decided that, due to the unique circumstances of this permit application, the best available control technology (BACT) analysis would be conducted taking into account the factors affecting BACT at the time the County submitted a complete application for a site certification. That date was August 31, 1983.

Pinellas County does not agree that it lacks a valid PSD permit. The information supplied to the Department on December 16, 1985, was a resubmission of original data and modifications. Pinellas County submitted through the federal PSD permitting process under protest.

The proposed project will be a third resource recovery facility boiler which could use up to 1050 tons per day (TPD) of refuse as fuel. The proposed boiler expansion will increase the total

solid waste processing capacity of the plant to 3150 TPD. The steam from the new boiler will be sent to a turbine generator with a capacity of 29 megawatts (MW) (gross). Pinellas County has contracted with a full service vendor to design, construct, and operate the plant for 20 years. Generated electricity will be transmitted to the Florida Power Corporation (FPC) Gandy Substation for distribution over the FPC transmission system. The generating capacity of the expanded plant should be approximately 72 MW. The primary purpose of the facility is to dispose of solid waste. In addition to electricity, steam, ferrous metals, and aluminum could be recovered resources. Non-processible waste (including non-combustibles and demolition debris) and unusable residue will be buried at a licensed, off-site sanitary landfill. The sale of electricity, and eventually other processed and recovered resources, will help offset the overall cost of owning and operating the facility.

The Resource Recovery Facility (RRF) will be located on approximately 20 acres within the county's existing Bridgway Acres Phase I Landfill tract. The Phase I Landfill site is situated in the northern most 80 acres of a total of approximately 225 acres located just south of 114th Avenue North and west of 28th Street North. An existing 230 KV transmission line will be used to transmit the electricity from the resource recovery facility. Areas of the plant site not previously disturbed by landfilling. Activities were occupied either by pine flat woods or wet weather ponds. The topography is fairly level with elevation ranging from 5 to 10 feet above sea level across the tract. Geology of the site shows an over burden of sand, marl, and clay lies over solution riddle limestone and dolomite which forms the Floridan aquifer. The over burden forms a subsurface reservoir called the shallow aquifer. The proposed project will consist of a 29 MW steam electric generating turbine; one 1050 tons per day mass-burn solid waste fired boiler; a mechanical draft cooling tower; a 161 foot flue gas stack and an electrostatic precipitator.

Florida Power Corporation's existing 230 KV transmission line corridor will be used to transmit the electricity from the resource recovery facility.

## II. Rule Applicability

The proposed site of the Pinellas County RRF is in an area designated as nonattainment for ozone under 40 CFR 81.310, and attainment for all other criteria pollutants.

New major sources which emit attainment pollutants regulated under the Clean Air Act in amounts greater than certain significance levels, are subject to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The significance levels are specified by the PSD regulations.

New major sources in Pinellas County which are subject to the PPSA and which are major for a nonattainment pollutant will be subject to 40 CFR 52.24, statutory restriction on new stationary sources (construction ban). New municipal incinerators capable of charging greater than 50 TPD are also subject to 40 CFR 60, Subpart E, New Source Performance Standards (NSPS).

New municipal incinerators with a charging rate equal to greater than 50 TPD are also subject to Florida Rule 17-2.600(1)(c).

The applicant is proposing the construction of one 1050 TPD mass burn technology incinerator for the processing of up to 1050 TPD of municipal solid waste.

The average annual emissions from the unit for all regulated pollutants have been estimated by the applicant. These emission rates, and the PSD significant emission rates, are listed in Table II-1.

The proposed source has the potential to emit more than 100 tons per year of one or more regulated pollutants and is, therefore, subject to review for Prevention of Significant Deterioration (PSD) under 40 CFR 52.21. PSD review includes, among other requirements, a determination of Best Available Control Technology (BACT) and an air quality impact analysis for each attainment and noncriteria pollutant that would be emitted in a significant amount as listed in Table II-1. For the proposed source, the applicant has addressed PSD review for the seven pollutants which will be emitted in significant amounts: PM, SO<sub>2</sub>, CO, NO<sub>x</sub>, Pb, Hg, and fluorides.

The proposed source will emit less than 100 TPY of VOC (precursor of ozone), and is thus not subject to the construction ban of 40 CFR 52.24. The proposed incinerator will have a charging rate of 1050 tons per day, and thus is subject to NSPS and 17-2.600(1)(c). NSPS requires that the source meet a particulate emission rate of 0.08 grains per dry standard cubic foot (gr/dscf), corrected to 12% CO<sub>2</sub>. Regulation 17-2.600(1)(c) requires each incinerator to emit no more than .08 gr/dscf particulate corrected to 50% excess air.

### III. Preliminary Determination

As noted in Section II, Table II-1, the proposed source will result in significant emissions of the criteria pollutants PM, SO<sub>2</sub>, CO, NO<sub>x</sub>, and lead, and of the non-criteria pollutants mercury and fluorides.

The review required under the prevention of significant deterioration (PSD) regulations for these pollutants includes:

Table II-1  
 Unit #3  
 Pinellas County Resource Recovery Project  
 Typical Annual Emission Rates

Pollutant	Typical Annual Emission Rate (Ton/Yr)(1)	Significant Emission Rate for PSD Applicability
Particulate Matter (PM)	109	25
Sulfur Dioxide (SO <sub>2</sub> ) (2)	747	40
Carbon Monoxide (CO)	289	100
Nitrogen Oxides (NO <sub>x</sub> ) (3)	1112	40
Lead (Pb) (4)	19.3	0.6
Mercury (Hg)	1.3	0.1

- (1) Based on processing 1050 tons per day MSW for 365 days per year.  
 (2) Based on emission rate of 170 pounds SO<sub>2</sub> per hour.  
 (3) Based on emission rate of 254 pounds NO<sub>x</sub> per hour.  
 (4) Based on emission rate of 4.4 pounds Pb per hour.

Compliance with all applicable SIP, NSPS, and National Emission Standards for Hazardous Pollutants (NESHAP) regulations

BACT

An analysis of existing air quality;

A PSD increment analysis (for SO<sub>2</sub> and PM only);

An Ambient Air Quality Standards (AAQS) analysis;

An analysis of impacts on soils, vegetation, visibility, and growth-related air quality impacts, and;

A "Good Engineering Practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines. BACT is specified on a case-by-case basis considering environmental, economic, and energy impacts.

Based on these required analyses, the Department has reasonable assurance that the proposed unit at the Pinellas County RRF, as described in this report and subject to the conditions of approval proposed herein, will employ BACT, will not cause or contribute to a violation of any PSD increment or ambient air quality standard, and will comply with all applicable air pollution regulations. A discussion of all review components follows.

IV. Control Technology Review

a. BACT Determination

40 CFR 52.21 (j) requires that each pollutant subject to PSD review must be controlled by BACT. For unit #3 eight pollutants are subject to BACT. The BACT emission limits proposed by the Department are summarized as follows:

<u>Pollutant</u>	<u>BACT</u>
Particulate Matter	0.03 gr/dscf
Sulfur Dioxide	3.90 lb/ton
Nitrogen Oxides	5.80 lb/ton
Carbon Monoxide	1.51 lb/ton
Lead	.10 lb/ton

Mercury*	3200 grams/day
Beryllium	$1.3 \times 10^{-6}$ lb/ton
Fluorides	.10 lb/ton

\*when more than 2205 lb/day of municipal sludge is fired.

Also included as proposed permit conditions are limits on opacity, and VOC. These limits are required to insure the emissions of VOC do not exceed the threshold level for applicability of the construction ban.

The present plans are to install one 1050 tons per day (TPD) incinerator-boiler unit to process a total of 1050 TPD of MSW and generate 29 megawatts of electrical power.

The incinerator will have an approximate heat input of 438 million Btu per hour based upon a MSW calorific content of 4500 Btu per pound. The incinerator will be scheduled to operate 8760 hours per year and on this basis the tons per year of the various air pollutants emitted was calculated.

Based upon air pollutant emission factors provided by the applicant, the calculated total annual tonnage of regulated air pollutants emitted from the three units to the atmosphere is listed in Table II-1.

The applicant has proposed the following air pollutant emission limits, on a pound per ton basis: Particulate-0.57, CO-1.5, SO<sub>2</sub>-3.9, NO<sub>x</sub>-5.8, Pb-0.10, Hg-0.010, Be- $1.30 \times 10^{-6}$ , and fluorides-0.10. An electrostatic precipitator (ESP) will be used to control the particulate, Pb, Hg, and Be emissions. Design and operating procedures will control the emission of VOC, CO and NO<sub>x</sub>. The firing of only MSW, a low sulfur content fuel, will limit SO<sub>2</sub>.

The applicant has requested emission limits for SO<sub>2</sub> to be 170 pounds per hour. Emission test data for a multitude of solid waste combustion facilities is contained in the California Air Resource Board Report. These data indicate that emissions of SO<sub>2</sub> from these facilities range from 0.4 to 7.2 pounds of SO<sub>2</sub> per ton of solid waste fired. The proposed emission limit of 120 pounds per hour, equivalent to 3.9 pounds of SO<sub>2</sub> per ton of solid waste fired, is in the middle of this expected range.

The 170 pounds per hour figure is judged to be BACT. The amount of SO<sub>2</sub> emitted would be comparable to the burning of distillate oil having a 0.35 percent sulfur content. Burning low sulfur fuel is one acceptable method of controlling SO<sub>2</sub> emissions. The installation of a flue gas desulfurization system to control SO<sub>2</sub> emissions is not warranted when burning MSW.

The mercury emission limit determined as BACT is equal to the National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The provisions of this subpart, however, do not apply because no grease, scum, grit screenings or sewage sludge will be incinerated in the proposed incinerators. According to the report "Air Pollution Control at Resource Recovery Facilities" issued by the California Air Resources Board, the average mercury emission factor when firing MSW is  $4 \times 10^{-4}$  pounds per million Btu. The applicant has proposed an emission limit of 3200 gram/day when more than 2205 lbs/day of municipal sludge is fired. This value is judged to be BACT.

The uncontrolled emission of beryllium, according to the California report, when firing MSW is estimated to be  $6.2 \times 10^{-6}$  pounds per million Btu. Uncontrolled beryllium emissions would be approximately 11 grams per 24 hours or 0.01 TPY. The operating temperature of the particulate matter emission control device will be below 500°F. Operation below this temperature is necessary to force absorption/condensation of beryllium oxides, present in the flue gas stream, onto available fly ash particles subsequently removed by the control device. Assuming 95% efficiency of the control device the annual beryllium emissions are estimated at 0.0007 tons per year. This amount of beryllium emitted is considered to have a negligible impact on the environment. The emission factor of  $1.30 \times 10^{-6}$  lb/ton MSW proposed by the applicant is judged to be BACT. If beryllium containing waste as defined in the National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart C, Subsection 61.31(g), were charged into the incinerator, emissions of beryllium to the atmosphere could not exceed 10 grams per 24 hours or an ambient concentration of 0.01 ug/m<sup>3</sup>, 30 day average. Compliance with this beryllium emission limit would be in accordance with NESHAP, Subpart C. However, the applicant has not applied to burn beryllium-containing waste, and the permit prohibits this activity.

The temperature of the incinerator combustion gases at the inlet to the particulate control device is estimated to be 425-475 °F. At these temperatures any lead would be in a nonvaporous state and would be removed by the particulate control device. The lead emission limit will be set at 0.10 pounds per ton of MSW charged into the incinerator. This level of control is judged to be BACT.

Since there are several secondary lead reclamation plants in the Tampa area, there is an economic incentive to recycle lead containing materials. The majority of lead emissions from an incinerator are expected to originate from solder joints in discarded electronic devices. The amount of lead emitted is not considered to have a significant impact upon the environment.



During combustion of municipal solid waste,  $\text{NO}_x$  is formed in high temperature zones in and around the furnace flame by the oxidation of atmospheric nitrogen and nitrogen in the waste. The two primary variables that affect the formation of  $\text{NO}_x$  are the temperature and the concentration of oxygen. Techniques such as the method of fuel firing to provide correct distribution of combustion air between overfire and underfire air, exhaust gas recirculation, and decreased heat release rates have been used to reduce  $\text{NO}_x$  emissions. A few add-on control techniques such as catalytic reduction with ammonia and thermal de- $\text{NO}_x$  are still experimental, and are not considered to be demonstrated technology for the proposed project.

The proposed unit will use proprietary grate and combustion controls to limit  $\text{NO}_x$  emissions at 254 pounds per hour. This level of control is judged to represent BACT.

Carbon monoxide is a product of incomplete combustion where there is insufficient air. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The department agrees with the applicant that BACT is the grate and combustion control system to insure sufficient mixing of the MSW and air so that the emission of products of incomplete combustion is minimized. The proposed CO emission rate is 66 pounds per hour. This level of control is judged to represent BACT.

Furthermore, CO has a calorific value of 4347 Btu/lb and when discharged to the atmosphere represents lost heat energy. Since heat energy is used to produce the steam which drives the generator to produce electric power, there is a strong economic incentive to minimize CO emissions.

Particulate matter emissions will be controlled by an electrostatic precipitator (ESP). The proposed boiler will be equipped with its own ESP which will be efficient to 0.030 grains per dry standard cubic foot corrected to 12%  $\text{CO}_2$  at the outlet. At this emission rate, particulate matter emissions for the facility will be approximately 109 tons per year.

The applicant indicates that fluorides will be emitted by the proposed facility. Emissions of fluoride are estimated at 0.10 pounds per ton of fuel combusted. At this emission rate, fluorides would be emitted at a rate of 4.3 pounds per hour or 19.0 tons per year. The significant emission rate for fluoride is 3.0 tons per year. Control of acid gas emissions would be obtained by a scrubber. However, at the level of these acid gas emissions, the addition of a scrubber for acid gas control would be uneconomical. No control is judged to represent BACT.

b. NSPS and Florida SIP Limit Analysis

These two regulations dictate similar emission limits using slightly different units. The proposed particulate emission limit of 0.030 gr/dscf is far below either of these limits.

V. Air Quality Analysis

The air quality impact of the proposed emissions has been analyzed. Atmospheric dispersion modeling has been completed and used in conjunction with an analysis of existing air quality data to determine maximum ground-level ambient concentrations of the pollutants subject to BACT. Based on these analyses, the department has reasonable assurance that the proposed solid waste recovery facility in Pinellas County, subject to these BACT emission limitations, will not cause or contribute to a violation of any PSD increment or ambient air quality standard.

a. Modeling Methodology

Two EPA-approved dispersion models, the Single Source CRSTER model and the Industrial Source Complex Short-term (ISCST) model, were used in the air quality impact analysis. Both of these models relate ground-level concentrations to pollutant emissions of inert gases or small particles from a point source by imposing a Gaussian solution to the steady-state mass conservation equation. The CRSTER model, which is confined by the collocation of all point sources, was used to identify the critical years of meteorology. The ISCST model, which allows for separation of sources and several other features, such as the inclusion of building wake downwash, was used to refine the analysis.

The surface and upper air meteorological data used in these models were National Weather Service data collected at Tampa, Florida, during the period 1970-1974. Since five years of data were used, the highest, second-high short-term predicted concentrations may be used to compare with the appropriate ambient standard or PSD increment.

The stack parameters and emission rates used in evaluating the ambient impacts are contained in Table V-1 and Table V-2, respectively. The new Unit 3 is to be identical to Units 1 and 2. The actual design data for these two units are used for Unit 3. These data were developed in the design process and vary from that used in the original application. Only for the pollutants SO<sub>2</sub> and PM were all the sources evaluated. Total ambient air quality impacts were based on the modeled impacts plus the monitored "background" concentrations.

TABLE V-1  
PINELLAS COUNTY RESOURCE RECOVERY PROJECT  
SOURCE PARAMETERS USED IN MODELING

Source	UTM-E (km)	UTM-N (km)	Stack Height (m)	Exit Temperature (K)	Exit Velocity (m/s)	Stack Diamet (m)
RRF Unit 3	335.2	3084.1	49.1	505	26.8	2.37
RRF Units 1-2	335.2	3084.1	49.1	505	26.8	2.37
McKay Bay RRF	360.0	3091.9	45.7	500	21.3	1.91
TECO Big Bend	361.9	3075.0	149.4	426	15.6	7.00
FPC Bartow	342.4	3082.7	91.4	408	44.0	3.35
FPC Higgins	336.5	3098.5	53.0	422	10.4	3.81
Anclote Unit 1	324.9	3119.0	152.1	416	50.0	3.66
Anclote Unit 2	324.9	3119.0	152.1	416	28.3	3.66
Hooker Pt. Units 1,2	360.0	3087.5	61.0	427	8.1	4.30
Hooker Pt. Units 3,5	360.0	3087.5	93.3	400	26.9	3.20
Hooker Pt. Unit 4	360.0	3087.5	93.3	438	42.4	2.90
Hooker Pt. Unit 6	360.0	3087.5	93.3	417	23.4	5.40
TECO Gannon Units 1-5	385.0	3091.0	85.3	403	9.2	3.43
TECO Gannon Unit 6	385.0	3091.0	85.3	403	18.0	2.87

Area Source	UTM-E (km)	UTM-N (km)	Release Height (m)	Area Width (m)
Golden Triangle	330.0	3085.0	12.45	100



Appendix A is a summary of the pertinent modeling output.

b. Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring may be required for all pollutants subject to PSD review. In general, one year of quality assured data using an EPA-reference, or the equivalent, monitor must be submitted. Sometimes less than one year of data, but no less than four months, may be accepted when department approval is given. An exemption to this requirement can be obtained if the maximum air quality impact, as determined through modeling, is less than a pollutant-specific de minimus concentration. In addition, if current monitoring data already exist and these data are representative of the proposed source area, then at the discretion of the department these data may be used.

The predicted maximum air quality impacts of the proposed project (Unit 3) for each of the seven pollutants subject to review are given in Table V-3 along with the monitoring de minimus levels. From the table it is seen that PM, NOx, CO, and Hg have maximum air impacts less than the de minimus level; therefore no preconstruction monitoring is required. Sufficient data in the area of the source already exist for SO<sub>2</sub> and Pb to define existing air quality for these pollutants. Two continuous SO<sub>2</sub> monitors are located in the vicinity of the proposed project. The first, located at site 3620-002, is an SPM station with the objective of monitoring emissions from the RRF. It is located 1.8 kilometers from the facility and was placed at that location as part of the post construction monitoring requirements associated with the operation of units 1 and 2. The second SO<sub>2</sub> monitor, site 3980-023, is a NAMS station sited for population exposure measurements. It is 5.1 kilometers from the facility. The nearest lead monitor is located at site 3980-024, 10.4 kilometers from the RRF. This SPM monitor is sited to measure the maximum concentration of lead in an area of high traffic volume. As such, concentration levels measured at this site should be greater than at the RRF, and this be a conservative measure of background levels there.

Although fluorides are subject to monitoring requirements, no EPA-approved method currently exists to measure ambient concentrations of this pollutant.

Table V-4 shows the monitored ambient air quality levels for the most recent complete year (1982) for all the criteria pollutants, including the required data for SO<sub>2</sub> and Pb. These data were collected from existing monitors in Pinellas County.

TABLE V-3

MAXIMUM AIR QUALITY IMPACTS (UNIT 3 ONLY)  
FOR COMPARISON TO DEMINIMUS AMBIENT LEVELS

<u>Pollutant</u>	<u>Maximum Modeled Concentration (ug/m<sup>3</sup>)</u>	<u>Deminimus Ambient Impact Level (mg/m<sup>3</sup>)</u>
SO <sub>2</sub> (24-hour)	16.4	13
PM (24-hour)	4.1	10
NO <sub>2</sub> (Annual)	1.7	14
CO (8-hour)	8.6	575
Pb (24-hour)	0.42	0.1
Hg (24-hour)	0.082	0.25
Fluorides (24-hour)	0.82	0.25

TABLE V-4

PINELLAS COUNTY 1982 MONITORING DATA IN THE VICINITY OF  
THE PINELLAS COUNTY RESOURCE RECOVERY FACILITY

<u>Pollutant</u>	<u>Site</u>	<u>Averaging Time</u>	<u>Maximum Concentration(ug/m<sup>3</sup>)</u>	<u>2nd Maximum Concentration(ug/m<sup>3</sup>)</u>
SO <sub>2</sub>	3980 023	3-hour	642	485
		24-hour	205	112
		Annual	24	-
PM	3980 023	24-hour	67	64
		Annual	33	-
NO <sub>2</sub>	3980 018	Annual	27	-
CO	3980 018	1-hour	14000	11000
		8-hour	7000	6000
Pb	3980 024	Quarterly	0.8	0.7

### c. PSD Increment Analysis

The Pinellas County RRF is located in an area where the Class II PSD increments apply. The facility is also located approximately 75 kilometers from the Class I Chassahowitzka National Wilderness Area. As such an analysis of the impact on this area must be performed.

A PSD increment analysis is required for the pollutants SO<sub>2</sub> and PM only. The PSD increments represent the amount that new sources in the area may increase ambient ground-level concentrations of these pollutants for various time averages. At no time, however, can the increased loading of these pollutants into the atmosphere from these new sources cause or contribute to a violation of the ambient air quality standards.

For the Pinellas County RRF the proposed Unit 3 along with the previously built Units 1 and 2 all consume PSD increment. In addition, several other new sources in the area have been identified which may interact with the Pinellas County RRF in consuming the allowed PSD increments. These sources are the McKay Bay RRF and the TECO Big Bend power plant. Two other sources have been identified by the department as having the potential to affect the increment consumption. These sources are the city of Largo Wastewater Treatment Facility and the Hubert Rutland Hospital. Analysis by the department has shown, however, that these two additional sources will not significantly contribute to increment consumption.

Atmospheric dispersion modeling was performed, as discussed previously, taking into account only those new sources which consume PSD increment. The results of the modeling are summarized in Table V-5.

The impact of these sources on the nearest Class I area was not explicitly modeled. The models used in this air quality analysis are not appropriate for predicting ground-level concentrations beyond 50 kilometers. However, the impact on the Class I area may be extrapolated from modeling results showing the proposed Unit 3 impact on the two distant non-attainment areas. An SO<sub>2</sub> nonattainment area is located near Tarpon Springs approximately 23.5 kilometers from the Pinellas County RRF. The impacts of Unit 3 alone on this area are 2.2 ug/m<sup>3</sup>, 3-hour average; 0.3 ug/m<sup>3</sup>, 24-hour average; and 0.02 ug/m<sup>3</sup>, annual average. These values are less than significant for impacts on nonattainment areas and would be much less at the distance of the Class I area. A PM nonattainment area is located in Tampa, 14.4 kilometers from the RRF. Here, the impacts of Unit 3 alone are 0.01 ug/m<sup>3</sup>, 24-hour average and 0.006 ug/m<sup>3</sup>, annual average. Again, these impacts are less than significant for nonattainment areas and the concentrations would be much less at the distance



TABLE V-5  
COMPARISON OF NEW SOURCE IMPACTS  
WITH PSD INCREMENTS

Pollutant and Time Average	PSD Class II Increment( $\mu\text{g}/\text{m}^3$ )	Predicted Concentration( $\mu\text{g}/\text{m}^3$ )	PSD Class I Increment( $\mu\text{g}/\text{m}^3$ )	Predicted Concentration( $\mu\text{g}/\text{m}^3$ )
SO <sub>2</sub>				
3-hour	512	263	25	< 4
24-hour	91	81	5	< 1
Annual	20	5	2	<<1
PM				
24-hour	37	6	10	<< 1
Annual	19	0.4	5	<<1

of the Class I area. Table V-5 indicates the results of all the PSD increment modeling.

#### d. AAQS Analysis

Given existing air quality in the area of the Pinellas County RRF, the proposed Unit 3 emissions are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are contained in Table V-6.

Of the pollutants subject to PSD review only the criteria pollutants SO<sub>2</sub>, PM, CO, NO<sub>2</sub>, and Pb have an AAQS with which to compare. All sources listed in Table I-1 were modeled to determine the maximum ground-level impacts for SO<sub>2</sub>, and PM. For CO, NO<sub>2</sub>, and Pb only the three units at the Pinellas County RRF were modeled to determine the maximum ground-level concentrations resulting from this facility. The quarterly (90 day) average, for which the lead standard is based, was conservatively estimated by using the maximum 24-hour concentration. Although the estimated lead concentration is greater than the AAQS for that pollutant, the department assumes that if quarterly averaging had been completed, then concentration estimates would be at or below the AAQS.

The total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentrations. This "background" concentration takes into account all sources of the particular pollutant in question that were not explicitly modeled. A conservative estimate of these "background" concentrations as listed in Table V-4. These are conservative estimates because sources used in the modeling may have contributed to the monitored value and this would be contributing doubly to the total impact.

### VI. Additional Impacts Analysis

#### a. Impacts on Soils and Vegetation

The maximum ground-level concentrations predicted to occur as a result of emissions from the proposed project in conjunction with all other sources, including a background concentrations, will be below all applicable AAQS including the secondary standards designed to protect public welfare-related values. No soils or species of vegetation highly sensitive to these emissions in the concentrations predicted are known to occur in the site vicinity, or in the Chassowitzka Class I area.

#### b. Impact on Visibility

A level I visibility screening analysis was performed to determine if any impact may occur in the Class I area. The analysis showed that there was no potential for an adverse impact on visibility in this area.

TABLE V-6  
COMPARISON OF TOTAL IMPACTS WITH  
AMBIENT AIR QUALITY STANDARDS

Pollutant and Time Average	Maximum Impact Unit 3 (ug/m <sup>3</sup> )	Maximum Impact All Sources (ug/m <sup>3</sup> )	Existing Background (ug/m <sup>3</sup> )	Maximum Total Impact (ug/m <sup>3</sup> )	Florida AAQS (ug/m <sup>3</sup> )
SO <sub>2</sub>					
3-hour	34	269	485	754	1300
24-hour	16	97	112	209	260
Annual	1	13	24	37	60
PM					
24-hour	4	6	64	70	150
Annual	0.2	0.7	33	34	60
NO <sub>2</sub>					
Annual	2	6	27	33	100
CO					
1-hour	13	39	11000	11039	40000
8-hour	9	27	6000	6027	10000
Pb					
Quarterly	0.4 <sup>(1)</sup>	1.6 <sup>(1)</sup>	0.8	2.4 <sup>(1)</sup>	1.5

(1) Conservatively estimated by using the maximum 24-hour concentration. The quarterly (30-day) average concentration will be less than the values recorded here.

c. Acid Rain Impact

The increased emissions of SO<sub>2</sub> and NO<sub>x</sub>, precursors to possible acid formation and subsequent acidic rain, from the proposed Unit 3 project are relatively small. In comparison with the emissions of these pollutants from nearby power plants the increased loading due to the proposed project is inconsequential. Thus, no adverse impact on the acidity of rainfall is expected as a result of this project.

d. Growth-Related Air Quality Impacts

The construction of the proposed Unit 3 will require between 200 and 300 persons. Nearly all will be from the local area. The project is not expected to stimulate any additional growth or shift the nature of projected growth to the extent that an air quality impact will result.

e. GEP Stack Height Determination

Good engineering practice (GEP) stack height means the greater of: (1) 65 meters; or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. For the proposed project the building height is 35.4 meters and the building width is 35.0 meters. Thus definition (2) above leads to a GEP stack height of 87.9 meters.

Due to the proximity of the facility to an airport, the stack height cannot be built to the GEP height. The applicant has addressed the possible increased ground-level concentrations (as a result of aerodynamic effects of the nearby building) by including a downwash mechanism in the modeling.

VII. Nonattainment Review

EPA announced approval of Florida's new source review program for major sources in designated nonattainment areas on March 18, 1980 (45 FR 17140). Subsequently, in 1985, EPA discovered that the Florida Power Plant Siting Act supercedes in part the nonattainment new source review regulations under Florida law. Consequently, the Florida SIP is deficient with respect to electrical power plants. EPA plans to issue, in the near future, a federal register notice clarifying that two sets of nonattainment regulations will apply:

(1) For sources located in designated nonattainment areas, EPA's construction ban (40 CFR 52.24) applies to major sources and major modifications, and

(2) For sources locating in designated attainment or unclassifiable areas, EPA's Interpretative Ruling (40 CFR 51.18 Appendix S) will apply to major sources and major modifications.

The proposed source will be located in an area designated nonattainment for ozone, but is not a major source of VOC and, thus, will not be subject to the construction ban. The source will be located 23.5 kilometers from SO<sub>2</sub> nonattainment area and is a major source for SO<sub>2</sub>. Under the Interpretative Ruling, the proposed source would be subject to certain more stringent requirements if the impact of its SO<sub>2</sub> emissions on the nearby nonattainment area exceeded 1 ug/m<sup>3</sup> annual average, 5 ug/m<sup>3</sup> 24-hour average, or 25 ug/m<sup>3</sup> 3-hour average. The modeling analysis shows the impacts of the proposed source to be less than each of those levels, so the Interpretative Ruling will not apply. The source is also located 14.4 kilometers from the Tampa particulate nonattainment area. Again, the predicted impacts on this area are less than significant and the Interpretative Ruling does not apply.

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

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

Unit #3, Pinellas County, Florida

is, as of the effective date of this permit (PSD-FL-98) authorized to construct a stationary source at the following location:

One mile east of Pinellas Park on  
the existing County's existing  
Bridgeway Acres Phase I Landfill tract.

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

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

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

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

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
Regional Administrator

PART I

Specific Conditions

1. Emission Limitations

a. Stack emissions from Unit #3 shall not exceed the following:

- (1) Particulate matter: 0.030 grains per dry standard cubic foot corrected to 12% CO<sub>2</sub> (gr/dscf-12%) or 24.9 pounds per hour whichever is more restrictive.
- (2) Visible Emissions: Opacity of stack emissions shall not be greater than 20% opacity. Excess opacity resulting from startup or shutdown shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess opacity shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by EPA for longer duration.

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

- (3) SO<sub>2</sub>: 170 lb/hr
- (4) Nitrogen Oxides: 254 lb/hr
- (5) Carbon Monoxide: 66.0 lb/hr, or 1.8 lb/ton, whichever is more restrictive.
- (6) Lead: 4.4 lb/hr
- (7) Fluorides: 4.4 lb/hr
- (8) Beryllium:  $56.9 \times 10^{-6}$  lb/hr
- (9) Mercury: 3200 grams/day when more than 2205 lbs/day of municipal sludge is fired.
- (10) The potential for dust generation by ash handling activities will be mitigated by quenching the ash prior to loading in ash transport trucks.

(11) The Unit #3 is subject to 40 CFR Part 60, Subpart E, New Source Performance Standards (NSPS), except that where requirements in this permit are more restrictive, the requirements in this permit shall apply.

b. Compliance Tests

(1) Compliance tests for particulate matter, SO<sub>2</sub>, nitrogen oxides, CO, fluorides, mercury and beryllium shall be conducted in accordance with 40 CFR 60.8 (a), (b), (d), (e), and (f), except that an annual test will be conducted for particulate matter. Compliance tests for opacity will be conducted simultaneously during each compliance test run for particulate matter.

Compliance tests shall be conducted for such time and under such conditions as specified by EPA prior to the compliance test. These conditions will be specified by EPA upon notification of performance tests as required by General Condition 1. The permittee shall make available to EPA such records as may be necessary to determine the conditions of the performance tests.

(2) The following test methods and procedures from 40 CFR Parts 60 and 61 shall be used for compliance testing:

- a. Method 1 for selection of sample site and sample traverses
- b. Method 2 for determining stack gas flow rate when converting concentrations to or from mass emission limits.
- c. Method 3 for gas analysis when needed for calculation of molecular weight or percent CO<sub>2</sub>.
- d. Method 4 for determining moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits.
- e. Method 5 for concentration of particulate matter and associated moisture content. One sample shall constitute one test run.



- f. Method 9 for visible determination of the opacity of emissions.
- g. Method 6 for concentration of SO<sub>2</sub>. Two samples, taken at approximately 30 minute intervals, shall constitute one test run.
- h. Method 7 for concentration of nitrogen oxides. Four samples, taken at approximately 15 minute intervals, shall constitute one test run.
- i. Method 10 (continuous) for determination of CO concentrations. One sample constitutes one test run.
- j. Method 12 for determination of lead concentration and associated moisture content. One sample constitutes one test run.
- k. Method 13A or 13B for determination of fluoride concentrations and associated moisture content. One sample shall constitute one test run.
- l. Method 101A for determination of mercury emission rate and associated moisture content. One sample shall constitute one test run.
- m. Method 104 for determination of beryllium emission rate and associated moisture content. One sample shall constitute one test run.

(3) The stack tests shall be performed at design capacity.

- 2. The height of the boiler exhaust stack shall be 161 feet above ground level at the base of the stack.
- 3. The incinerator boilers shall not be loaded in excess of their rated capacity of 87,500 pounds per hour each.
- 4. The incinerator boilers shall have a metal name plate affixed in a conspicuous place on the shell showing manufacturer, model number, type waste, rated capacity and certification number.
- 5. The permittee must submit to EPA and DER within fifteen (15) days after it becomes available to the County, copies of technical data pertaining to the incinerator boiler design, to the electrostatic precipitator design, and to the fuel mix that can be used to evaluate compliance of the facility with the preceding emission limitations.

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

7. Electrostatic Precipitator

The electrostatic precipitator shall be designed and constructed to limit particulate emissions to no more than 0.30 grains per dscf corrected to 12% CO<sub>2</sub>.

8. Stack Monitoring Program

The permittee shall install and operate continuous monitoring devices for oxygen and stack opacity. The monitoring devices shall meet the applicable requirements of Rule 17-2.710, FAC, 40 CFR Part 60, Subparts A and D, Sections 60.13 and 60.45 respectively, except that emission rates shall be calculated in units consistent with emission limits in this permit. The conversion procedure shall be approved by EPA.

9. Reporting

a. A copy of the results of the stack tests shall be submitted within forty-five days of testing to the DER Southwest Florida District Office, the Pinellas County Department of Environmental Management (PCDEM) and EPA Region IV.

b. Stack monitoring shall be reported to PCDEM, the DER Southwest District Office and EPA Region IV on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR, Part 60, Subsection 60.7.

10. Fuel

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

11. Addresses for submitting reports are:

a. EPA - Region IV

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

b. DER

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

c. Southwest District Office of DER

District Manager  
Department of Environmental Regulation  
7601 Highway 301 N.  
Tampa, FL 33610

## PART II

### General Conditions

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

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

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

5. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit and EPA of the change in control of ownership within 30 days.
6. The permittee shall allow representatives of the state and local environmental control agency or representatives of the EPA upon the presentation of credentials:
  - (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;
  - (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Clean Air Act;
  - (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;
  - (d) to sample at reasonable times any emissions of pollutants; and
  - (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.
7. The conditions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

Notice of Prevention of Significant Deterioration (PSD)  
Draft Permit

Name and address of applicant:

Pinellas County  
315 Haven Street  
Clearwater, Florida 33516

Name and address of office processing application:

Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301

On August 31, 1986, Pinellas County applied to the Florida Department of Environmental Regulation (DER) to construct a third 1050 ton per day (TPD) unit at the existing energy recovery facility at the county's Bridgeway Acres site. The application is subject to U.S. Environmental Protection Agency (EPA) regulations for Prevention of Significant Deterioration of Air Quality (PSD), codified at 40 CFR 52.21. These regulations require that, before construction on a source of air pollution subject to PSD may begin, a permit must be obtained from EPA. Such permit can only be issued if the new construction has been determined by EPA to comply with the requirements of the PSD regulations which are described in 40 CFR 52.21. These requirements include a restriction on the incremental increases in air quality due to the new source, and application of best available control technology (BACT).

A special set of circumstances is applicable to this PSD permit application. A permit to construct the source was issued by the Power Plant Siting Board on February 29, 1984 under the Florida Power Plant Siting Act. At that time, DER considered such a permit to constitute a PSD permit issued under Florida's PSD regulations, which have been approved by EPA. Such approval by EPA transferred permit signature authority for PSD sources from EPA to DER. Subsequent to the issuance of that permit, EPA determined that Power Plant Site Certifications, because of certain procedural differences, do not constitute PSD permits under the DER regulations, and thus do not satisfy the requirements of the Federal Clean Air Act. In order to rectify this situation, EPA withdrew authority from DER to issue PSD permits to such sources, but delegated to DER the authority to process the PSD applications in preparation for issuance of a permit by EPA.

Since Florida had already issued a Site Certification to Pinellas County, the source had begun construction prior to EPA's determination that the Florida procedure is inadequate.

Consequently, EPA issued an administrative order under Section 167 of the Clean Air Act, which required Pinellas County to either immediately apply for a PSD permit or cease construction. On December 16, 1985, Pinellas County, while reserving all rights, applied to DER for a PSD permit for Unit #3. Because of the special circumstances surrounding this application, EPA determined that the determination of best available control technology for this source could be made as of the date of the original complete application to Florida for a Power Plant Site Certification permit. Therefore, the draft permit and preliminary determination reflect the best available control technology as of August 31, 1983, the date of that application.

The DER has been granted delegation by EPA to carry out the PSD review of this source, except for final signature of the PSD permit. Acting under that delegation, the DER has prepared a draft permit and made a preliminary determination that the construction will comply with all applicable provisions of the PSD regulations. The degree of increment consumption that will result from the construction is:

Class I Area

<u>Pollutant</u>	<u>Annual Avg.</u>	<u>24-hr. Avg.</u>	<u>3-hr. Avg.</u>
Sulfur Dioxide	<<50%	<20%	<16%
Particulate Matter	<<20%	<<10%	N/A

Class II Area

<u>Pollutant</u>	<u>Annual Avg.</u>	<u>24-hr. Avg.</u>	<u>3-hr. Avg.</u>
Sulfur Dioxide	25%	89%	51%
Particulate Matter	2%	16%	N/A

A copy of the administrative record of the application, including the draft PSD permit, the preliminary determination, and all materials submitted by the applicant, will be available for review for 30 days during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:

Department of Environmental Regulation  
 Bureau of Air Quality Management  
 2600 Blair Stone Road  
 Tallahassee, Florida 32301  
 Department of Environmental Regulation  
 Southwest District  
 7601 Highway 301 North  
 Tampa, Florida 33509

Pinellas County Department of  
Environmental Management  
Division of Air Quality  
16100 Fairchild Drive  
Bldg. - V102  
Clearwater, Florida 33520

Written comments on the preliminary determination may be submitted to:

C. H. Fancy, P.E.  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
Telephone (904)488-1344

Further information on the application, including copies of the application, the draft permit, and a fact sheet, may be obtained from the person named above.

All comments postmarked within 30 days of the date of this notice will be considered by DER in preparing the final determination. The final determination will be sent to EPA for issuance or denial of the PSD application.

Any person may request a public hearing on the draft permit. Request must be in writing, and shall state the issues to be raised in the hearing.

Requests for a hearing must be postmarked not later than 30 days from the date of this notice and sent to:

C. H. Fancy, P.E.  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
Telephone (904)488-1344



# NOTICE OF CERTIFICATION HEARING ON AN APPLICATION TO CONSTRUCT AND OPERATE AN ELECTRICAL POWER PLANT ON A SITE TO BE LOCATED NEAR PINELLAS PARK, FLORIDA

1. Application number 83-18 for certification to authorize construction and operation of an addition to an electrical power plant near Pinellas Park, Florida, is now pending before the Department of Environmental Regulation, pursuant to the Florida Electrical Power Plant Siting Act, Part II, Chapter 403, F.S.

2. The resource recovery facility site is located in Pinellas County within the existing Pinellas County Resource Recovery Facility property 2 miles northeast of Pinellas Park, south of 114th Avenue, north and west of 28th Street North. The proposed additional plant will consist of one 1050-ton per day solid waste-fired unit with a 29 MW turbine generator. The power plant will be owned by Pinellas County.

3. The Department of Environmental Regulation has evaluated the application for the proposed power plant. Certification of the plant would allow its construction and operation. The application and the Department's analysis of the impacts of the plant are available for public inspection at the following addresses:

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION  
Southwest District Office  
7601 Highway 301 North  
Tampa, Florida 33610

PINELLAS COUNTY  
Department of Solid Waste Management  
2800 110th Avenue North  
St. Petersburg, Florida 33702

HERNANDO COUNTY DEPARTMENT OF  
PLANNING AND ZONING  
156 East Jefferson  
Brooksville, Florida 33512

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT  
2379 Broad Street (South U.S. 41)  
Brooksville, Florida 33512

4. Pursuant to Section 403.508, Florida Statutes, the certification hearing will be held by the Division of Administrative Hearings on February 29, 1984, at 10:00 a.m., at the Pinellas County Courthouse, 5th Floor Assembly Room, 315 Court Street, Clearwater, Florida, in order to take written or oral testimony on the effects of the proposed electrical power plant or any other matter appropriate to the consideration of the site. Need for the facility has been predetermined by the Public Service Commission at a separate hearing. Written comments may be sent to William Williams (Hearing Officer) at Division of Administrative Hearings, 2009 Apalachee Parkway, Tallahassee, Florida, 32301, on or before February 12, 1984.

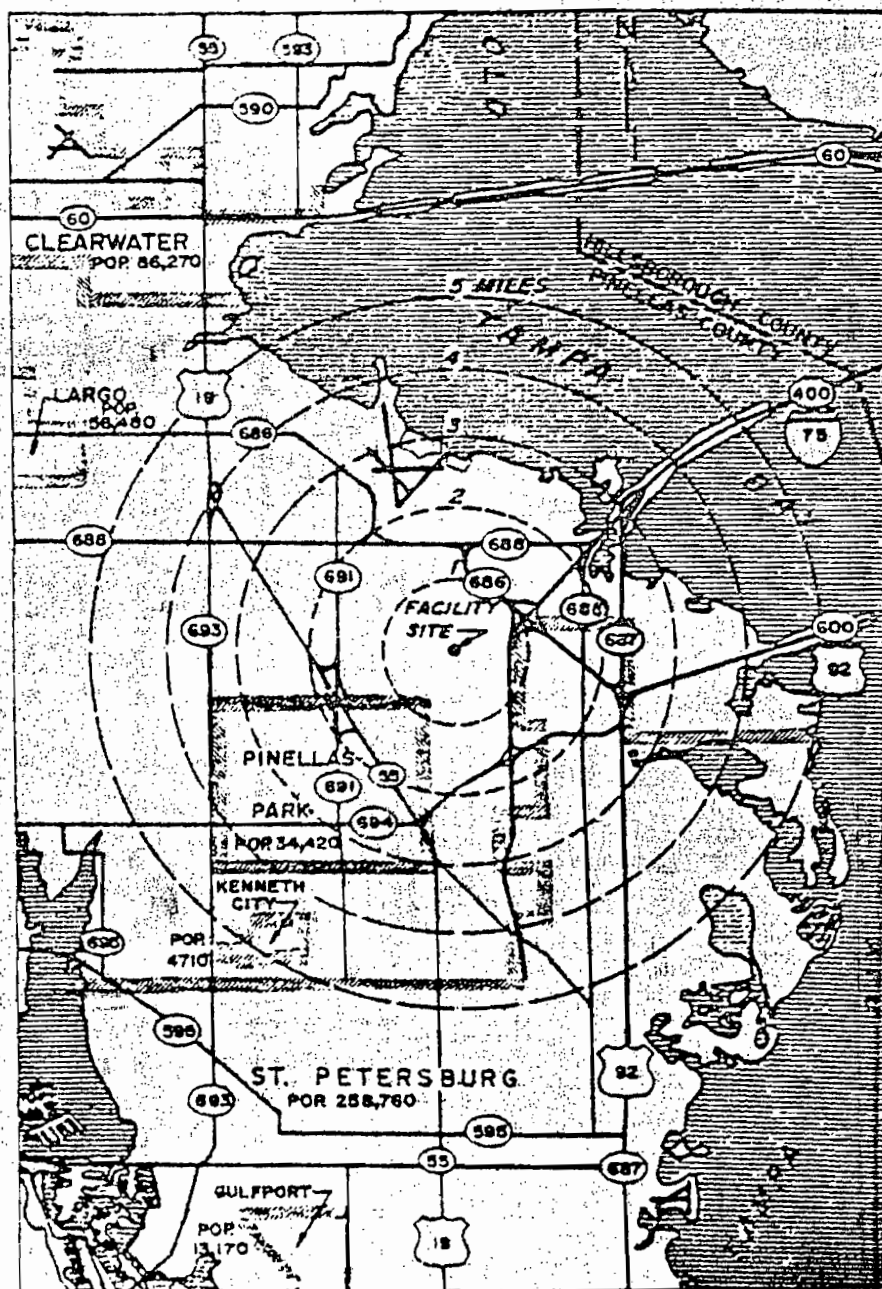
5. Pursuant to 403.508(4), F.S.: "(a) Parties to the proceeding shall include: the applicant; the Public Service Commission; the Division of State Planning; the water management district as defined in Chapter 373, in whose jurisdiction the proposed electrical power plant is to be located; and the Department. (b) Upon the filing with the Department of a notice of intent to be a party at least 15 days prior to the date set for the land use hearing, the following shall also be parties to the proceeding:

1. Any county or municipality in whose jurisdiction the proposed electrical power plant is to be located.

located.

2. Any state agency not listed in paragraph (a) as to matters within its jurisdiction.
  3. Any domestic non-profit corporation or association formed in whole or in part to promote conservation or natural beauty; to protect the environment, personal health, or other biological values; to preserve historical sites; to promote consumer interests; to represent labor, commercial or industrial groups; or to promote orderly development of the area in which the proposed electrical power plant is to be located.
- (c) Notwithstanding paragraph (4)(d), failure of an agency described in subparagraphs (4)(b)1 and (4)(b)2 to file a notice of intent to be a party within the time provided herein shall constitute a waiver of the right of the agency to participate as a party in the proceeding.
- (d) Other parties may include any person, including those persons enumerated in paragraph (4)(b) who failed to timely file a notice of intent to be a party, whose substantial interests are affected and being determined by the proceeding and who timely file a motion to intervene pursuant to Chapter 120, F.S., and applicable rules. Intervention pursuant to this paragraph may be granted at the discretion of the designated hearing officer and upon such conditions as he may prescribe any time prior to 15 days before the commencement of the certification hearing.
- (3) Any agency whose properties or works are being affected pursuant to a 403.5092 shall be made a party upon the request of the department of the applicant.
6. Those wishing to intervene in these proceedings must be represented by an attorney or other person who can be determined to be qualified to appear in administrative proceedings pursuant to Chapter 120, F.S., or Chapter 17-1.21, FAC.

FIGURE 2.2.a.



STUDY AREA

**CLEARWATER SUN**  
Published Daily  
Clearwater, Pinellas County, Florida

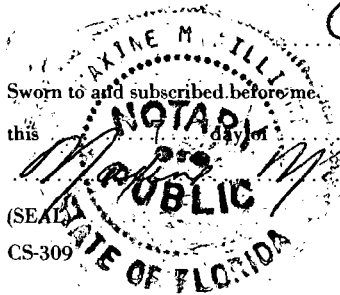
STATE OF FLORIDA  
COUNTY OF PINELLAS:

Before the undersigned authority personally appeared Eunice Neubaum, who an oath says that she is the Legal Account Executive of the Clearwater Sun, a daily newspaper published at Clearwater in Pinellas County, Florida; that the attached copy of advertisement, being a 4x21.5 = 86" Display advertisement in the matter of Notice of certification Hearing

in the XXX Court was published in said newspaper in the issues of January 29, 1984 Clearwater Sun

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

*Eunice Neubaum*



Sworn to and subscribed before me

this

March D. 19 84

*Maxine M. Williams*  
Notary Public

NOTARY PUBLIC STATE OF FLORIDA AT LARGE  
MY COMMISSION EXPIRES MAY 6 1985  
BONDED THRU GENERAL INS. UNDERWRITERS

DER  
MAR 12 1984  
PURCHASING

Received DER

JUL 29 1985

E P S

July 24, 1985

Dr. Rick Garrity, District Manager  
State Department of Environmental Regulation  
Southwest District Office  
7601 Highway 301, North  
Tampa, FL 33610-9544

RRF

PA 83-18  
011?


Re: Emission Test Report - 1985

Dear Dr. Garrity:

Enclosed please find two copies of the annual Air Emissions Test Report for the Pinellas County Refuse to Energy Plant. The report is submitted in compliance with Section XIV.A.3.c of the Conditions of Certification, Case No. 83-2355. The period covered is May 1984 to May 1985.

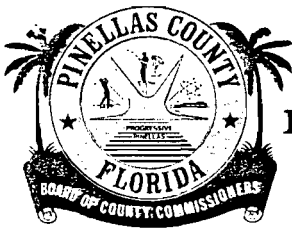
If you have any questions, please contact me at your convenience.

Sincerely,

  
Robert Van Deman, P.E., Director  
Solid Waste Management

RVD:rvt  
encl.  
0132V

cc: ✓ Buck Owen, w/encl.  
HDR, w/o encl.  
W.W. Dasher, Dir., PW Ops, w/o encl.



# BOARD OF COUNTY COMMISSIONERS

Received DER

MAY 9 1985

DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702.  
PHONE (813) 825-1565



COMMISSIONERS

BRUCE TYNDALL, CHAIRMAN  
CHARLES E. RAINEY, VICE-CHAIRMAN  
JOHN CHESNUT, JR.  
GEORGE GREER  
BARBARA SHEEN TODD

PPS

P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623

May 8, 1985

State of Florida  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

Attention: Mr. Hamilton S. Oven, Jr., P.E.

Subject: Air Emissions Modification, Pinellas County RRF

Gentlemen:

Pursuant to our meeting with the Bureau of Air Quality Management in Tallahassee on February 14, 1985, Pinellas County hereby submits proposed amendments and support documentation to the August 17, 1984, letter to the Department. Based on the discussions at the February 14 meeting, it is our understanding that the Best Available Control Technology (BACT) review process is conducted only once for each source and that it was not the Department's intent to designate that the emission limitations determined to be BACT for Unit #3 are also to be applied to existing Units 1 & 2.

Therefore, Pinellas County requests that the existing wording of Section XIV.A.1. of the February 29, 1984, Conditions of Certification (COC) be deleted, and the following text substituted in its place:

1. Emission Limitations upon Operation of Unit 3
  - a. Emissions from Units 1 or 2 shall not exceed the following:
    - (1) Particulate matter: in grains per standard cubic foot dry gas corrected to 12% CO<sub>2</sub> - 0.08.
    - (2) SO<sub>2</sub>-170 lbs./hr. each unit
    - (3) Odor: there shall be no objectionable odor
    - (4) Visible emissions: stack opacity shall be no greater than 20% except as provided for during start-up, shutdown, or malfunctions when the provisions of 17-2.250, FAC shall apply.

b. Emissions from Unit 3 shall not exceed the following:

(1) Particulate matter: in grains per standard cubic foot dry gas corrected to 12% CO<sub>2</sub> - 0.03.

(2) SO<sub>2</sub>-170 lbs./hr.

(3) Nitrogen oxides - 254 lbs./hr.

(4) Carbon monoxide - 66 lbs./hr.

(5) Lead - 4.4 lb./hr.

(6) Mercury - 3200 grams/day when more than 2205 lbs./day of municipal sludge is fired. Compliance shall be determined in accordance with 40 CFR 6.1, Method 101, Appendix B.

(7) Odor - there shall be no objectionable odor

(8) Visible emissions - stack opacity shall be no greater than 20% except as provided for during start-up, shutdown or malfunctions when the provisions of 17-2.250, FAC shall apply.

c. The height of the boiler exhaust stack shall not be less than 161 feet above grade.

d. The incinerator boilers shall not be loaded in excess of their rated capacity of 87,500 pounds of municipal solid waste per hour each.

e. 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.

f. Compliance with the limitations for particulates, sulfur oxides, nitrogen oxides, carbon monoxide and lead shall be determined in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 1,2,3,5,6, and 40 CFR 60, Appendix A, Method 7. The stack test shall be performed at +/- 10% of the maximum steam rate of 250,000 pounds per hour.

(END OF PROPOSED WORDING CHANGE)

The rationale for the proposed amendments is as follows:

1. Particulate matter - Unchanged from the February 29, 1984 COC.
2. SO<sub>2</sub> - As Pinellas County has stated on several prior occasions, the concentration of SO<sub>2</sub> in emissions from resource recovery facilities is highly variable. This is due to the wide range in the sulfur content of solid waste, a very heterogeneous material. A compilation of tested stack emissions is presented in Appendix 1. From these data and from the data in the attached California Air Resources Board report (Appendix 2) the following conclusions are reached:

A. The median SO<sub>2</sub> emission rate is 3.8 pounds of SO<sub>2</sub> per ton of solid waste.

B. The SO<sub>2</sub> emissions exhibit wide deviations from the median.

Based on these conclusions, an emission rate in the median area is proposed. It is proposed that this emission rate be stipulated for all three units. Currently, Units 1 and 2 are permitted at 1.2 pounds of SO<sub>2</sub> per million BTU's (10.8 lbs./Ton @ 4500 BTU/pound). Modeling results at the proposed emission rate are also attached for review (Appendix 3). The results indicate that no significant increase in ambient SO<sub>2</sub> will result from emissions at this level.

3. Nitrogen oxides - As discussed in the August 17 letter, nitrogen oxide emissions are largely the result of boiler operation. Newer, more efficient units, like Pinellas, generate more of these constituents. However, nitrogen oxide emissions do not exhibit the wide deviations as noted with SO<sub>2</sub>. Therefore, it is proposed that the nitrogen oxide limit be based on an upper limit if it is to be defined as a "not-to-exceed" value. Appendix 4 features stack test results from four mass burn facilities. As shown, 95% of the time, the facilities can attain an emission limit of 5.8 lb./ton (254 lbs./hr. for Pinellas), which is the proposed level for Unit 3.
4. Carbon Monoxide - Unchanged from the February 29, 1984, COC for Unit 3.

Air Emissions Modification

Page 4 of 4

May 8, 1985

5. Lead - Lead emissions are largely a function of particulate matter emissions. The attached report by Arthur D. Little, Inc. (Appendix 5) states that approximately 16% of the emitted particulate is in the form of lead. Based on an allowable particulate emission rate of 0.03 g/dscf, the corresponding lead emission is 4.4 lb./hr., which is proposed for Unit 3.
6. Mercury - Unchanged from February 29, 1984, COC for Unit 3.
7. Odor - Unchanged from February 29, 1984, COC for Unit 3.
8. Visible emissions - Opacity is a function of particulate and other gaseous stack emissions. While it is not possible at this time to state what the opacity values will be for Unit 3, the continuous data obtained from Units 1 & 2 indicate that the limitation in the current COC is not consistently attainable (See Appendix 6). Furthermore, opacity and particulate emissions have been compared for Units 1 & 2. Based on this comparison, the opacity at the allowable particulate emission of 0.03 g/dscf will generally be above 10%.

It is requested that the Department consider our request for COC amendment. If you require additional information, please contact this office.

Very truly yours,



Bob Van Deman, P.E., Director  
Solid Waste Management

BVD:rvt  
encl  
0054V



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Clair Fancy, Deputy Bureau Chief, BAQM  
FROM: Carol A. Forthman *Carol A. Forthman*  
DATE: February 1, 1985  
SUBJECT: Pinellas County Resource Recovery Facility

Ed Svec asked me to comment to you on the Department's authority either to enter the facility referenced above to test for certain pollutants, whether regulated or not, or to require the facility to test for those pollutants. My review indicates that the department, under statutory authority may require reports on the "composition and concentration of effluent, and such other information as the department shall prescribe to be filed relative to pollution". Section 403.061(13), Florida Statutes. This general grant of authority would seem to allow the department to require tests that are reasonable to insure that the effluents do not result in discharge to the atmosphere of harmful substances.

In addition, Section V, C., of the Conditions of Certification for the facility permits the department to "... sample any discharge or pollutants". This would permit the department or an authorized representative to conduct the required tests. Therefore, it is my opinion that we have the authority to either require the tests, to conduct them, or to have some authorized representative conduct them for us.

Neither of these grants of authority specify that the pollutants referred to are limited to those regulated by the department. Rather they speak generally to "effluents" and "pollutants".

In addition, the department's general authorizing legislation, Section 403.021, Florida Statutes, states that "the department shall consider the total well-being of the public and shall not consider solely the ambient pollution standards when exercising its powers, if there may be a danger of a public health hazard". 403.021(8), F.S. Therefore, if it is determined that there is the potential for emissions of toxic substances, I

believe that the department's authority, as stated above, would extend to testing for such substances in addition to any regulated pollutants.

Please advise if any further information is needed.

CAF/dw

cc: Steve Smallwood  
Ed Svec

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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Date Due: _____	Date Due: _____	

TO: Hamilton S. Oven  
THRU: C.H. Fancy *CHF*  
THRU: Bill Thomas *BT*  
FROM: Edward Svec *ES*  
DATE: January 16, 1985  
SUBJ: Modification of Conditions of Certification  
Pinellas County RRF PA 83-18

The Bureau of Air Quality Management has received and reviewed the request to modify the Conditions of Certification for the Pinellas County Resource Recovery Facility. The Bureau recommends the following actions:

The wording of COC XIV.A.1.e. be changed to the proposed wording submitted by the applicant. The correct test method is EPA Method 5 and there were no tests stipulated for lead or carbon monoxide.

The Bureau agrees to the proposed wording change of COC XIV.A. 3.a. Please note, however, that it should read "Chapter 17-2.710, FAC".

The Bureau does not agree to the proposed changes in the opacity limit, SO<sub>2</sub> limit, NO<sub>x</sub> limit, and lead limit at this time. These limits were based on a determination of Best Available Control Technology. In order to change the BACT emission limits, the applicant must demonstrate that the facility and any applicable control device has been properly installed, operated, and maintained. The applicant must also demonstrate the emission limits imposed are beyond the limit of technology by test results. The intent of the Bureau is not to require additional add-on control equipment. We feel these emission limits are obtainable for this facility.

ES/rw

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
INTEROFFICE MEMORANDUM

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Date Due: _____	Date Due: _____	

TO: Terry Cole  
FROM: Rick Garrity *Rick G.*  
DATE: December 3, 1984

RECEIVED

DEC 7 1984

Office of the Secretary

SUBJECT: Pinellas County Resource Recovery Ash Residue Sampling

Our staff has examined ash residue from the above referenced site and the laboratory analysis is attached. We apologize for the delay in obtaining the data but we did want to do our own sampling as opposed to relying totally on past data. I have already called Senator McPherson's office (have not reached him yet) and will send him these results in a cover letter.

What to do with such ash residue is currently being debated by those in the resource recovery business. They, of course, would like to "use it" as opposed to disposing of it. Uses include things as diverse as roadbed material, ingredients in building blocks, and landfill cover. Currently DER permits only the disposal of the residue in a Class I landfill. Ray Moreau is aware of attempts to consider reuse and is interested in pursuing any "use" possibilities. I also am interested since we will have three of these plants operating in our district and I plan to pursue the possibilities further with Ray Moreau's involvement and the involvement of the affected parties.

RDG/jdj

Attachments

cc: Ray Moreau



STEVEN JOHN ALEXANDER  
SPECIAL ASSISTANT  
OFFICE OF THE SECRETARY

STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL REGULATION  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301

TELEPHONE  
(904) 488-4805  
SUNCOM 278-4805

INTEROFFICE MEMORANDUM

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To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
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From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Dr. Garrity  
FROM: Don Moores *Don Moores*  
DATE: November 30, 1984 *lag*  
SUBJECT: Pinellas County Resource Recovery Ash Residue Sampling

Samples of the ash residue were collected on October 8th and sent to the SPANLab for metals analysis. Today, Randy Armstrong called me to relay the results. Written confirmation will follow. The results are expressed as two numbers; since the sample was rather unhomogeneous, duplicate analyses were performed. All results are expressed as mg per kg:

	<u>Replicate 1</u>	<u>Replicate 2</u>
Arsenic	3.5	4.1
Barium	53	98
Cadmium	10.2	13.3
Chromium	38	49
Lead	473	717
Nickle	71	48
Selenium	0.11U*	0.11K*
Silver	1.76	3.34
Zinc	1400	585

\*U means something was detected but the number expressed is the lower detection limit. K means that there was more than the minimum detection limit, but an exact number is not available.

While I was collecting the sample, I discussed it with Mr. Acenbrack. Only one sample was collected since they only had one kind available; they do not always remove metals and cannot guarantee metals removal, so it is all treated the same.

He told me that the County hoped to use the ash for low-grade roads since oyster shell is no longer readily available. It was observed, however, that the material is also being used as daily cover for the landfill.

Memo to Dr. Garrity  
November 30, 1984  
Page 2

The data reported on the ash indicate priority metals concentrations are extremely high. This does not, however, indicate what would happen to groundwater after rainfall leached through the material in the context of a road or a landfill. It is also questionable whether the material is impermeable enough to be appropriate as daily landfill cover.

For the purpose of evaluating the potential impacts of leachate in a landfill situation, I suggest that the County have an E-P Toxicity test performed. I believe ES & E can do this test and is acceptable to the Department.

I have not been able to find anyone who knew of any special test which would simulate road-building conditions. It is impossible to predict the pH which might exist when the material was exposed to rainfall or rising groundwater. It may be possible to analyze the E-P Toxicity test at a variety of pH conditions in order to approximate the potential impact on groundwater.

At the minimum, an E-P Toxicity is absolutely essential, now that it has been placed in the landfill.

DM/laj  
cc: Andy Berry

RECEIVED  
JUL 9 1984  
DIV. ENVIRONMENTAL  
PERMITTING

July 6, 1984

Dr. Rick Garrity, District Manager  
State Department of Environmental Regulation  
Southwest District Office  
7601 Highway 301 North  
Tampa, FL 33610-544

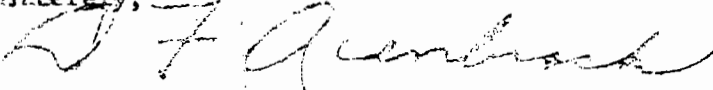
Re: Emission Test Report—1984

Gentlemen:

Enclosed please find the initial Air Emissions Test Report for the  
Pinellas County Refuse to Energy Plant. The Report is submitted in  
compliance with Section XIV. A. #.c. of the Conditions of  
Certification, Case PA 78-11. The period covered is May 1983 to 1984.

If you have any questions, please contact me at your convenience.

Sincerely,



D. F. Acenbach, Director  
Solid Waste Management

ACE:lt10083

Encl

cc: Buck Oven, w/o encl  
HDR, w/encl  
W. W. Dasher, Dir, PW Ops, w/o encl



W. GRAY DUNLAP  
COUNTY ATTORNEY

OFFICE OF COUNTY ATTORNEY

# PINELLAS COUNTY, FLORIDA

PHONE (813) 462-3354 • 315 COURT STREET • CLEARWATER, FLORIDA 33516

Received DER

APR 13 1984

P.P.S

April 11, 1984

William E. Williams  
Hearing Officer  
Division of Administrative Hearings  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

Re: Pinellas County Power Plant Certification  
Application 83-18

Dear Mr. Williams:

Enclosed for filing please find a certified copy of the verbatim transcript of the administrative hearing held in this matter in Clearwater, Florida, on February 29, 1984.

Very truly yours,

Van B. Cook  
Chief Assistant County Attorney

VBC:dtr  
Enc.

cc: Julia D. Cobb, Assistant General Counsel  
C. Laurence Keesey, Dept. Community Affairs  
Karen A. Lloyd, SFWMD  
Bonnie E. Davis, Public Service Commission  
Hamilton S. Oven, Dept. Environmental Regulation



ADMINISTRATIVE HEARING RE PINELLAS COUNTY RESOURCE RECOVERY PROJECT  
APPLICATION FOR POWER PLANT SITE CERTIFICATION - CASE #83-2355 -  
PINELLAS COUNTY COURTHOUSE, CLEARWATER, FLORIDA 2/29/84 10:10 A.M.  
Tape #1 Mitchell

VERBATIM TRANSCRIPT

WILLIAMS:

For the record, my name is William E. Williams. I'm a Hearing Officer from the Division of Administrative Hearings. And we're here today for the purpose of conducting a final hearing in Division of Administrative Hearings Case #83-2355 in re Pinellas County Resource Recovery Project Application for Power Plant Site Certification. Before proceeding further at this point, counsel for the parties will please enter their appearances first for the applicant, Pinellas County.

COOK:

My name is Van B. Cook, I'm the Chief Assistant County Attorney for Pinellas County.

WILLIAMS:

Any additional appearances for the County, Mr. Cook?

COOK:

Not of counsel...

WILLIAMS:

All right, thank you sir. For the Department of Environmental Regulation.

COBB:

For the record, my name is Julia D. Cobb, Assistant General Counsel for the Department of Environmental Regulation.

WILLIAMS:

Could you spell your last name, please ma'am.

COBB:

C O B B.

WILLIAMS:

Thank you Ms. Cobb. For the Department of Community Affairs.

KEESEY:

I'm C. Lawrence Keeseey, Senior Attorney, Department of Community Affairs, Tallahassee.

WILLIAMS:

Spell your last name for the record, Mr. Keeseey.

KEESEY:

K E E S E Y.

WILLIAMS:

Thank you sir. For the Public Service Commission. I understand there's no one planning to be here from the Public Service Commission. And likewise, no one from the Southwest Florida Water Management District is planning to attend. First in the way of preliminary matters, Mr. Cook, will I get a transcript of this proceeding? Are you planning to file a transcript?

COOK:

Yes sir.

WILLIAMS:

All right, thank you sir. I have been handed, this morning, a motion for continuance of this hearing filed by the Department of Environmental Regulation relating to an apparent modification being suggested by the permit applicant insofar as sulfur dioxide emissions are concerned. Ms. Cobb, do you wish to go ahead and speak to that motion at this point?

COBB:

Yes sir, counsel for the County, and I have discussed this...

RECORDER:

Excuse me sir, if you want this for the record, we need them to speak into the microphone.

WILLIAMS:

If you would please, ma'am.

COOK:

I was planning to use that, one of the chairs for the witnesses, and then the counsel could use this microphone.

WILLIAMS:

Okay, good, Ms. Cobb, if you would please, ma'am.

COBB:

Mr. Cook and I discussed the motion this morning, your Honor, and if it is agreeable to you the County has agreed to the comeback

provision which you see, the third alternative, to go ahead and continue with the hearing today and allow them to come back at a later date and give us the adequate information on the air.

WILLIAMS:

That would be by way of a request for modification.

COBB:

Yes sir.

WILLIAMS:

In other words, you all would anticipate me conducting the hearing today, entering a recommended order based on the record that is made before me, and then you all coming back for a modification as to sulfur dioxide emissions, is that correct? Assuming of course, that the recommended order would include the sulfur dioxide emissions contained in the original application. Is that what you all are saying? Mr. Cook.

COOK:

If I may elaborate.

WILLIAMS:

Sure. You better come up toward the microphone there.

COOK:

Basically that's right. What we're really seeking here is a motion or an amendment to a particular provision of the conditions of certification entitled The Modification of Conditions. And I discussed this with counsel and I believe we're in agreement as to the appropriate wording, although to finalize that wording it would actually appear in the recommended order we would submit to you. In effect, what we are asking for is authority delegated by the Board to the Secretary, to modify emission limitations as adopted in your recommended order, subject to a point of entry for interested persons or other parties, and preserving the 120 and 403 provisions, but not requiring the Governor or Cabinet to approve a particular emission limitation change from what you would hear today. That's the essence of that.

WILLIAMS:

Does that fairly characterize your agreement? All right, let me

suggest to you, it appears from reviewing the prehearing stipulation that there are aren't, insofar as the statutory parties at this point are concerned, disputes of fact. You all are essentially in agreement as to the facts. What I suggest to you all that you do then, usually in contested cases both sides will submit a proposed recommended order setting forth what you consider the appropriate factual findings to be, and the appropriate legal conclusions. If it turns out, after we conduct the hearing today, that you all are still in agreement as to the Findings of Fact and Conclusions of Law, I suggest to you that you submit a stipulated proposed recommended order to me incorporating all of the factual findings that you all deem appropriate for consideration by the Governor and Cabinet, including the wording that you all might agree on with respect to the sulfur dioxide emissions. Does that sound acceptable?

COBB:

Yes sir.

COOK:

That was our intent. In fact, it is our intention to actually provide you with that stipulated recommended order no later than this Friday, which would mean you would not of course have a transcript, but I believe that you will see at the conclusion of this hearing that the parties are basically in agreement on almost every matter of fact and law.

WILLIAMS:

If you all can submit it to me in the form that you would both like to see entered, or all of you would like to see entered, it would help. I'm supposed to start a 3-week DER hearing on Monday, and I'm going to be pretty much tied up from Monday forward. So if we can do it in that fashion, subject of course to any disputes that might arise today that none of us can predict at this point. All right?

COBB:

Fine.

COOK:

Thank you.

as an exhibit in this proceeding so you're offering the application as Petitioner's Exhibit No. 1?

COOK:

Yes sir.

WILLIAMS:

All right, if you would so mark it. Any objection? Without objection it will be received as Petitioner's Exhibit No. 1.

COOK:

Mr. Acenbrack, did you review this application prior to its submittal to the Department?

ACENBRACK:

I did.

COOK:

Are you familiar with its contents?

ACENBRACK:

Yes.

COOK:

All right, I'd like to spend a few minutes then going through this application with you. I'll be referring to various sections of the application, and asking you for some comment. It would probably be helpful to all of the parties and the Hearing Officer if you would refer to specific page numbers as appropriate. I would like you to begin with a brief description of the site as contained in Chapter 2 starting at page 6 of the application to acquaint everyone with a general feeling for what resource recovery under the current site certification is comprised of.

ACENBRACK:

Basically the overall site is approximately 230 acres size. The site of the plant itself is approximately 20 acres. The ah, without a drawing it's difficult to go into details but the approximate eastern boundary of the site is at 28th Street North, the southern boundary is 102nd Avenue North, the northern boundary is approximately 114th Avenue North, and the western boundary is approximately 34th Street North.

opportunity to present any additional evidence should they deem it necessary.

WILLIAMS:

Thank you Mr. Cook. Ms. Cobb.

COBB:

I'll waive my statement.

WILLIAMS:

All right, Mr. Keeseey.

KEESEY:

I have no statement.

WILLIAMS:

All right, Mr. Cook, call your first witness.

COOK:

I call Mr. Acenbrack.

WILLIAMS:

If you'll come up and have a seat in one of these chairs up here please Mr. Acenbrack. Would you raise your right hand please sir. (Duly sworn). State your name please sir.

ACENBRACK:

My name is Donald F. Acenbrack.

WILLIAMS:

Spell your last name please.

ACENBRACK:

A C E N B R A C K.

WILLIAMS:

And your address, please.

ACENBRACK:

1926 Sever Drive, Clearwater.

WILLIAMS:

Mr. Cook.

COOK:

Mr. Acenbrack, would you tell us about your current employment.

ACENBRACK:

I'm the Director of Solid Waste Management for Pinellas County.

WILLIAMS:

All right, that would appear to me then to obviate the Motion for Continuance so we'll dispense with that. Now, one other problem that we discussed briefly, I think at the prehearing conference, and it became apparent to me in reviewing my file this morning is the 45-day notice requirement contained in Chapter 403. You all need to correct me if I'm wrong, but it appears to me that the notice in the newspaper was not published 45 days prior to today's hearing. Now please correct me if I'm wrong. This is just based on review of my file. And if that is the case we need to consider the question of the Hearing Officer's authority to alter that time frame under the Department's rules. Mr. Cook.

COOK:

Yes, I believe the 45 days pertains to the land use and zoning hearing, which the parties have stipulated and agreed is not applicable here. I believe the Certification Hearing notice is 30 days, and when Mr. Oven testifies as to the notices and they're received into evidence you will note that one of the notices is not timely by approximately 3 days, and at that time we will move to waive that defect.

WILLIAMS:

All right, good, good. All right, are there any additional preliminary matters that we need to take up at this point? All right, Mr. Cook, do you wish to make an opening statement?

COOK:

Very briefly. Just to acquaint the Hearing Officer and the members of the public who are in attendance here today, I propose to call three individuals on behalf of Pinellas County to briefly summarize and go through the County's petition or application for site certification which is a modification or expansion of an existing facility previously approved under the Power Plan Siting Act. At the conclusion of those County witnesses we would then call Mr. Oven from the Department of Environmental Regulation to again briefly review the required DER staff analysis report and recommendations and conditions of certification, and then there would be DER's

COOK:

How long have you held that position?

ACENBRACK:

Since October, '76.

COOK:

And would you describe your educational background briefly please.

ACENBRACK:

I have a Bachelor of Science degree in Civil Engineering from the University of Miami and I have a Master degree in Education from the University of South Florida.

COOK:

Did you participate in the original Site Certification of the original Resource Recovery Facility here in Pinellas County?

ACENBRACK:

I did.

COOK:

Do you have a copy of the County's application that was submitted to DER?

ACENBRACK:

I do.

COOK:

Mr. Williams, may I inquire as to whether you have a copy in the record?

WILLIAMS:

I do not in my file. We'll have to introduce a copy into the record. I think there was a copy that was sent over with the letter from DER. If you all don't have readily available another copy, what I could do simply is receive it as Petitioner's Exhibit No. 1 and simply mark it when I get back to the office and include that application as the exhibit, if you all want to do it in that fashion Mr. Cook.

COOK:

I could tender to you a copy of the application, and if any party objects to this, it's just a duplicate of it.

WILLIAMS:

All right. We'd need to mark it so it will be included in the record



COOK:

What facilities currently, or facility structures, that kind of thing, currently exist or are under construction at the site at this time?

ACENBRACK:

Well the plant itself is up and operational. The County has an Administration Building for the Solid Waste Department, there is a material storage building, the landfill called Bridgeway Acres II is constructed and operational. There's also an entrance facility which includes a scale house, having 3 scales. There's also a restroom facility along with the scale house. There's also a citizens disposal site that we refer to as a mini refuse station. Of course there's associated roads and utilities. We have 3 sources of water, one potable source and two treated water sources. In addition to that we have a spray irrigation system, and then also on the total County-owned site but not within the certified area, there is a ... .. station. We also have the, what we call the tie line, or the high tension transmission line from the site to the Gandy substation. We have various signs including a very large informational identification sign telling what is at the site. We have security fences and of course storm drainage, in addition to a road network.

COOK:

When did the existing plant become operational?

ACENBRACK:

The existing plant became operational in May, 1983.

COOK:

Okay, now turning your attention back to Chapter 1, what is the, essentially the purpose of the application for additional or expansion site certification?

ACENBRACK:

Well beginning on page 2, since the submittal of the site application for the original two-boiler plant was made in 1978, the refuse generation in the County has increased faster than was anticipated, therefore, to meet these additional demands on the process and capability of the plant, an additional boiler is required.

COOK:

Would you describe briefly the load characteristics as contained in the application?

ACENBRACK:

On page 3, a proposed third boiler expansion would increase the total solid waste processing to pass the other plant to 3150 tons per day, or approximately 1.1 million tons per year based on having a fuel quality of 5,000 BTU's per pound of solid waste. This added capacity will allow the incineration of all Class 1 material, or garbage, through the 1990's.

COOK:

Solid waste is disposed of in one of, basically two different ways. Is that correct, at the plant?

ACENBRACK:

Yes, it's either disposed of through the plant, or at one of the two landfills associated with the plant. There is a Class 1 landfill called Bridgeway Acres 2 that currently takes the residue from the plant as well as the regular garbage or Class 1 material when for one reason or another the plant is not operational or the amount being delivered is beyond the capacity of the plant to handle.

COOK:

In addition to the third boiler, the additional boiler, what other equipment is ancillary to that?

ACENBRACK:

Well in addition to the third boiler, there will be an additional electrostatic precipitator, exhaust stack, there will be an increase in the size of the electrical switch yard and there will be two additional cells added to the cooling tower and there will be ah, not to exceed 29 megawatt additional generator installed. The existing transmission line is already sufficient capacity to handle the increase in electrical generation.

COOK:

So there's no impact then on transmission lines in this application?

ACENBRACK:

That's correct.

COOK:

Does the third boiler proposal also provide you with a reserve capability or a back-up capability?

ACENBRACK:

Yes. The installation of a third boiler will provide additional system redundancy in case of just any malfunction, and of course also during routine boiler maintenance. If routine shut downs are scheduled during periods of low solid waste inflow, and the duration of what we call the semi-annual shutdown is approximately 2 weeks per year for boiler.

COOK:

In addition to disposal of solid waste, what other objectives or positive accomplishments are achieved by the plan in the proposed expansion?

ACENBRACK:

Well of course the primary objective of the plant is to dispose of solid waste. In doing this inverse impacts on the environment are minimized with respect to landfill activities. We have some secondary objectives including the sale of electricity and the recovery and sale of marketable combusted materials and of course a reduction in requirement for the use of our limited landfill capacity.

COOK:

How many Class 1 landfills, other than at the site that's been certified, are currently in operation?

ACENBRACK:

None in Pinellas County.

COOK:

Were there Class 1 landfills in operation prior to the operation of the Resource Recovery Facility?

ACENBRACK:

Yes, there was one at the plant site called Bridgeway Acres 1, there was a Toytown Landfill. Those were both closed either prior to or concurrently with the opening of the new plant last May.

COOK:

Are any new lands contemplated to be added pursuant to this certification here?

ACENBRACK:

No.

COOK:

How about new roads, pipelines, drainage structures or other landfills?

ACENBRACK:

There will be some construction of what we call a pumping system to utilize the water from the retention pond that's part of the cooling water make-up, but there will be no other construction, ancillary construction, projects within the certified area.

COOK:

What about storm water holding ponds, aeration oxidation ponds? What can you tell us about that?

ACENBRACK:

Well those are up and operational at the present time. The need for additional size or construction of that type facility is not anticipated.

COOK:

Where is your office located?

ACENBRACK:

My office is located in the new Administration Building on the site, just south of the plant itself.

COOK:

Would you give us a general description please, based on your knowledge, of the existing land uses in the immediate vicinity. And by that I mean within several miles of the plant site.

ACENBRACK:

To the north and west, most of the land is zoned industrial. To the south and southwest, the land is zoned residential.

COOK:

What is the actual zoning of the site itself?

ACENBRACK:

The actual zoning of the site is industrial.

COOK:

And is that site location in the unincorporated area of the County?

ACENBRACK:

The plant site itself is in the unincorporated area of the County, however, the Bridgeway Acre 2 landfill site is in the corporate limits of the City of Pinellas Park.

COOK:

Okay, calling your attention to page 11 of the application, would you describe briefly for us the affects on potable and non-potable water as a result of this proposed addition, and the sources of those waters.

ACENBRACK:

Well the proposed change at the plant would increase the non-potable water consumption by approximately 50%. There are existing water mains from St. Petersburg and from Largo carrying reclaimed water, they're capable of carrying the antiflow. We don't think there'd be much more than a slight increase in the consumption of the potable water, anticipated in this expansion. And this water will continue to come from Pinellas County Water System.

COOK:

Is it possible that storm water would also be considered an alternative cooling water source?

ACENBRACK:

Yes. We're doing some engineering study at the present time to put plans to utilize this water from the storm water retention as part of what we call the cooling water makeup.

COOK:

Are you aware of any potable waters which exist in the presently certified site.

ACENBRACK:

We have a potable water line, a 12-inch water line.

COOK:

No, I mean wells.

ACENBRACK:

No, there are no potable wells within the site that I'm aware of.

COOK:

Are you aware of any historic, scenic, cultural or national landmarks located on the site that's presently certified?

ACENBRACK:

None to my knowledge.

COOK:

I'd like to discuss for a moment the visibility of the site from adjacent roadways and areas. Will you comment on that please.

ACENBRACK:

The plant is approximately 100 feet tall and therefore, can be seen from long distances. It's been estimated that it can be seen approximately a maximum 6 miles away. However, in the near vicinity because of the large stand of pines in the area, it's difficult to see it for more than approximately a half a mile away.

COOK:

Are there berms constructed around the parameters of the site?

ACENBRACK:

Yes there are 12 to 15-foot high berms on both the southern and western portion of the certified area.

COOK:

Are those berms landscaped?

ACENBRACK:

Yes they are, and planted with a stand of pines.

COOK:

Okay, I'd like to talk then now about the anticipated effects of construction, specifically as they pertain to noise. What is your evaluation of that aspect?

ACENBRACK:

The noise is, should be no louder than the noise that's already existing in the area, well within the industrial standards. It will be some noise from time to time as construction goes on, but the ambient noises from traffic and from ongoing operations, both in the plant and landfilling, should provide no significant increases.

COOK:

What about impacts on the land itself during construction, and how do you propose to deal with those impacts?

ACENBRACK:

Well, there will be no required caring of trees or rather grubbing operations taking place on the plant site, therefore, except for some possible dust during dryer weather, we anticipate no negative impact of construction as far as the land is concerned.

COOK:

How would you control dust?

ACENBRACK:

By water spray trucks, during times as such activities are necessary.

COOK:

Do you contemplate any adverse impact on human populations during construction?

ACENBRACK:

The proposed construction site is already on land that is an industrial setting. The construction work force will be composed almost totally of local hirings, however, we don't anticipate any additional demand on housing, therefore, or transportation, education facilities, or any other municipal services. The only other impact is that there will be some increase in traffic along the nearby roadway during construction when such activities as pouring concrete takes place, and it's estimated that about a maximum of 12 delivery trucks per hour will be involved in such an activity, but that's only for a few days time period.

COOK:

What erosion control measures will you anticipate initiating as necessary during construction?

ACENBRACK:

Well erosion control we would put down such thing as straw bale filters as they're called, around ditches and swales and holding ponds to minimize the water movement ... over the ground. Of course, we would establish by sodding or otherwise, the reestablishment of vegetation on any bare soil. And of course we'd divert around any

areas where erosion situations are likely to occur.

COOK:

Okay, thank you. I'd like to call your attention now to Chapter 7 and I'd like you to discuss briefly economic and social effects of plant operations, specifically what the benefits to be derived from this proposal to added third boiler are.

ACENBRACK:

Well the capacity afforded by a third boiler would minimize the land filling of class one solid waste. Of course this is the stated policy of the Board of County Commissioners. And based on current waste generation estimates, all class one material can be incinerated by the three boiler plant through the mid 1990's. As far as specific benefits from the operation, we expect that the land requirements will be drastically reduced for disposal of solid waste. Of course that will also result in some savings in real estate costs. The land filling of the boiler residue is not expected to contaminate ground water as could be expected if we had the landfill raw garbage. Since the boiler residue doesn't attract sea gulls we expect the disease factors of public health and aviation safety will be enhanced thereby. Of course the increase in electrical generation capacity will reduce need for foreign oil imports and we anticipate that we could save about 4 1/2 million gallons of oil during a 10-year period and considerably save approximately 135 million dollars thereby. The new turbo generator has the capacity to handle energy requirements of 8 or 9,000 Pinellas County homes.

COOK:

Is there an airport nearby the site?

ACENBRACK:

Yes, there's an airport approximately 2 miles to the north of the site.

COOK:

Can you estimate for us the approximate cost of this proposed expansion?

ACENBRACK:

The construction cost contractually are 53 1/2 million dollars, plus



the addition of escalation during the time of construction.

COOK:

How is the facility existing and expanded paid for? Is it funded by taxpayer dollars?

ACENBRACK:

No it is not, it is ah, initially the funds are made available through the issuance of a revenue bond, and the revenues produced from electricity and from tipping fees and part of it from the expected income from the sale of recovered metals together with investment incomes from required standby funds, make up our sources of income to pay for both the operation and the debt service on the plant.

COOK:

Do you anticipate any particular problems with traffic or traffic congestion as a result of the proposed expansion?

ACENBRACK:

There has been a steady increase in automobile and truck traffic in the vicinity of the site, and of course this is a result of growth of light industry, especially along 49th Street. Presently the waste haulers and plant personnel arrive at the site via two directions, actually three now, and that's eastward from 49th Street along 118th Avenue and then south on 28th Street, and then south on Roosevelt Boulevard, and also north from Gandy Boulevard. To date no traffic congestion has been observed in these roadways in the vicinity of the plant. We also have routine patrols by the County's Sheriff Department, and things so far trafficwise have been smooth around the plant.

COOK:

Okay, thank you Mr. Acenbrack. I have no further questions at this time. I would like to reserve the right to recall Mr. Acenbrack at the conclusion of Mr. Oven's testimony.

WILLIAMS:

All right, fine Mr. Cook. Cross-examination, Ms. Cobb?

COBB:

No questions.

WILLIAMS:

Mr. Keeseey?

KEESEY:

No questions.

WILLIAMS:

Thank you, Mr. Acenbrack, you may step down. Call your next witness.

COOK:

Mr. Vandeman, please.

WILLIAMS:

Raise your right hand, please sir. (Duly sworn) State your name please.

VANDEMAN:

My name is Robert Vandeman.

WILLIAMS:

If you would spell your last name for the record, please sir.

VANDEMAN:

The last name is spelled V A N D E M A N.

WILLIAMS:

And your address please, Mr. Vandeman.

VANDEMAN:

1728 72nd Avenue Northeast, St. Petersburg.

WILLIAMS:

Thank you sir. Mr. Cook.

COOK:

Mr. Vandeman, would you discuss your occupation, who you are employed by.

VANDEMAN:

I'm employed by the engineering firm of Henningson, Durham and Richardson in their St. Petersburg office. I'm the Office Manager and the Project Manager for the Pinellas County Resource Recovery System.

COOK:

Is that pursuant to a contract with the County?

VANDEMAN:

Yes it is.

COOK:

And how long have you been associated with the County's Resource Recovery Facility in that capacity?

VANDEMAN:

Approximately 3 years.

COOK:

Did you have the opportunity to review Pinellas County's application for a third boiler prior to its submittal to the Department of Environmental Regulation?

VANDEMAN:

Yes, I did.

COOK:

Are you familiar with its content?

VANDEMAN:

Yes.

COOK:

And would you describe briefly your educational background, how many degrees you have.

VANDEMAN:

I'm a graduate of Purdue University, a Bachelor's degree in Industrial Engineering with a mechanical concentration. I have a professional engineer's license for the State of Indiana and for the State of Florida.

COOK:

Thank you. I'd like to call your attention to Chapter 3 of the County's application which discusses the plant. And I'd like to go into a little detail about the plant, physical characteristics, specifically with regard to the proposed expansion. If you would describe for us in general terms what the existing plant consists of at this point.

VANDEMAN:

The plant as it is currently operating, has been in operation incinerating refuse for more than a year. The equipment that is in

existence right now consists of one stack, it consists of two incinerators which have a nominal rating of 1,050 tons per day each. There are two electrostatic precipitators. There is one 50.9 turbine generator and a single cooling tower structure that consists of three cells. The proposed expansion would add to that facility a second stack of similar height. It would add a second turbine generator with a rating not to exceed 29 megawatts. It would add to the existing cooling tower structure an additional two cells bringing the total number of cells to 5. It would add a third electrostatic precipitator. That basically is what happens to the plant itself.

COOK:

And what is the source of fuel for this plant?

VANDEMAN:

The source of fuel is municipal solid waste that's collected throughout the County by various collection agencies.

COOK:

You heard Mr. Acenbrack discuss the potable and non-potable water requirements of the existing and proposed facility. Do you concur in his statements with that regard?

VANDEMAN:

Yes I do.

COOK:

Would you describe basically for us the heat dissipation system changes as a result of the proposed expansion?

VANDEMAN:

Yes. The heat dissipation at the power plant is achieved through the use of the cooling tower structure. I mentioned earlier that there's an existing 3 cell cooling tower which will be expanded to a 5 cell structure. The purpose of the cooling tower is to receive waters heated by the turbine generator condenser and to cool those waters so that they may be recycled and serve that function. At present, that recirculation stream is approximately 33,400 GPM. The addition of a third incinerator will cause the heat load to go up and to accommodate that the waterflow through the cooling tower will increase to approximately 50,100 GPM.

COOK:

What about the steam production rate after expansion?

VANDEMAN:

The steam production from the third incinerator will increase the total steam production of the plant by approximately 50%. It is currently approximately 50,000 pounds per hour. It will increase to approximately 750,000 pounds per hour.

COOK:

I'd like you to take just a moment to tract through for us basically the cooling system from non-potable water coming into the facility to the time it comes out. Can you briefly describe that process for us.

VANDEMAN:

Yes. Schematically the process is shown in the application by figure 3-1, I believe in the application that follows page number 21. There are two sources of water used in total to operate the plant. Potable water which is used after expansion will be used at the approximate rate of 149 gallons per minute, and non-potable water which will be used at a total input rate of approximately 1,590 gallons per minute. The source of the potable water is the, ultimately is the Pinellas County Water system. The source of the non-potable water is one of two, either the City of St. Petersburg Northeast Treatment Plant or the City of Largo Treatment Plant. Basically, the potable water is not used in the process, it's used for just domestic use within the plant. The non-potable water, whether it is from either Largo or the City of St. Petersburg, is used in the cooling tower, and is used after treatment for boiler makeup water. As the water proceeds through the plant, it is used, well the domestic water becomes sanitary sewerage, the non-potable water, either leaves the plant in the form of drift and evaporation from the cooling towers, or else leaves the plant in the form of blow down which goes to the sanitary sewer, or may leave the plant as quench water remaining on recovered materials. Ultimately, the sanitary sewer flow is to the City of Pinellas Park, which in turn transmits it to the Pinellas County facility which is called South Cross Bayou.

END OF TAPE #1 (Mitchell)

ANDREWS:

James C. Andrews, Jr.

WILLIAMS:

And your address, Mr. Andrews.

ANDREWS:

440 Bell Lane, Milton, Florida 32570

WILLIAMS:

Thank you, sir. Mr. Cook.

COOK:

Mr. Andrews, would you describe your occupation and current employment?

ANDREWS:

Yes sir. I am an Environmental Engineer with the consulting engineering firm of Henningson, Durham and Richardson.

COOK:

How long have you been employed in that capacity?

ANDREWS:

A little over seven years.

COOK:

Are you familiar with the Pinellas County Resource Recovery facility?

ANDREWS:

Yes sir, I am.

COOK:

How long have you been associated with that project?

ANDREWS:

Approximately six years.

COOK:

Would you describe your educational background for us, please.

ANDREWS:

I have a Bachelor of Science Degree in Biology from the University of West Florida and a Master of Engineering Degree from the University of Florida in Environmental Engineering.

COOK:

Mr. Williams, at this time I would tender Mr. Andrews as an expert

COOK:

Would you tell us what happens to the boiler residue?

VANDEMAN:

Yes. The plant is a mass burn facility and as such all the refuse that is received at the plant is taken through the incineration process. Having been incinerated, it physically is collected from several points completely within the plant, ah, so having collected a total or complete residue, that stream in total is sent to a material recovery system. The material recovery system extracts out of that total residue products which we call ferrous an iron product, a second product, heavy non-ferrous, a third product, aluminum. It also separates out some concrete blocks and logs which are clearly put to the landfill and having made those separations it produces a product which we call aggregate. The aggregate is currently used at the plant site for use in building haul roads and for daily cover at the Class 1 fill. I think that about covers it.

COOK

Okay, thank you. I have no further questions.

WILLIAMS:

Cross examination. Ms. Cobb?

COBB:

No, thank you.

WILLIAMS:

Mr. Keeseey?

KEESEY:

No questions.

WILLIAMS:

All right, thank you, Mr. Andrews. You may step down. Call your next witness, Mr. Cook.

COOK:

Mr. Andrews.

WILLIAMS:

Raise your right hand please, sir. (duly sworn)

ANDREWS:

I do.

witness in environmental engineering.

WILLIAMS:

Any objection?

COBB:

No objection.

KEESEY:

No objection.

WILLIAMS:

All right. He'll be accepted as an expert in that area. Go ahead Mr. Cook.

COOK:

Thank you. Mr. Andrews, did you have the opportunity to review the County's application for site certification of an additional boiler and related structure prior to submittal to the Department of Environmental Regulation?

ANDREWS:

Yes sir, I did.

COOK:

Did you in fact author a portion or most of this report?

ANDREWS:

Yes sir, I did.

COOK:

Would you describe briefly for us existing and any change in the site geology.

ANDREWS:

Well there were no changes in site geology per se. The actual geology there is very typical of this type of coastal landform. You basically have a top surficial layer of sand mixed in with shell which grades gradually to clay and marl the deeper you go at a depth ranging anywhere from fifteen to forty feet below land surface you encounter a fairly continuous clay hardpan which averages thirty-seven feet in thickness underneath the site. Beneath this hardpan layer is the first of the many successional limestone formations which are termed the Florida aquifer.



COOK:

Okay. Would you also likewise describe the site hydrology.

ANDREWS:

The hydrology of the site is it's a very complex mixture of gravel water from the surface aquifer and surface waters. That is the two really can't be distinguished. The flow is very sluggish throughout most of the sites. In the open lands which have not been developed yet for landfills, runoff flow is by sheet flow to either canals, intercepted ditches or existing ponds that are out there. In the developed areas there is a drainage system that basically conveys all of the storm water runoff to a twenty acre holding pond.

COOK:

Would you describe the basic ecology of the area including the immediate area and including the site.

ANDREWS:

Most of the site lands are disturbed in one form or another, the plant site of course and the landfill areas which are in a disturbed man altered state. The only remaining what you might call pristine or virgin lands at the site are in the southern portions of the total 230 acre site and these consist of pine flat woods and what we term wet weather ponds. The actual fauna and flora again in the undisturbed areas are typical of these Florida landforms and pine flat wood type terrain, slash pines and those sorts of animals, crows, bobcats, raccoons, that you find in those type areas. In the disturbed lands which are vegetated your standard Florida exotic species like Brazilian Peppers have invaded those areas.

COOK:

Does this proposal impact on any of that significantly or appreciably?

ANDREWS:

No sir. It does not.

COOK:

Okay, thank you. I would now like to have you comment on the cooling water and blow down with regard to what the proposed and existing safeguards are to minimize any adverse environmental

impact in that area?

ANDREWS:

Well the blow down supply as Mr. Vandeman had mentioned is entirely discharged to the sanitary line. The quality of that blow down stream if I had to coin it, it represents a slightly salty type water that is high and total as all solids but that's due to the actual makeup itself coming from reclaimed water sources but all the flow per se is discharged to the sanitary line excepting of course for that which evaporates into the atmosphere.

COOK:

And how does this monitor control?

ANDREWS:

As far as the actual blow down per se, the blow down is sampled for quality. The receiving sewage treatment plant has indicated in the application that the quality of the effluent is adequate and does not cause any problems therein.

COOK:

Okay, with regard to the boiler and cooling tower, are anti corrosion and anti fouling aid employed?

ANDREWS:

Yes, as standard plant operations they add certain chemicals to either destroy bacteria in the process waters or in some cases to neutralize or treat the waters such that they do not attack the actual metals that are in the processes, things like oxygen strippers, that sort of thing. I might add that the blow down itself is neutralized prior to discharge.

COOK:

Okay, thank you. Now I'd like to turn your attention to Chapter 4 of the application and specifically the environmental effects of construction and ask you to comment on the construction effects as they pertain to water quality firstly.

ANDREWS:

The most significant effect that could be anticipated would be due to silt or sediments from the construction sites getting into surface waters. These of course would be mitigated by the use of

such erosion control methods as straw ... filters and grass mulches, that sort of thing.

COOK:

How about the effects on air quality during construction?

ANDREWS:

The primary effect would be what is termed fugitive emissions and dust that are kicked up by heavy equipment, actually moving over barren soils and during dry periods there could be significant dust levels. Mitigating measures here again, as Mr. Acenbrack mentioned, will be the use of water sprays to keep the dust levels down during these dry periods.

COOK:

How about the impact on solid waste generation and disposal?

ANDREWS:

Any debris that is generated by construction of course if it is a processable type debris such as cardboard boxes and that sort of thing will be sent to the plant like all solid waste non-processable construction debris will be landfilled.

COOK:

What do you anticipate the proposed impacts during construction are on water bodies and uses?

ANDREWS:

We don't anticipate any significant impacts.

COOK:

Okay, I would like then now to draw your attention to the operational environmental effects in Chapter 5 of the application and I believe Mr. Vandeman commented on the heat dissipation system. Do you have anything further to add or elaborate on in that regard?

ANDREWS:

No sir, I don't.

COOK:

What about the effects of off stream cooling during operation?

ANDREWS:

The effects again of the off stream coolants would be the actual

evaporated material in the air. Most of the drift I think the number we used before was something like 75 to 80 percent of all that drift is going to fall on site. Again, with the chemical treatments and the disinfectant treatment that's afforded, not only at the treatment plant but also at the cooling towers, we don't anticipate any adverse environmental impacts due to the cooling tower ...

COOK:

Thank you. I believe you heard Mr. Acenbrack comment on operational impacts on noise. Do you concur with those comments?

ANDREWS:

Yes sir. We have taken measurements at the site during the construction of units 1 and 2 and we found no significant increase in noise.

COOK:

All right, I'd like to now discuss as indicated in Chapter 6, some brief discussion on the environmental measurements and monitoring programs that are associated with the existing plant and the proposed expansion.

ANDREWS:

As part of the conditions of certification for units 1 and 2, there was a comprehensive monitoring plan that was required for various things. Those required included groundwater monitoring, monitoring of sediments in the aeration oxidation pond. Surface water analysis. These programs have been implemented. The groundwater monitoring plan is now in one hundred percent operation. Some other programs that the County implemented on their own behalf which were not required by the DER includes such things as noise monitoring and also there was a monitoring program of the influent to the cooling towers and conducted by the State of Florida's epidemiology research lab where they independently come over to the plant on a regular basis and extract samples of the cooling tower makeup and analyze them for virus or other pathogen which could in fact though a remote possibility they could be there.

COOK:

Directing your attention to Table 6.2. Would you comment on those

requirements and frequency of analysis.

ANDREWS:

Okay, the analyzing of the water quality in the pond and the sediments and the groundwater data, these are basically quarterly type measurements that again as I mentioned have been implemented as of last November. These data are collected basically to establish what impact the existing treatment systems at site, that is the aeration oxidation system, has on groundwater. The analysis of the sediments in the pond and the tissues of the vegetation in the pond is of course to monitor the uptake of potential pollutants by these and exactly to guide what the management technique will be for these materials. Other things that are associated with the monitoring include solid waste reports which are submitted monthly to the District Department of Environmental Regulation and the virus monitoring program as I mentioned is done approximately on a monthly basis, but again it's very random. They just come out as part of their overall sewage treatment plant monitoring program.

COOK:

Are there any monitoring wells at the site?

ANDREWS:

Yes sir, there are a total of seventeen monitoring wells installed as part of the conditions of certification. There are many other wells that were installed prior to that by the U.S. Geological Survey.

COOK:

What's the basic purpose of those monitoring wells?

ANDREWS:

To analyze for potential contamination of well water due to activities at the site.

COOK:

On Page 46 of the application there are some comments about continuous sampling of pond water and sediments in groundwater. Is that any different from previously testified to?

ANDREWS:

No sir, it isn't.

COOK:

I would now call your attention to Appendix 1 which refers to air quality. I'd like you to basically just comment on that entire appendix.

ANDREWS:

Appendix 1 was the best available control technology or simply put BACT analysis for the air emissions at the plant. The BACT is an evaluation whereby in this case the Department of Environmental Regulation strives to set the lowest achievable emission rate for various potential air pollutants based not only on environmental considerations but also on economics and energy consumption. For unit 3 we analyzed several parameters or potential pollutants in the BACT analysis and specifically particulate matter, sulfur dioxides, nitrogen oxides, carbon monoxides, lead and beryllium, particularly mercury, hydrogen fluoride and gaseous mercury. In that application we evaluated various control technologies and recommended to the department various control technologies or other means as best available control technology in this case. Specifically for particulate matter, lead and beryllium and particularly mercury, we proposed to utilize an electrostatic precipitator. For sulfur dioxides, specifically we cited the fact that the use of municipal solid waste as a fuel and as the exclusive fuel at the facility be a low sulfur containing material represents the best available control technology in that case. For nitrogen oxides and carbon monoxides, the operating of the boiler, the actual mode of operation in the boiler is proposed as the control technology for those. They are dependent or their emission rates are dependent on boiler operation per se. We selected the electrostatic precipitator for several reasons. Of these include the fact that there is one out there the two units for the existing plants whereby the operators will be familiar with it. We have shown that the electrostatic precipitator performs well in cleaning particulate matter from the stack flue gas. It generates very little residue compared to other control technologies and of course with existing precipitators at the plant you have a ready supply of spare parts in case of malfunctions.

COOK:

Did you propose certain emission limitations for these various air emission parameters.

ANDREWS:

Yes sir. What we did as far as particulate matter, we proposed to meet a grain loading in the design of the precipitator of .03 grains per dry standard cubic feet at twelve percent CO<sub>2</sub>, adjusted to twelve percent CO<sub>2</sub>.

COOK:

I take it you performed air quality analysis for all these parameters prior to coming up with this figure?

ANDREWS:

Yes sir, appendix 2 actually details the air modeling program that went along with this. We've looked basically at all of the, what we call criteria pollutants, particulate matter, sulfur dioxides, carbon monoxide, nitrogen oxides and lead. The modeling program in a general sense consisted of using two long term models. There were some prior screening models that were used. One is termed the Cresta(sp) model. One is termed the ISCST model and basically the Cresta(sp) model was utilized to identify at what time periods based on actual meteorological data from the Tampa weather service, at what times we would note the highest pollutant concentrations. The ISCST model was actually used to refine those results a lot more clearly. For example, and particularly in terms of building down wash and building wake effect which is included in the ISCST modeling, we analyzed for the highest and second highest short term concentrations and we evaluated this in terms of the prevention of significant deterioration or PSE increment consumption as well as the ambient air quality standards established both by EPA and further refined by the State of Florida. The PSE analysis was conducted for particulate matter and sulfur dioxides and units 1 and 2 and unit 3, as well as the McKay Bay Resource Recovery Facility in Tampa and the TECO Big Ben Plant were included in that PSE analysis. The basic result of the PSE evaluation was that installation and

operation in unit 3 will not cause a violation of PSE increment. As far as the ambient air quality standard analysis which basically is the governing of all situations, we executed this for all of the criteria pollutants that I mentioned before and included at least as I recall fourteen major measures in that analysis all around the Tampa Bay region and again we also looked at potential impacts to two nonattainment areas, one being over in Tampa for particulate matter. One being near Tarpon Springs for sulfur dioxides and we analyzed our impact on those areas and also on a Class 1 area located approximately 75 kilometers north of the site which is a national wildlife refuge and again as with the PSE increment, the modeling indicated that no violations at the ambient air quality standards could be demonstrated even in the critical nonattainment or the Class 1 areas. Furthermore, in appendix 3 of that document we looked at whether it would cause additional impacts, basically to look at what affects criteria and what we call non-criteria pollutants would have on visibility, would have on soils and would have on vegetation. The visibility analysis was specifically directed towards potential impairments of visibility at this national wildlife refuge and again it showed that the chances of a visibility impairment due to unit 3 and as well as units 1, 2 and 3 together was extremely unlikely at that area. We also evaluated and took a look at what types of sensitive areas as far as agriculture or backyard gardens, that sort of thing, could be affected by this and again we found that no adverse effects are likely.

COOK:

Have you had the opportunity to review the Department's Proposed Conditions of Certification?

ANDREWS:

Yes sir, I have.

COOK:

Do the emission limitation standards they propose conform to those that you propose?

ANDREWS:

The emission limitations that the Department has proposed were the



limitations utilized in the air quality modeling.

COOK:

Is there a possibility in your opinion that through further discussions and use of further data and other modeling techniques that different emission limitation standards could be attained that would still result in no adverse impact?

ANDREWS:

Yes, the modeling results really pointed out the fact that the accumulative impact of our facility plus all the other say fourteen emission sources that I mentioned before, the accumulative impact is at a certain number and our facility is actually such a small factor in that that different emission rates would really not have much of a significant change in the overall air quality, the model air quality.

COOK:

Are the statements contained in the application to the best of your knowledge accurate and represent the intentions and purposes of Pinellas County in filing this application?

ANDREWS:

Yes sir.

COOK:

At this time I would move that the application be received into evidence as Exhibit #1.

WILLIAMS:

So received.

COOK:

I have no further questions.

WILLIAMS:

All right. Cross examination?

COBB:

No questions.

WILLIAMS:

Mr. Keeseey?

KEESEY:

No questions.

WILLIAMS:

All right, Mr. Cook. Call your next witness.

COOK:

I call Mr. Oven.

WILLIAMS:

Mr. Oven? Raise your right hand please, sir. (duly sworn)

OVEN:

I do.

WILLIAMS:

State your name, please.

OVEN:

My name is Hamilton S. Oven, Jr.

WILLIAMS:

Spell your last name please, Mr. Oven.

OVEN:

O-v-e-n.

WILLIAMS:

And your address please.

OVEN:

I work at 2600 Blair Stone Road, Tallahassee, Florida, 32301

WILLIAMS:

All right, thank you Mr. Oven. Mr. Cook?

COOK:

Thank you. Mr. Oven, would you briefly describe your educational background and experience.

OVEN:

I have a Bachelor's Degree in Civil Engineering with a Sanitarium Engineering Option, University of Florida. A Master's Degree in Environmental Engineering specializing in air pollution control from the University of Florida. I worked for one year with the Federal Power Commission in Washington, D.C. dealing with air pollution and types of power plants. I spent fourteen and-a-half months as Air Pollution Control Engineer with the City of Jacksonville. Another nine months as Water Pollution Control Engineer for the City of Jacksonville. Another two years as the Director of Air and Water

Pollution Control in the City of Jacksonville. I spent fourteen and-a-half months as a Deputy Executive Director of the Florida Department of Pollution Control at which time I set up the power plant siting program for that Department. In June of 1974 I became a professional engineer directly in charge of the power plant siting program which I've continued to date.

COOK:

At this time, Pinellas County would stipulate to Mr. Oven's expertise in the areas of environmental engineering and power plant siting.

WILLIAMS:

Any objection?

COBB:

No objection.

KEESEY:

No objection.

WILLIAMS:

All right, he will be accepted in those areas, Mr. Cook.

COOK:

Mr. Oven, did you have occasion to receive and review Pinellas County's application for a power plant site certification pertaining to expansion of a third boiler commonly referred to.

OVEN:

I did.

COOK:

And as part of that procedure, did you cause notices of this hearing to be published?

OVEN:

Yes.

COOK:

Do you have those notices with you today?

OVEN:

Yes I do.

COOK:

May I see them? (Mr. Oven submits documents to Mr. Cook)

Mr. Williams, at this time I would move the introduction of these notices into evidence.

WILLIAMS:

As composite Exhibit 2. Any objection?

KEESEY:

No objection.

COBB:

No objection.

WILLIAMS:

All right. It will be marked and received as Petitioner's Composite Exhibit #2.

COOK:

Thank you.

WILLIAMS:

Mr. Cook?

COOK:

And at this time I would call your attention, Mr. Williams, to the notice published in the Florida Administrative Weekly. I believe the notice requirement is thirty days and this didn't quite make that. I think it was published on the 2nd or the 3rd for the hearing on the 29th which constitutes approximately a three or four day defect in that notice requirement although the other two notices do comply with the thirty day requirement and I would move at this time to waive that defect pursuant to your authority under the power plant siting act, if there is no objection to same.

WILLIAMS:

Any objection to the waiver of the thirty day notice requirement with respect to the certification hearing?

COBB:

No objection.

KEESEY:

No objection.

WILLIAMS:

All right, so ruled.

COOK:

Thank you. Mr. Oven, I am looking at a copy of a report entitled "State of Florida, Department of Environmental Regulation,

Electrical Power Plant Site Certification Review, Staff Analysis" signed by Terry Coe(?) on January 27, 1984. Do you have a copy of that document?

OVEN:

Yes I do.

COOK:

Has a copy been furnished to your knowledge to the Hearing Officer?

OVEN:

Yes, I have another copy here if you would like,

WILLIAMS:

I have my copy.

OVEN:

Ah, I would say that this copy has more up-to-date conditions of certification than the Hearing Officer's.

WILLIAMS:

I'll have to take your copy then, Mr. Oven.

COOK:

... submission of amended ...

WILLIAMS:

I'll tell you what I'll do. To avoid having to take two copies back to Tallahassee, I'll just trade copies with you. How's that?

OVEN:

That's fine.

WILLIAMS:

All right. (Mr. Oven and Mr. Williams exchange copies of document)

All right, are you moving this in, Mr. Cook?

COOK:

I move that in as Petitioner's Exhibit 3.

WILLIAMS:

Any objection?

COBB:

No objection.

KEESEY:

No objection.

WILLIAMS:

All right, it will be marked and received as Petitioner's Exhibit #3.

COOK:

Mr. Oven, we would like you to comment on your involvement in the preparation of this report. What I'm basically asking you is are you the primary author of this report?

OVEN:

Yes I am.

COOK:

I would like, Mr. Oven, with your permission to go through the majority of this report in much the same manner the County went through their application for the purpose of the interest of the people in the audience and the hearing officer. Starting with Page 1, the introduction, let me preface that by asking, were you involved with and are you familiar with the previous site certification of this facility?

OVEN:

I participated in the review and the department's analysis of that previous certification, yes.

COOK:

Thank you. You heard testimony regarding the general description of the site and the existing proposed facilities. Do you agree with that or do you have any comments on that?

OVEN:

I agree. I might clarify one thing. Mr. Acenbrack mentioned a savings in gallons, I believe it's barrels. And a barrel being forty-two gallons.

COOK:

Thank you. You've indicated in page 3 of your analysis a need for the expanded facility and you heard Mr. Acenbrack talk about some of the objectives and some of the benefits. Do you concur that this type of facility is in fact beneficial because number one, it reduces required landfill areas for garbage in other areas of the County and that it also produces other beneficial side effects such as the reduction and the need for foreign oil and covered metals and that type of thing?

OVEN:

Yes I do.

COOK:

Thank you. Are you in disagreement with the testimony you heard regarding the general characteristics of the land use in the immediate vicinity?

OVEN:

No.

COOK:

I understand from your report that you submitted copies of the County's application to a number of agencies or departments of the State indicated on Page 7. There were approximately eleven of them. Is that correct?

OVEN:

That is correct.

COOK:

Okay, I would like to beginning on page 8 briefly go through with you just in general the kind of substance or the comments you received back. I take it you did receive statutory required reports?

OVEN:

Yes we did.

COOK:

And you have them with you today?

OVEN:

Yes, they are incorporated in this report.

COOK:

Okay, thank you. I believe, Mr. Williams, if we can move introduction of the Public Service Commission's Report since it was an administrative hearing as referenced in Mr. Oven's report.

WILLIAMS:

Is that contained in the DER staff analysis?

OVEN:

Yes it is.

COOK:

Also attached is an appendix I believe.

OVEN:

This is summarized in my report and attached is an appendix.

WILLIAMS:

All right, unless there is some objection, I'll simply review that in the course of reviewing Petitioner's Exhibit #3 and it's contained in Petitioner's Exhibit #3 for purposes of the record for consideration by the Governing Cabinet unless there is some contrary indication. Ms. Cobb or Mr. Keeseey?

COBB:

No objection.

KEESEY:

No objection.

COOK:

I believe that the truth or veracity of the statements contained in the PSC report may be judicially noticed as opposed to the other report.

WILLIAMS:

All right, fine. Thank you.

COOK:

Turning then to the next report you received from the Department from Community Affairs, could you summarize, first of all let me ask you this question. These reports that you received, I take it they played a role in your final analysis and recommendation or conclusion. Is that correct?

OVEN:

Yes they do.

COOK:

Was there any particularly significant adverse comments received from the Department of Community Affairs that would have played an important role in your decision?

OVEN:

No there was not.

COOK:

How would you summarize the comments of the Department of Community Affairs?



OVEN:

Basically they found that the proposed facility was in conformance with the majority of the element in the State Comprehensive Plan.

COOK:

It appears that they had to weigh a few benefits versus negative impacts pertaining to some state policies. I call your attention to quote that the increased negative land use and other impacts generated by the proposed facility expansion are outweighed by the benefits the expansion would provide in reducing the amount of landfill area needed, recovering metals and producing electrical power. Do you concur in that?

OVEN:

Yes I do.

COOK:

Thank you. I would move the introduction of that report in same manner as previously.

WILLIAMS:

All right, I will consider it.

COOK:

A summary of it is at least contained in the DER report.

WILLIAMS:

All right.

OVEN:

The entire report is contained as an appendix in the rear of the document as well.

WILLIAMS:

I was just flipping through that report as a matter of fact. Go ahead Mr. Cook.

COOK:

Did you receive a report from the Southwest Florida Water Management District?

OVEN:

Yes.

COOK:

And what was their conclusions?

OVEN:

They concluded that the use of reclaimed water for industrial ... needs reduces the demand for potable water and for most water conservation and they encourage the use of reclaimed water for this in several projects.

COOK:

Would you characterize their responses as favorable?

OVEN:

Yes.

COOK:

Thank you. There's no actual report I don't believe. Did they not just basically submit you a letter?

OVEN:

They submitted a letter. That's correct.

COOK:

I'd like the record to reflect that that was contained in the report.

WILLIAMS:

All right, Mr. Cook.

COOK:

Did you also receive a comment from the Department of Health and Rehabilitative Services?

OVEN:

Yes I did.

COOK:

And what was the substance of that comment?

OVEN:

They felt that the public impacts of the proposed facility were favorable.

COOK:

Thank you. Are you aware of any archaeological or historical sites in that immediate vicinity?

OVEN:

No I am not.

rules promulgated thereunder. Would you then as I bring up each topic just provide me with some brief comments starting with the accessibility to transmission.

OVEN:

The new facility will utilize existing transmission facilities, therefore, there is no adverse impact.

COOK:

Thank you. How about the fuel?

OVEN:

Well the use of solid waste as a fuel reduces the use of foreign oil and reduces the amount of material that must be disposed of in landfills therefore it conserves land space.

COOK:

Okay, thank you. How about the proximity to and impacts on transportation systems?

OVEN:

The facility is located within a good network of roads. There are sufficient roads available around the site that there should be no adverse impacts on traffic.

COOK:

Thank you. Cooling system requirements.

OVEN:

The proposed facility will utilize a mechanical draft cooling tower similarly designed to the existing cooling tower which appears to be operating satisfactorily and should cause no adverse impacts on the environment.

COOK:

Thank you. How about soil and foundation conditions?

OVEN:

The examination of soil and foundation conditions indicate there are no adverse conditions existing that would cause a hazard to the site.

COOK:

Thank you. You've heard the testimony regarding the sources and availability of potable and non-potable water. Do you agree with

COOK:

Was this confirmed by the Department of State, Division of Archives, History and Records Management?

OVEN:

Yes.

COOK:

Thank you. Did the Department of Natural Resources provide you with any adverse comments?

OVEN:

No.

COOK:

Did the Game and Fresh Water Fish Commission provide you with any comments?

OVEN:

They did.

COOK:

And what was the substance of their conclusion?

OVEN:

They felt that the impacts of proposed project on fish and wildlife resources were expected to be minimal.

COOK:

Thank you. How about any reports or comments from the Department of Agriculture and Consumer Service?

OVEN:

They had no adverse impacts.

COOK:

Thank you. How about the Department of Commerce?

OVEN:

The Department of Commerce felt that the proposed project was beneficial.

COOK:

Thank you. Now beginning on Page 27, your staff report discusses the Department's evaluations and actually beginning on Page 28 I believe you addressed the criteria that you are supposed to review pursuant to state statute on power plant siting and the appropriate

those comments?

OVEN:

I do.

COOK:

And are those satisfactory?

OVEN:

Yes

COOK:

You've heard testimony regarding proposed site modifications. Do you have any disagreement or differences of opinion with that testimony?

OVEN:

No.

COOK:

Thank you. Do you anticipate or foresee or expect any adverse impacts on plant and animal communities or rare and endangered species?

OVEN:

No adverse impacts.

COOK:

Thank you. You have reviewed the applicant's existing and proposed surface water safeguards or treatments especially pertaining to storm water runoff. Are you satisfied that what exists on the site and what is proposed will meet those surface water safeguards?

OVEN:

Yes.

COOK:

Have you addressed the impact of the existing and proposed expansion of the facility with respect to groundwater?

OVEN:

Yes.

COOK:

Are you satisfied that the applicant's proposals will ensure that water quality standards beyond the boundaries of the site are met?

OVEN:

I have.

COOK:

Are there safeguards and conditions incorporated in the enclosed conditions of certification pertaining to this subject?

OVEN:

That is correct.

COOK:

Would the same be true ... storm water treatment itself?

OVEN:

Yes.

COOK:

Now addressing air quality. You did an extensive analysis of air quality, proposed impacts as a result of the proposed expansion of the site. You've heard Mr. Andrews testify as to the studies done by the County and the data that formed the basis for their submittal in the application, would you like to spend a few minutes and comment on how you reviewed that data and what you came up with?

OVEN:

Certainly. The Department is required by the rules of the Department to perform analysis of the impact on air quality and also a determination of whether or not the facility will utilize the best available control technology. One is sort of dependent upon the other. Determining which is best available control technology will determine the emissions from the facility and the emission from the facility will then be utilized by air quality models to predict the impacts on ambient air quality. The Department in reviewing the best available control technology reviewed for example the performance criteria test done on the existing facility which helped ascertain the range in which that existing facility was emitting. It also reviewed the various federal determinations, the best available control technology for similar type facilities around the country and other determinations made within the State of Florida. Using that we then proposed the various emission rates which are incorporated in the conditions of certification. Then we reviewed

the modeling in its ... role to confirm the impacts of the facility as to the impacts on that air quality criteria for ambient air quality and prevention of significant deterioration there are limits as to how much you can increase the adverse air quality impacts in an area, especially in those areas where the ambient air quality is cleaner than the standards and in reviewing the modeling we determined that the impacts of this proposed facility in addition to other permitted facilities that have been recently constructed in the area would not violate ambient air quality and would not violate the prevention of significant deterioration limits.

COOK:

And that's assuming that your emission standards are met. Correct?

OVEN:

Yes.

COOK:

Are those emission standards, if you'll excuse the phrase, cast in stone? Can they ever be changed without jeopardizing your ultimate goals here in the way of air quality protection?

OVEN:

In most cases they can be changed upon demonstration that the emission limitations will not violate ambient air quality standards or violate the PSD increments. Now in some cases, some of the emission standards may be the same as those required by regulation in which case you would have to change the regulation before you could change the conditions.

COOK:

But if I might characterize the BACT analysis as one that does change depending on a number of circumstances.

OVEN:

That is correct. We have to look at what is achievable. What is economic. What is practical and that which complies.

(end of Tape #2)

(Tape #3 - A. Delaney)

COOK:

Okay, now calling your attention to page 47 of your report, excuse me page 40, I'm sorry page 68 of number 4, you made the statement that having reviewed the application you're satisfied that the construction and operational safeguards imposed or required by the conditions of certification are satisfactory. Is that correct?

OVEN:

That is correct.

COOK:

In conclusion then what is your recommendation regarding the County's application for site certification?

OVEN:

Would you repeat the question please, sir?

COOK:

What is your recommendation regarding the application for site certification?

OVEN:

The Department recommends that the proposed application be certified in conformance with the proposed conditions of certification that are attached to this report.

COOK:

Okay, thank you. Now at this point I would like to go through those conditions with you. There are a number of what appear to be procedural conditions listed as Roman Numerals I through XII. Is that correct?

OVEN:

Yes.

COOK:

Are those basically the same as the ones that existed in the previous site certification?

OVEN:

By enlarge with the exception of number 12.

COOK:

Right, and as we discussed earlier, do you or your Department have



any objection to changing what was the proposed condition #12, modification of conditions to enable the County to reach a mutual agreement with the Department in providing sufficient notice to the public to change those certain emission limitations? Again, assuming that there's a mutual agreement without requiring Governor and Cabinet approval.

OVEN:

That's correct. I might note for the Hearing Officer's information that we propose deleting SO2 of the 5th line of that.

WILLIAMS:

What page are you on now?

COOK:

Page 4 of the conditions.

OVEN:

As I indicated, rather than limiting it to the SO2, we're just going to leave it at the emission limitation.

WILLIAMS

All right.

COOK:

Okay, there were a couple of minor changes I'd like to go through with you at this time. And with your permission Mr. Williams, I'll provide a copy of this to you and the other parties here and we can go through each of these and as we ....

(Mr. Cook submits copies of document to Hearing Officer, Ms. Cobb and Mr. Keesey)

OVEN:

Also the Department would endeavor to correct these conditions and file them with the proposed recommended order so that you would have a complete set of conditions at that time.

COOK:

I'm not sure these are in correct order but the applicant proposed on Page, no, firstly on Page 7 and it's not before you but as I understood it, the emission limitations for particulate matter which are referenced as .03 grain, that would apply to unit 3 the third boiler, the proposed boiler and the existing .08 grains at the

standard for units 1 and 2 would remain. Is that correct?

OVEN:

That is correct.

COOK:

And that will be clarified ..

OVEN:

Yes.

COOK:

Is it also not true that the conditions of certification that are proposed here and that have basically been agreed to among the parties will apply to the extent that they are applicable at this time to the extent that they are not at this time, the previous conditions would remain in effect until such time as the third boiler becomes operational?

OVEN:

That is correct.

COOK:

Thank you. On page 9 of the conditions, paragraph #2, electrostatic precipitator. You have before you a proposed revision that this basically distinguishes between the ESP for unit 3, the proposed boiler, and the existing language remains the same for units 1 and 2.

OVEN:

That is correct.

COOK:

You have no objection to that?

OVEN:

No objection.

COOK:

Thank you. That same page, paragraph #3, I believe we have basically a typographical error and the word stack in the first sentence should precede the word opacity. Is that correct?

OVEN:

Correct.

OVEN:

No I do not.

COOK:

Thank you. Turning now to page 15, paragraph 6, the last sentence pertaining to fly ash. Do you have any objection to inserting after the words fly ash, the words - which has been segregated or separated from bottom ash?

OVEN:

No.

COOK:

The purpose of this being that the fly ash coming from the ESP is definitely prohibited. To be in place below maximum groundwater. Is that correct?

OVEN:

That is correct.

COOK:

Thank you. And lastly, on the last page, page 17, the applicant had requested primarily for purpose of clarity, reinserting a previous condition of certification pertaining to the status of existing permits which would then be Roman Numeral XV and would say, no permit may be issued for sanitary wasteland filling other than this certification for the area known as Bridgeway Acres II. Do you have any objection to the inclusion of that?

OVEN:

No.

COOK:

Thank you, Mr. Oven. Just a couple of more questions for you. Do you understand that it is the applicant's position that they intend to agree to these conditions of certification subject to the right to utilize the modification of conditions procedure that we just discussed and subject to the reservation of their rights to object or contest the application of any such condition to the existing units 1 and 2, should that become something that the County wants to pursue?

COOK:

Thank you. On page 9, the same section, paragraph D, it looks like the word was left out and it should read the permittee shall, strike the word, and, and continue with operate. Is that correct?

OVEN:

Correct.

COOK:

Thank you. Turning to section C, on page 11, paragraph #3, entitled Special Studies. At the end of the first sentence referencing fifteen minute contact time, do you have an objection to including the words - or alternative level as approved by the Department.

OVEN:

No I do not.

COOK:

Thank you. In section D, you have a copy of the proposed additional subparagraph E with request that upon satisfactory demonstration to the department the surface water quality will not be deteriorated. Special pilot operation in the field to determine environmentally effective land application of process blow down water from the resource recovery facility may be allowed. This demonstration will require submittal of background and system design data and provisions for monitoring as approved by the Department. Do you have any objection to insertion of that?

OVEN:

No I do not. This is in conformance with the material reviewed in your initial application which allowed the spray irrigation of some of the stormwater so this will be within the parameter of that original application. We have no objection to it.

COOK:

Thank you. Turning now to page 14, section E, Solid and Hazardous Waste. Paragraph #2. The last sentence in that paragraph reads, daily cover shall consist of a six inch layer of compacted earth. Do you have any objection to inserting after the word earth - or other material approved by the Department?

OVEN:

That is my understanding.

COOK:

Do you have any objection to that?

OVEN:

No.

COOK:

Two more questions. Is it your opinion that the location and operation of the proposed facility, if made subject to the conditions of certification which have been discussed, are 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?

OVEN:

It is.

COOK:

Is it further your opinion that the operational safeguards for the proposed facility are technically sufficient for the welfare and protection of the citizens of Florida?

OVEN:

It is.

COOK:

Is it your opinion that certification of this facility is consistent with the provision of abundant low cost electrical energy?

OVEN:

Yes.

COOK:

Is it your opinion that proposed air pollution control equipment should prevent the operation of the facility from causing significant deterioration of ambient air quality?

OVEN:

It is.

COOK:

Thank you, Mr. Oven. I have no further questions.

WILLIAMS

Cross examination?

MS. COBB:

No questions.

WILLIAMS:

Mr. Keeseey?

KEESEY:

No questions.

WILLIAMS:

All right, Mr. Oven, you may step down.

COOK:

Mr. Williams, at this time, I would like to recall Mr. Acenbrack for one question.

WILLIAMS

All right. Mr. Acenbrack? All right, Mr. Acenbrack, you've been previously sworn. You're still under oath. All right, Mr. Cook.

COOK:

Mr. Acenbrack, have you had the opportunity to review the Department's staff analysis that Mr. Oven testified to, as well as the proposed conditions of certification as amended pursuant to discussions here?

ACENBRACK:

Yes.

COOK:

On behalf of Pinellas County, is it your intention to agree to comply with the proposed conditions of certification subject only to the right to exercise the modification of conditions, provisions that we've discussed and with a reservation of rights pertaining to the application of any such conditions to existing units 1 and 2?

ACENBRACK:

Yes.

COOK:

No further questions.

WILLIAMS:

Cross examination?

MS. COBB:

No questions.

KEESEY:

No questions.

WILLIAMS:

All right, thank you, Mr. Acenbrack. You may step down. All right, Mr. Cook?

COOK:

Mr. Williams, I believe this concludes the applicant's presentation at this time. I would request the right to make a closing statement at the conclusion of the other party's,

WILLIAMS:

certainly. All right, Ms. Cobb? Additional testimony?

COBB:

No additional testimony.

WILLIAMS:

Mr. Keeseey?

KEESEY:

No, we have no witnesses.

WILLIAMS:

All right. Now there are some members of the public apparently sitting out in the audience. If any of you all would like an opportunity to speak to this application either in favor of it or against it, this is your opportunity to do so. If you choose to do so, if you would please come up to the podium here and identify yourselves with your name and address and then I'll swear you and give you an opportunity to make whatever statement you choose to make and give counsel for the various parties here an opportunity to cross examine you should they choose to do so. Is there anyone here who would like to make a statement for the record? (no response) There doesn't appear to be anyone. All right. Closing statements. Mr. Cook?

COOK:

Mr. Williams, it is respectfully submitted that the testimony you've heard today establishes that the proposed facility as described in the application and the DER analysis is appropriate for

certification subject to the proposed conditions as amended and will 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, and meets the purpose and spirit of the power plant siting act. Thank you.

WILLIAMS:

All right, thank you, Mr. Cook. Ms. Cobb?

COBB:

No statement

WILLIAMS:

Mr. Keeseey?

KEESEY:

No statement.

WILLIAMS:

All right. You all have indicated that you wish to file apparently fairly expeditiously a stipulated proposed recommended order. Let's go ahead and set up a time for filing of that document. What's your pleasure? Let me know when you want to file it.

COOK:

We would propose to submit that to you as soon as possible. Possibly as early as tomorrow afternoon but no later than Friday because we're aware of your extensive scheduling,

WILLIAMS:

right. I'm going to be in Miami on Friday. I will be back in my office for the beginning of the DER hearing on Monday so if you can get it filed by Friday, perhaps I can check my mail over the weekend and if everything appears appropriate, perhaps have the thing entered and signed by the first of next week. Monday, Tuesday or Wednesday, somewhere in that area.

COOK:

That would be perfectly acceptable.

WILLIAMS:

What I will do is as soon as the order is ready and signed, I'll have my secretary call Ms. Cobb to indicate that the order has been signed and they can either pick up a copy or let you know that a copy is available so that you all know,



COBB:

fine,

WILLIAMS:

as soon as possible. I know you have agenda problems with the Governor and Cabinet from time to time so we'll attempt to expedite it in that fashion. All right, if I haven't heard from you for some strange reason by the first part of next week, if you would call and let me know when I could expect to receive the proposed orders from you all and we'll just proceed in that fashion. All right, is there anything further that we need to take up at this point?

COBB:

(indicates no)

WILLIAMS:

Now, Mr. Cook, do you want me to keep this copy of the application or do you want me to substitute the copy that was filed with the original request for the Hearing Officer? It's up to you.

COOK:

There's been no change, to my knowledge. Why don't I keep that,

WILLIAMS:

all right,

COOK:

and satisfy yourself that your copy is ...

WILLIAMS:

okay, if I get in touch with you we can reintroduce that into the record then or I can get with Mr. Owen and Ms. Cobb.

COOK:

I have extra copies.

WILLIAMS:

Okay, good. All right, is there anything further we need to take up at this point before adjourning the hearing? (no response) From any of the parties?

COBB:

No.

WILLIAMS:

All right, thank you all. The hearing is adjourned. (11:55 A.M.)

STATE OF FLORIDA )

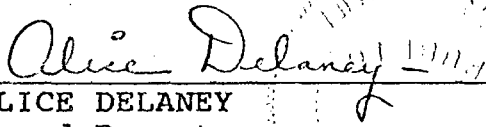
COUNTY OF PINELLAS )


I, ALICE DELANEY, Board Reporter, Notary Public, State of Florida at Large,

DO HEREBY CERTIFY that the foregoing transcript of the Administrative Hearing Re Pinellas County Resource Recovery Project Application for Power Plant Site Certification - Case No. 83-2355, was taken before me at the time and place set forth in the caption thereof; that the witnesses therein were by me duly sworn on oath to testify the truth; that the proceedings of said hearing were stenographically reported by me, and that the foregoing pages, number 1 through 57, inclusive, constitute a true and correct transcription of said proceedings as had.

I FURTHER CERTIFY that I am not a relative or attorney or counsel of any of the parties hereto, nor a relative or employee of such attorney or counsel, nor do I have any interest in the outcome or events of the action.

IN WITNESS WHEREOF I have hereunto affixed my official signature and seal of office this 30th day of March 1984, at Clearwater, Pinellas County, Florida.

  
ALICE DELANEY  
Board Reporter  
Notary Public  
State of Florida at Large



My commission expires:

Notary Public, State of Florida  
My Commission Expires Sept. 20, 1987  
Member of the Florida Notary Public Association, Inc.

1607p/0033p

cc Don Kell.  
Pat Lewis



# BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565



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BARBARA SHEEN TODD

March 12, 1984

Mr. Hamilton S. Oven, Jr., P.E., Administrator  
Power Plant Siting Section  
State of FL Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32302-8241

Dr. Rick Garrity, District Manager  
State Department of Environmental Regulation  
Southwest District Office  
7601 Highway 301, North  
Tampa, FL 33610-9544

Received DER

MAR 15 1984

P.P.S

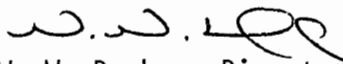
Re: Environmental Monitoring Program--Pinellas County Resource Recovery Facility

Dear Mr. Oven:

The Environmental Monitoring Program implemented in compliance with the conditions of Certification (COC) for the Pinellas County Resource Recovery Facility is fully operational. Enclosed, please find a xerox copy of a report on the "as installed" plan. Appendix C of this document features the analytical results for the first quarterly regimen. This is submitted in accordance with Section XIV.D.3 of the COC.

If you have any questions, please feel free to contact me.

Sincerely,

  
W. W. Dasher, Director  
Public Works Operations

cc: W. Gray Dunlap, County Attorney  
G. E. Jordan, Dir, PW&U  
HDR

WWD:ltl



STATE OF FLORIDA

# Department of Administration

## Division of Administrative Hearings

Oakland Building, 2009 Apalachee Parkway

TALLAHASSEE

32301

Bob Graham  
Governor

Nevin G. Smith  
Secretary of Administration

March 8, 1984

R P S

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

MAR 19 1984

RECEIVED

Re: Case No. 83-2355

In Re: Pinellas County Resource Project:  
Application for Power Plant Site  
Certification.

Dear Ms. Tschinkel:

Enclosed are copies of my Stipulation to Recommended Order and Recommended Order Regarding Site Certification entered in the above-styled case.

Please furnish the Division of Administrative Hearings a copy of the Final Order entered in this case.

Sincerely,

WILLIAM E. WILLIAMS  
Hearing Officer

/mc

Enclosures

- xc: Honorable Bob Graham
- Cabinet Members
- Van B. Cook, Esq.
- Julia D. Cobb, Esq.
- C. Laurence Keeseey, Esq.
- Mr. Tom Herndon
- Hamilton S. Oven, Jr., P.E.
- Bonnie Davis, Esq.
- Karen A. Lloyd, Esq.

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

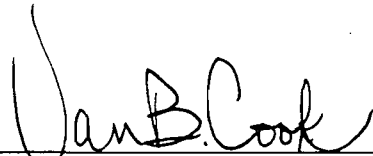
IN RE:

Pinellas County Resource  
Project: Application for  
Power Plant Site  
Certification.

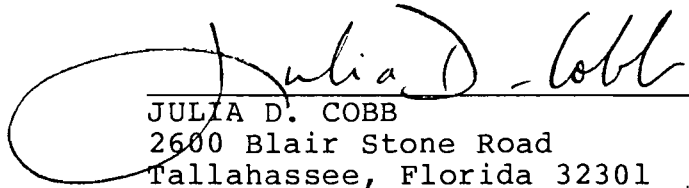
DOAH CASE NO.: 83-2355

STIPULATION TO RECOMMENDED ORDER

The Undersigned counsel to the parties to this proceeding hereby stipulate to the entry of the attached Recommended Order regarding site certification.



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Chief Assistant County Attorney  
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Clearwater, Florida 33516  
For the Applicant, Pinellas  
County



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Assistant General Counsel for  
Department of Environmental  
Regulation



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For the Department of Community  
Affairs

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: Pinellas County Resource )  
Project; Application for Power )  
Plant Site Certification )

Case No. 83-2355

RECOMMENDED ORDER  
REGARDING SITE CERTIFICATION

Pursuant to notice, the Division of Administrative Hearings, by its duly designated Hearing Officer, William E. Williams, held a public hearing in this cause on February 29, 1984, in Clearwater, Florida.

APPEARANCES

For the Applicant:

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Chief Assistant County Attorney  
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For the Department  
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Regulation:

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For the Department  
of Community Affairs:

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For Southwest Florida  
Water Management  
District:

None

For Public Service  
Commission

None

On or about September 6, 1983, the Applicant, Pinellas County, filed an amended application for power plant site certification to expand its existing resource recovery facility with the Department of Environmental Regulation. The Division of Administrative Hearings received a request from the Department of Environmental Regulation for the appointment of a Hearing Officer to conduct the hearings required by Chapter 403, Part II, Florida Statutes. On September 19, 1983, the Division of Administrative Hearings received a statement from the Department of Environmental Regulation declaring the application to be complete as of September 6, 1983.

On January 19, 1984, the Applicant filed a Motion to Expedite the certification hearing required by Chapter 403, Part II, Florida Statutes. On January 25, 1984, the undersigned entered an Order scheduling a certification hearing for February 29, 1984 and requiring a pre-hearing stipulation, and issued a Notice of Hearing. A pre-hearing stipulation was filed on or about February 24, 1984.

A certification hearing as required by Section 403.508(3), Florida Statutes, was held pursuant to proper notice in Clearwater, Florida. The notice published in the Florida Administrative Weekly was four days less than the required 30 day notice. Upon motion of the Applicant, and no other party entering an objection, this defect was waived. The purpose of that hearing was to receive testimony and evidence concerning whether the location and operation of the proposed facility would produce adverse effects on human health, environment, the ecology of the land and its wildlife, and the ecology of State waters and their aquatic life;

would assure the citizens of Florida that operational safeguards are technically sufficient for their welfare and protection; and would effect a reasonable balance between the need for the facility and the environmental impact resulting from construction and operation of the facility; as well as providing abundant, low-cost electrical energy. The hearing included an examination of the following:

- The necessity for expanded electrical generation;
- The expected environmental impact from construction and operation of the resource recovery facility;
- Operational safeguards of the facility;
- The availability of abundant, low-cost electrical energy;
- Other public interests and issues relevant to certification of the proposed site.

In addition, evidence relating to best available control technology and the prevention of significant deterioration of ambient air quality was presented.

The following parties entered appearances at or participated in this proceeding:

1. The Applicant, Pinellas County.
2. Florida Department of Environmental Regulation.
3. Florida Department of Community Affairs.

Having considered all testimony and evidence properly admitted, having heard arguments of Counsel, and being otherwise fully apprised herein, the following Findings of Fact, Conclusions of Law, and Recommended Order are entered:

#### FINDINGS OF FACT

1. A revised Application for power plant site certification was filed by Pinellas County on September 6, 1983. The Applicant proposes to expand its resource recovery facility, within the existing certified site, at which municipal solid wastes are burned to produce steam-generated electrical energy by the addition of a third boiler, additional turbine-generator, expanded cooling tower, a second stack, and related structures. The residue from the burning of these wastes is processed for recovery of metals and other valuable materials. The facility includes a large landfill which is used for disposal of those portions of the residue not amenable to recovery. Existing transmission facilities connecting the facility to Florida Power Corporation's Gandy Substation will continue to be utilized.



2. The resource recovery facility buildings are located on approximately 20 acres within Pinellas County's existing certified site. Areas of the plant site not previously disturbed by landfilling or construction activities are occupied largely either by pine flatwoods or wet weather ponds.

3. The existing resource recovery facility, certified in July 1979, consists of a 50 megawatt steam-electric generating turbine, two 1050 tons-per-day solid waste fired boilers; truck weighing scales; a refuse collection and storage pit, refuse stoking equipment; magnetic and ferrofluid separators; conveyors; a four cell mechanical draft cooling tower utilizing treated sewage effluent; effluent intake and outfall piping and connections; a 161 foot flue gas stack; electro-static precipitators; stormwater retention and treatment ponds; stormwater spray irrigation fields; a sanitary landfill; and control ditching. A 230 kilovolt transmission line and associated structures runs East, South, and then East of the site for approximately 1 and 1/4 miles. The proposed expansion of electrical generation capacity is approximately 29 MW for a total capacity not exceeding 79.9 MW.

4. The primary purpose for the facility is to dispose of the county's refuse and trash. There is a clear need for recovery facilities such as that proposed by the Applicant.

The Florida Public Service Commission has found that the proposed facility expansion will increase electrical system reliability and integrity and will maintain the supply of adequate electricity at a reasonable cost while reducing dependence on fossil fuel. The Department of Environmental Regulation has found that construction of the resource recovery facility permitted the closing of current landfills and reduced the need for future landfill areas and in fact serves a recognized need.

5. Impacts from site modification are minimal in that all new additions are adjacent to existing structures on previously cleared land. No rare or endangered species have been observed on the site.

6. Since 1978, refuse generation rates in Pinellas County have risen faster than was anticipated. To meet the added demand on the processing capacity of the plant, expansion of the facility is proposed. The reduction of landfill areas is environmentally desirable and area residents, concerned about the presence of landfills near their home, should find the proposed site modification and visual barriers more attractive than landfills.

7. Extensive measures have been incorporated into the proposal and the conditions of certification so as to minimize the environmental impacts from construction and operation.

8. Due to the isolated nature of the proposed site there is very little opportunity for public access during construction and operation. In addition, traffic into the site will be limited and controlled by fencing. The applicant has proposed adequate measures to comply with both State and Federal health and safety requirements.

9. The resource recovery facility is expected to produce the following average volumes of water during normal daily operations:

1. Cooling tower blowdown 279gpm.
2. Boiler blowdown 32gpm.
3. Cooling tower evaporation and drift 1311gpm.
4. Boiler demineralization backflush water 45 gpm.
5. Sanitary wastes 50gpm.

The plant effluents will be discharged to Pinellas County's South Cross Bayou Sewage Treatment Plant. Any surface water impacts would largely arise from stormwater runoff. Perimeter ditches, a central holding pond, and associated treatment facilities are used to collect, contain, and treat runoff originating on the site. This collection and treatment system is of sufficient size to prevent any stormwater discharge from the site except during periods of extremely heavy rainfall.

Groundwater in the vicinity is Class G-II (as defined by Section 17-3.401, Florida Administrative Code). Movement of the shallow aquifer groundwater in the area is generally

Northeasterly at a rate of 1 to 10 feet per year. The area of the site is underlain by a clay/marl zone which would tend to slow the vertical migration of leachates. There has previously been an impact on the shallow aquifer groundwater quality in the vicinity of the site due to adjacent landfilling operations and saltwater intrusions. Leaching of the decomposition materials from putrescible wastes has already altered the natural state and quality of the shallow aquifer. Since landfill materials from the resource recovery facility should primarily be boiler residue and non-putrescible wastes it is likely that any groundwater impacts from these new landfill materials will be much less than from previously landfilled putrescible materials.

10. Leachates and drainage are minimized by allowing water to run off the fill rather than being allowed to percolate through the filled material. Leachate which does form by percolation through an active fill is accumulated at the low point of the active cell. This accumulation is pumped directly to the aeration pond and is contained on site. At no time will raw refuse be deposited in standing water.

Wastewater leaves the aeration lagoon and enters two water treatment ponds which have been designed to remove nutrients and heavy metals from the runoff waters. Upon leaving the ponds, wastewater is chlorinated for bacteria and virus control and pumped to the land on the Southern portion of the site.

11. Construction activities are expected to produce air pollutants from vehicular and heavy equipment exhaust emissions and fugitive dust. During operation, expected stack emissions will include particulate, sulfur dioxide, fluorides, lead, carbon monoxide, hydrocarbons, mercury, beryllium, chlorides, and oxides of nitrogen. Odor is not expected to be a problem and control measures have been included in the proposal. An electro-static precipitator has been included for the control of particulate matter. There are no sulfur dioxide emission limitations for incinerators; however, if a sufficient volume of refuse is incinerated, prevention of significant deterioration criteria may

be applicable. The Department has conducted a Best Available Control Technology analysis for the resource recovery facility and has proposed emission limitation rates for the facility.

12. During operation, refuse will be sorted for large items or non-combustibles, the remaining refuse will be incinerated. Following combustion, the residue will pass through a resource recovery system designed to extract ferrous and non-ferrous metals. The residue, approximately 2.1 percent by weight of the original raw waste, will be landfilled on site. In the event of a facility shutdown, storage facilities at the processing plant will be sufficient for storage of three to four days of incoming waste. If the plant should remain out of operation beyond three to four days, incoming raw wastes would be landfilled at the site. The facility does not intend to accept hazardous wastes.

13. During and at the conclusion of the site certification hearing, the public was given the opportunity to comment upon the application for site certification. No one not a party provided any verbal or written testimony, reports, or other evidence.

14. The Department of Environmental Regulation and the Applicant have agreed that no land use hearing was required because the proposed expansion is within the previously certified site.

15. The Applicant has accepted the proposed conditions of certification (Exhibit 1) and has agreed to comply therewith if certification is granted subject to a reservation of its right to exercise the Modification of Conditions procedure referenced in Exhibit 1 and a further reservation of its rights to object, if deemed necessary, to the application of any revised emission limitation rates contained in Exhibit 1 to its existing facilities. No objection to said reservations was entered by any party to this hearing.

16. The Florida Department of Environmental Regulation, the Public Service Commission, the Division of State Planning and Southwest Florida Water Management District, have all recommended certification of the proposed resource recovery facility subject to conditions. The stipulated conditions are attached hereto as Exhibit 1.

## CONCLUSIONS OF LAW

1. This proceeding was held pursuant to the Florida Electrical Power Plant Siting Act, Chapter 403, Part II, Florida Statutes, and Chapter 17-17, Florida Administrative Code, to consider the subject application for site certification.

2. Notice in accordance with Chapter 403 and Chapter 120, Florida Statutes, and Chapter 17-17, Florida Administrative Code, has been given to all persons and parties entitled thereto, as well as to the general public. The defect in the required time period for publication of the notice in the Florida Administrative Weekly is deemed inconsequential and not prejudicial and is therefore waived.

3. The purpose of the site certification hearing was to receive testimony and evidence concerning whether the location and operation of the proposed facility will produce minimal adverse effects on human health, the environment, the ecology of the land and its wildlife, the ecology of State waters and their aquatic life, and to fully balance the increasing demand for electrical power plant location and operation with the broad interest of the public as provided in Chapter 403, Florida Statutes.

4. The record of this hearing consists of all pleadings and papers filed herein, including the site certification application, as amended, the transcripts of all hearings, all orders entered by the Hearing Officer, as well as all evidence and exhibits properly admitted.

5. Section 403.507(1)(a), Florida Statutes, provides that the Department of Community Affairs shall present a report as to the compatibility of the proposed electrical power plant with the State comprehensive plan. The Department of Community Affairs has made a report on the resource recovery facility and its report and recommendation have been submitted and introduced into evidence. The Department recommends certification subject to the conditions in Exhibit 1.

6. Section 403.507(1)(b), Florida Statutes, requires that the Florida Public Service Commission prepare a report and recommendation as to the present and future needs for electrical generating capacity in the area to be served by the proposed facility. Such a report and recommendation have been submitted and introduced into evidence. The Public Service Commission states that there will be some benefits derived from the generating capacity addition of the resource recovery facility and resulting reduction in oil consumption. The recommendation of the Public Service Commission is that the Pinellas County Waste Resource Recovery Facility be certified subject to the conditions in Exhibit 1.

7. Section 403.507(1)(c), Florida Statutes, requires the Water Management District in whose jurisdiction the resource recovery facility will be located to prepare a report as to matters within its jurisdiction. On September 22, 1983, the Southwest Florida Water Management District stated it did not object to the proposed expansion and encouraged the continued use of reclaimed water for such industrial non-potable needs.

8. Section 403.507(2), Florida Statutes, requires that the Department of Environmental Regulation conduct or contract for studies of the proposed electrical power plant including but not limited to:

- a. Cooling system requirements
- b. Construction and operational safeguards
- c. Proximity to transportation systems
- d. Soil and foundation conditions
- e. Impact on suitable present and projected water supplies for this and other competing uses
- f. Impact on surrounding land uses
- g. Accessibility to transmission corridors
- h. Environmental Impacts.

Such a report and recommendations have been submitted and introduced into evidence. The Department of Environmental Regulation recommends certification of the proposed facility subject to the conditions of certification which are attached as Exhibit 1.

9. The Applicant has accepted the proposed conditions of certification (Exhibit 1) and has agreed to comply therewith if certification is granted subject to a reservation of its right to exercise the Modification of Conditions procedure referenced in Exhibit 1 and a further reservation of its rights to object, if deemed necessary, to the application of any revised emission limitation rates contained in Exhibit 1 to its existing facilities. No objection to said reservations was entered by any party to this hearing.

10. The location and operation of the proposed facility, as described by the evidence in the record, if made subject to the conditions of certification attached, are 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. Section 403.502, Florida Statutes.

11. The operational safeguards for the proposed facility are technically sufficient for the welfare and protection of the citizens of Florida. Section 403.502(1), Florida Statutes.

12. The certification of the proposed facility is consistent with the provision of abundant low-cost electrical energy. Section 403.502(3), Florida Statutes.

13. The proposed air pollution control equipment should prevent the operation of the facility from causing significant deterioration of ambient air quality in the vicinity.

14. Construction and operation of the facility satisfy the prevention of significant deterioration criteria and the application of the Best Available Control Technology standards.

15. No land use hearing was required in this case because the proposed expansion is within the previously certified site and responsible zoning or planning authorities are precluded from changing land use plans or zoning ordinances so as to affect the site by Section 403.508(2), Florida Statutes.

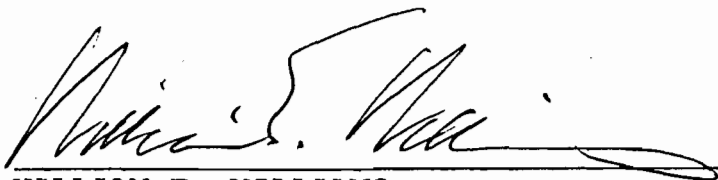
16. The parties to this certification hearing have stipulated to this Recommended Order.

RECOMMENDED ORDER

Having reviewed the record of this proceeding, and based upon the Findings of Fact and Conclusions of Law set forth herein, it is hereby recommended that certification, pursuant to Chapter 403, Part II, Florida Statutes, be granted to Pinellas County for the construction and operation of its resource recovery facility expansion and associated facilities, as proposed in the amended application and described in the record of this proceeding. It is further recommended that this certification be made subject to the conditions of certification attached hereto as Exhibit 1.

However, pursuant to the stipulation of the parties to this certification hearing, to the extent of any conflict between previously imposed Conditions of Certification and the proposed Conditions of Certification contained in Exhibit 1 herein pertaining to air quality, the revised Conditions of Exhibit 1 shall not apply to the existing facilities until the proposed expansion which is the subject of this proceeding is operational, at which time the Conditions of Certification (Exhibit 1 herein) shall apply and the previous Conditions of Certification shall be deemed rescinded.

DONE AND ORDERED this 8<sup>th</sup> day of MARCH 1984 in Tallahassee, Florida.



WILLIAM E. WILLIAMS  
Hearing Officer  
Division of Administrative Hearings  
The Oakland Building  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

FILED with the Division of Administrative Hearings this 1<sup>st</sup> day of March, 1984.



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Tallahassee, Florida 32301

State of Florida Department of Environmental Regulation  
 Pinellas County  
 Resource Recovery Facility  
 Case No. PA 78-11 and PA 83-18  
 CONDITIONS OF CERTIFICATION (2/29/84)

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State of Florida  
Pinellas County  
Resource Recovery Facility  
Case No. PA 78-11 and PA 83-18  
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 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, production increases, or process modifications which may result in new, different, or increased discharges or pollutants, change in fuel, or expansion in steam generating capacity must be reported by submission of a new or supplemental application pursuant to Chapter 403, Florida Statutes.

II. NON-COMPLIANCE NOTIFICATION

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the Southwest Florida District Manager of the Department by telephone during the 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. Such systems are not to be bypassed without prior Department approval.

### 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 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 permit, and
- B. To have access to and copy any records required to be kept under the conditions of this certification, 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 pursuant to Section 403.512, Florida Statutes, or for violations of any of its conditions.

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 provision 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 general or special 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 or, in the alternative by the use of the commonly accepted meaning as determined by the Department.

#### 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, related time schedules, emission limitations subject to notice and opportunity for hearing, or any special studies conducted, as necessary to attain the objectives of Chapter 403, Florida Statutes.

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

### XIII. CONSTRUCTION

The facility shall be constructed, as a minimum, pursuant to the design standards presented in the application.

#### 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 insure against spillage or discharge of excavated material that may cause turbidity in excess of 50 Jackson 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 shall be kept within the range of 6.0 to 8.5.

##### 2. Burning

Open burning in connection with land clearing shall be in accordance with Chapter 17-5, FAC, and County Ordinance 76-18. No additional permits shall be required, but prior to each act of burning, the Division of Forestry shall be contacted to determine if satisfactory conditions exist for burning. Open burning shall not occur if the Division of Forestry 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, FAC.

#### 5. Noise

Construction noise shall not exceed local noise ordinance specifications, nor those noise standards imposed by zoning.

#### 6. Dust

The County shall employ proper dust-control techniques to minimize fugitive dust emissions.

#### 7. Transmission Lines

The directly associated transmission lines from the Resource Recovery Facility electric generators to the existing Florida Power Corporation Gandy substation shall be cleared, maintained and prepared without the use of herbicides.

#### B. Environmental Control Program

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



If unexpected or harmful effects or evidence of irreversible environmental damage are detected during construction, the permittee shall notify the DER Southwest Florida District Office, 7601 Highway 301 North, Tampa, Florida, 33610, by telephone during the working day that the effect or damage occurs and shall confirm this in writing within seventy-two (72) hours of becoming aware of such conditions, and shall provide in writing an analysis of the problem and a plan to eliminate or significantly reduce the harmful effects of damage.

C. Reporting

1. Starting three (3) months after certification, a quarterly construction status report shall be submitted to the Southwest Florida District Office of the Department of Environmental Regulation. The report shall be a short narrative describing the progress of construction.

2. Upon completion of construction the DER Southwest Florida District Office will be notified in order that a pre-operational inspection can be performed.

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 Unit 3

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

- (1) Particulate matter: in grains per standard cubic foot dry gas corrected to 12% CO<sub>2</sub>  
Units 1 and 2 - 0.08  
Unit 3 - 0.03
- (2) SO<sub>2</sub>: 83 lbs/hr of Sulfur Dioxide
- (3) Nitrogen Oxides: 132 lbs/hr
- (4) Carbon Monoxide: 66 lbs/hr
- (5) Lead: .1.3 lbs/hr
- (6) Mercury: 3200 grams/day when more than 2205 lbs/day of municipal sludge is fired. Compliance shall be determined in accordance with 40 CFR 61, Method 101, Appendix B.
- (7) Odor: there shall be no objectionable odor.
- (8) Visible emissions: opacity shall be no greater than 10% except that visible emissions with no more than 20% opacity may be allowed for up to three 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)(2)9;, DER Method 9.

b. The height of the boiler exhaust stacks shall not be less than 161 feet above grade.

c. The incinerator boilers shall not be loaded in excess of their rated capacity of 87,500 pounds 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 and lead shall be determined in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 1, 2, 3, 5, 6, and 40 CFR 60, Appendix A, Method 7. The stack test shall be performed at  $\pm 10\%$  of the maximum steam rate of 250,000 pounds per hour.

## 2. Electrostatic Precipitators

For Unit 3 the electrostatic precipitator shall be designed and constructed to achieve a maximum emission rate of 0.03 grains per dscf. In the event that the ESP fails to perform as specified, or if other parameters of the facility's operation are subsequently modified, additional control will be necessitated.

For Units 1 and 2 the three-field electrostatic precipitator shall be designed and constructed to allow the installation of a fourth field in the event that the three-field ESP fails to perform as specified, or if other parameters of the facility's operation are subsequently modified, necessitating additional control.

### 3. Air Monitoring Program

a. The permittee shall install and operate continuously stack monitoring devices for oxygen and opacity. The monitoring devices shall meet the applicable requirements of Chapter 17-2, 710, FAC, and 40 CFR 60.45, and 40 CFR 60.13, including certification of each device.

b. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports in accordance with Section 17-2.700(4), FAC.

c. The permittee shall have a sampling test of the stack emissions performed by a commercial testing firm within 90 days of the start of operation of the boilers and annually from the date of testing thereafter.

d. The permittee shall operate two continuous SO<sub>2</sub> monitors and one continuous wind direction and velocity monitor in the immediate vicinity of the site. The monitors shall be specifically located as designated by the DER and shall conform to 40 CFR 53. Monitoring shall begin upon commencement of operation.

### 4. Reporting

a. Two copies of the results of the stack tests shall be submitted within forty-five days of testing to the DER Southwest Florida District Office.

b. Stack monitoring shall be reported to the DER Southwest District Office on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR, Part 60, Subsection 60.7.

c. SO<sub>2</sub> monitoring shall be reported to the DER Southwest Florida District Office on a monthly basis.

## B. Fuel

The Resource Recovery Facility shall utilize refuse such as garbage and trash (as defined in Chapter 17-7, FAC) as its fuel. Use of alternate fuels would necessitate modification of these Conditions of Certification.

## C. Cooling Tower

### 1. Makeup Water Constituency

The Resource Recovery Facility shall utilize only treated sewage effluent or stormwater runoff from the stormwater holding pond as cooling tower makeup water. The effluent shall have received prior to use in the tower, as a minimum, secondary treatment, as well as treatment described in Condition XIV.C.2. below. Use of waters other than treated sewage effluent or site stormwater, i.e., higher quality potable waters or lower quality less-than-secondarily treated sewage effluent, will require a modification of conditions agreed to by the Southwest Florida Water Management District and the Department and must be approved by the Governor and Cabinet.

### 2. Chlorination

Chlorine levels in the cooling tower makeup water shall continuously be monitored, prior to insertion in the cooling towers. Sewage effluent from the Northeast St. Petersburg Wastewater Treatment Plant used as makeup shall be treated if necessary to maintain a 1.0 mg/liter total chlorine residual after fifteen minutes contact time. Makeup water from the Largo Wastewater Treatment Plant shall be treated to maintain a 1.0 mg/liter free chlorine residual after fifteen minutes contact time. Chlorination should occur at an effluent turbidity of 5 Nephelometric Turbidity Units or less.

### 3. Special Studies

Upon satisfactory demonstration to the Department that the number of viruses entering the towers in the effluent makeup from the upgraded Largo Plant can be reduced to an undetectable level with the use of a lesser amount of chlorination, the above requirement may be altered to 1.0 mg/liter total chlorine residual after a 15 minute contact time or alternate levels as approved by the department. This demonstration may occur through performance of special studies approved by the Department. Alteration of the chlorination requirements must still insure adequate treatment for the control of bacterial growth in the cooling towers.

#### D. Water Discharges

##### 1. Surface Water

a. Any discharges from the site stormwater/leachate treatment 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 State Water Quality Standards, Chapter 17-3, FAC.

b. Sampling of water quality in the aeration pond, the cattail ponds, and an analysis of the tissues of the cattails utilized as part of the leachate/stormwater treatment system shall be conducted prior to pumping of leachate or stormwater through this system to verify background levels and concentrations of any metals, especially heavy metals, already present in the ponds or the vegetation. Within three months after commencement of stormwater/leachate pumping through this system, and quarterly thereafter, the pond waters and cattail tissues, as well as root detritus or other sediments on the bottom of the ponds shall again be sampled to determine the degree and effectiveness of heavy metal uptake treatment in this system, and for correlation with

groundwater monitoring data. If analyses indicate that toxic levels of materials are present in the cattail tissues, root detritus, or other pond precipitates, then these materials shall be incinerated or otherwise removed from contact with the natural environment and groundwaters. Results of analyses conducted shall be sent to the Department for review of system effectiveness.

c. Leachate, stormwater, or other site wastewaters which are to be spray irrigated shall be treated to conform to any rules promulgated by the State for the land application of wastewaters in areas not commonly accessible to the public.

d. Cooling tower blowdown shall not be discharged to surface waters.

e. Upon satisfactory demonstration to the Department that surface water quality will not be deteriorated, a special pilot operation, in the field, to determine the environmental effect of land application of process blowdown water from the Resource Recovery Facility may be allowed. This demonstration will require submittal of background and system design data, and provisions for monitoring as approved by the Department.

## 2. 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 Water Quality Standards of Chapter 17-3.101, FAC, (Class G-II Groundwaters) at the boundary of the site.

b. If the groundwater monitoring system in the vicinity of the aeration/cattail ponds indicates that groundwater quality beyond the boundary of the site has been deteriorated by substances leaching from these ponds, then these ponds shall be lined or other Departmentally approved methods employed to reduce

further leaching sufficient to insure attainment of groundwater quality standards at the boundary of the site.

### 3. Groundwater Monitoring Program

a. Sampling of the shallow aquifer groundwater quality shall be conducted in at least four wells in the site vicinity. One of these wells shall be up hydrologic slope from the landfill area to provide current background data; one shall be located in the immediate vicinity of the aeration/cattail ponds; and two shall be located down hydrologic slope from the landfill/spray irrigation areas. Specific location of these wells may be proposed by the applicant, but must be approved by the Department.

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 insure that groundwater samples can be obtained with the groundwater table elevation at its estimated lowest point and shall be protected from damage or 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. The wells shall be monitored on a quarterly basis for the following parameters:

Conductivity	Arsenic	Selenium
Nitrates	Barium	Silver
Iron	Cadmium	Chlorides



COD	Chromium	pH
Nickel	Lead	Copper
Aluminum	Mercury	Zinc
Total Coliform Bacteria		

d. Reports shall be submitted in duplicate within 30 days of receipt of analysis results to the Department 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.

2. Putrescible wastes shall receive daily cover. No cover shall be required for the landfilling of only ash or construction/demolition debris. Daily cover shall consist of a six inch layer of compacted earth or other material approved by the DER placed at the end of each working day.

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. 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 DER Southwest District Office quarterly, commencing 120 days after the Resource Recovery Facility becomes operational and is producing residues.

5. Unless approved by the Department with subsequent modification of conditions, this facility shall not accept materials currently defined as "Hazardous Wastes", i.e., pesticides, volatile or radioactive material, etc.

6. No putrescible wastes shall be placed below the maximum groundwater level unless permanent leachate controls are installed. Methodology for permanent leachate controls shall be submitted to the Department for review. Such methodology shall not be implemented until approved by the Department. In the absence of permanent leachate controls, demolition debris and other non-putrescible items (other than boiler residue) shall be utilized to separate the putrescible waste from the groundwater. Boiler residue may be placed below the maximum groundwater level without permanent leachate controls provided that the permittee demonstrates that the residue will not contribute to a violation of water quality criteria at the boundary of a zone of discharge extending to the site boundary. Fly ash which has been segregated or separated from bottom ash shall not be placed below the maximum groundwater level without permanent leachate controls.

7. Separate cells and lifts shall be maintained for landfilling putrescible wastes.

8. All cells will be constructed to promote leachate drainage to a low end of the cell; all leachate formed at the low end of an active cell shall be pumped to the aeration pond for treatment.

9. A chemical analysis of the boiler residue shall be conducted within 30 days after commencement of operation, testing at the minimum for levels of Cadmium, Chromium, Zinc and Lead to determine the nature and potential toxicity or hazardousness of the materials created in the combustion process.

10. Results from the residue analysis shall immediately be sent to the Department and will be used to determine whether or not these materials constitute a "Hazardous Waste" as defined by Chapter 17-30, FAC; results of these analyses may also be used for correlation with groundwater monitoring information and in any subsequent modification of conditions.

11. If residue material are determined to be a "Hazardous Waste", then measures shall be taken to treat or dispose of the residues pursuant to rules promulgated by either Federal or State authorities.

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 unusual 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 the environment of polychlorinated biphenyl compounds.

#### F. Operational Safeguards

The overall design and layout of the facilities shall be such as to minimize hazards 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 Corporation Gandy Substation 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.

XV. STATUS OF EXISTING PERMITS

No permit may be issued for sanitary waste landfilling other than this Certification, for the area known as Bridgeway Acres II.



# BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET  
CLEARWATER, FLORIDA 33516

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CHARLES E. RAINEY  
BARBARA SHEEN TODD

W. GRAY DUNLAP  
COUNTY ATTORNEY

March 2, 1984

Received DER

MAR 7 1984

P.P.S.

Karen A. Lloyd, Esq.  
Southwest Florida Water  
Management District  
2379 Broad Street  
Brooksville, Florida 33512-9712

Re: Pinellas County Application for Power Plan  
Site Certification

Dear Ms. Lloyd:

Enclosed please find the original stipulation and recommended order in this proceeding. Please execute same and forward to the attention of Julie Cobb (Department of Environmental Regulation) as soon as possible. It would be appreciated if you could mail this to DER no later than Monday afternoon.

Thank you for your assistance in this regard.

Very truly yours,

Van B. Cook  
Chief Assistant County Attorney

VBC:dtr  
Enc.

cc: Julie Cobb, Esq.  
C. Laurence Keeseey, Esq.  
Hamilton S. Oven, Jr., P.E.  
Bonnie Davis, Esq.

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

MAR 7 1984

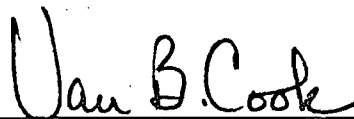
P P S

IN RE: Pinellas County Resource )  
Project; Application for Power )  
Plant Site Certification )

Case No. 83-2355

STIPULATION TO RECOMMENDED ORDER

The undersigned counsel to the parties to this proceeding hereby stipulate to the entry of the attached Recommended Order regarding site certification.



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VAN B. COOK  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, Florida 33516  
For the Applicant, Pinellas County

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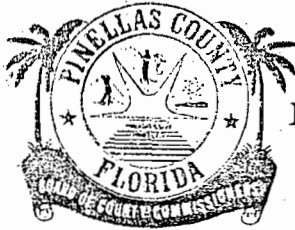
JULIE COBB  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
Assistant General Counsel for  
Department of Environmental  
Regulation

---

KAREN A. LLOYD, Esq.  
2379 Broad Street  
Brooksville, Florida 33512-9712  
For SFWMD

---

C. LAURENCE KEESEY, Esq.  
2571 Executive Center Circle East  
Tallahassee, Florida 32301  
For Department of Community Affairs



# BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 33516

## COMMISSIONERS

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BARBARA SHEEN TODD

W. GRAY DUNLAP  
COUNTY ATTORNEY

March 1, 1984

Received DER

MAR 5 1984

P.P.S

John Bottcher, Esq.  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Twin Towers Office Building  
Tallahassee, Florida 32301

Re: Recommended Order regarding Site Certification

Dear Mr. Bottcher:

Enclosed please find the recommended Order regarding site certification which I believe reflects the agreement reached between your office, Mr. Oven, and Pinellas County, prior to and at the hearing conducted on February 29, 1984.

Assuming you have no objection to same, I would request that you provide the hearing officer with the original and copies for distribution to the parties. Please be sure to attach the revised Conditions of Certification as Exhibit 1. However, please do not release this Order until I have had an opportunity to review and approve the revised conditions of certification.

The hearing officer indicated he would be able to sign this Order early Monday morning. Furthermore, Mr. Keesey indicates that his express approval is not required if the Order meets with your approval.

I have referenced that this is, in fact, a stipulated recommended order in paragraph 16 of the Conclusions of Law.

Continuation of letter to  
John Bottcher, Esq.  
March 1, 1984

Page Two

Thank you for your cooperation and that of the Department of  
Environmental Regulation throughout these proceedings.

Very truly yours,



Van B. Cook  
Chief Assistant County Attorney

VBC:dtr  
Enc.

cc: C. Laurence Keeseey, Esq.  
Hamilton S. Oven, Jr., P.E.  
Bonnie Davis, Esq.  
Karen A. Lloyd, Esq.

1735q/0033p



STATE OF FLORIDA

DIVISION OF ADMINISTRATIVE HEARINGS

IN RE: Pinellas County Resource )  
Project: Application for Power )  
Plant Site Certification )

Case No. 83-2355

RECOMMENDED ORDER  
REGARDING SITE CERTIFICATION

Pursuant to notice, the Division of Administrative Hearings, by its duly designated Hearing Officer, William E. Williams, held a public hearing in this cause on February 29, 1984, in Clearwater, Florida.

APPEARANCES

For the Applicant:

Van B. Cook  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, Florida 33516

For the Department  
of Environmental  
Regulation:

Julie Cobb  
Assistant General Counsel  
2600 Blair Stone Road  
Tallahassee, Florida 32301

For the Department  
of Community Affairs:

C. Laurence Keesey, Esq.  
2571 Executive Center Circle East  
Tallahassee, Florida 32301

For Southwest Florida  
Water Management  
District:

None

For Public Service  
Commission

None

Received DER

MAR 5 1984

PPS

On or about September 6, 1984, the Applicant, Pinellas County, filed an amended application for power plant site certification to expand its existing resource recovery facility with the Department of Environmental Regulation. The Division of Administrative Hearings received a request from the Department of Environmental Regulation for the appointment of a Hearing Officer to conduct the hearings required by Chapter 403, Part II, Florida Statutes. On September 19, 1984, the Division of Administrative Hearings received a statement from the Department of Environmental Regulation declaring the application to be complete as of September 6, 1984.

On January 19, 1984, the Applicant filed a Motion to Expedite the certification hearing required by Chapter 403, Part II, Florida Statutes. On January 25, 1984, the undersigned entered an Order scheduling a certification hearing for February 29, 1984 and requiring a pre-hearing stipulation, and issued a Notice of Hearing. A pre-hearing stipulation was filed on or about February 24, 1984.

A certification hearing as required by Section 403.508(3), Florida Statutes, was held pursuant to proper notice in Clearwater, Florida. The notice published in the Florida Administrative Weekly was four days less than the required 30 day notice. Upon motion of the Applicant, and no other party entering an objection, this defect was waived. The purpose of that hearing was to receive testimony and evidence concerning whether the location and operation of the proposed facility would produce adverse effects on human health, environment, the ecology of the land and its wildlife, and the ecology of State waters and their aquatic life:

would assure the citizens of Florida that operational safeguards are technically sufficient for their welfare and protection; and would effect a reasonable balance between the need for the facility and the environmental impact resulting from construction and operation of the facility; as well as providing abundant, low-cost electrical energy. The hearing included an examination of the following:

The necessity for expanded electrical generation;

The expected environmental impact from construction and operation of the resource recovery facility;

Operational safeguards of the facility;

The availability of abundant, low-cost electrical energy;

Other public interests and issues relevant to certification of the proposed site.

In addition, evidence relating to best available control technology and the prevention of significant deterioration of ambient air quality was presented.

The following parties entered appearances at or participated in this proceeding:

1. The Applicant, Pinellas County.
2. Florida Department of Environmental Regulation.
3. Florida Department of Community Affairs.

Having considered all testimony and evidence properly admitted, having heard arguments of Counsel, and being otherwise fully apprised herein, the following Findings of Fact, Conclusions of Law, and Recommended Order are entered:

#### FINDINGS OF FACT

1. A revised Application for power plant site certification was filed by Pinellas County on September 6, 1984. The Applicant proposes to expand its resource recovery facility, within the existing certified site, at which municipal solid wastes are burned to produce steam-generated electrical energy by the addition of a third boiler, additional turbine-generator, expanded cooling tower, a second stack, and related structures. The residue from the burning of these wastes is processed for recovery of metals and other valuable materials. The facility includes a large landfill which is used for disposal of those portions of the residue not amenable to recovery. Existing transmission facilities connecting the facility to Florida Power Corporation's Gandy Substation will continue to be utilized.

2. The resource recovery facility buildings are located on approximately 20 acres within Pinellas County's existing certified site. Areas of the plant site not previously disturbed by landfilling or construction activities are occupied largely either by pine flatwoods or wet weather ponds.

3. The existing resource recovery facility, certified in July 1979, consists of a 50 megawatt steam-electric generating turbine, two 1050 tons-per-day solid waste fired boilers; truck weighing scales; a refuse collection and sewage pit, refuse stoking equipment; magnetic and ferrofluid separators; conveyors; a four cell mechanical draft cooling tower utilizing treated sewage effluent; effluent intake and outfall piping and connections; a 161 foot flue gas stack; electro-static precipitators; stormwater retention and treatment ponds; stormwater spray irrigation fields; a sanitary landfill; and control ditching. A 230 kilovolt transmission line and associated structures runs East, South, and then East of the site for approximately 1 and 1/4 miles. The proposed expansion of electrical generation capacity is approximately 29 MW for a total capacity not exceeding 79.9 MW.

4. The primary purpose for the facility is to dispose of the county's refuse and trash. There is a clear need for recovery facilities such as that proposed by the Applicant.

The Florida Public Service Commission has found that the proposed facility expansion will increase electrical system reliability and integrity and will maintain the supply of adequate electricity at a reasonable cost while reducing dependence on fossil fuel. The Department of Environmental Regulation has found that construction of the resource recovery facility permitted the closing of current landfills and reduced the need for future landfill areas and in fact serves a recognized need.

5. Impacts from site modification are minimal in that all new additions are adjacent to existing structures on previously cleared land. No rare or endangered species have been observed on the site.

6. Since 1978, refuse generation rates in Pinellas County have risen faster than was anticipated. To meet the added demand on the processing capacity of the plant, expansion of the facility is proposed. The reduction of landfill areas is environmentally desirable and area residents, concerned about the presence of landfills near their home, should find the proposed site modification and visual barriers more attractive than landfills.

7. Extensive measures have been incorporated into the proposal and the conditions of certification so as to minimize the environmental impacts from construction and operation.

8. Due to the isolated nature of the proposed site there is very little opportunity for public access during construction and operation. In addition, traffic into the site will be limited and controlled by fencing. The applicant has proposed adequate measures to comply with both State and Federal health and safety requirements.

9. The resource recovery facility is expected to produce the following average volumes of water during normal daily operations:

1. Cooling tower blowdown 279gpm.
2. Boiler blowdown 32gpm.
3. Cooling tower evaporation and drift 1311gpm.
4. Boiler demineralization backflush water 45 gpm.
5. Sanitary wastes 50gpm.

The plant effluents will be discharged to Pinellas County's South Cross Bayou Sewage Treatment Plant. Any surface water impacts would largely arise from stormwater runoff. Perimeter ditches, a central holding pond, and associated treatment facilities are used to collect, contain, and treat runoff originating on the site. This collection and treatment system is of sufficient size to prevent any stormwater discharge from the site except during periods of extremely heavy rainfall.

Groundwater in the vicinity is Class G-II (as defined by Section 17-3.401, Florida Administrative Code). Movement of the shallow aquifer groundwater in the area is generally

Northeasterly at a rate of 1 to 10 feet per year. The area of the site is underlain by a clay/marl zone which would tend to slow the vertical migration of leachates. There has previously been an impact on the shallow aquifer groundwater quality in the vicinity of the site due to adjacent landfilling operations and saltwater intrusions. Leaching of the decomposition materials from putrescible wastes has already altered the natural state and quality of the shallow aquifer. Since landfill materials from the resource recovery facility should primarily be boiler residue and non-putrescible wastes it is likely that any groundwater impacts from these new landfill materials will be much less than from previously landfilled putrescible materials.

10. Leachates and drainage are minimized by allowing water to run off the fill rather than being allowed to percolate through the filled material. Leachate which does form by percolation through an active fill is accumulated at the low point of the active cell. This accumulation is pumped directly to the aeration pond and is contained on site. At no time will raw refuse be deposited in standing water.

Wastewater leaves the aeration lagoon and enters two water treatment ponds which have been designed to remove nutrients and heavy metals from the runoff waters. Upon leaving the ponds, wastewater is chlorinated for bacteria and virus control and pumped to the land on the Southern portion of the site.

11. Construction activities are expected to produce air pollutants from vehicular and heavy equipment exhaust emissions and fugitive dust. During operation, expected stack emissions will include particulate, sulfur dioxide, fluorides, lead, carbon monoxide, hydrocarbons, mercury, beryllium, chlorides, and oxides of nitrogen. Odor is not expected to be a problem and control measures have been included in the proposal. An electro-static precipitator has been included for the control of particulate matter. There are no sulfur dioxide emission limitations for incinerators; however, if a sufficient volume of refuse is incinerated, prevention of significant deterioration criteria may

be applicable. The Department has conducted a Best Available Control Technology analysis for the resource recovery facility and has proposed emission limitation rates for the facility.

12. During operation, refuse will be sorted for large items or non-combustibles, the remaining refuse will be incinerated. Following combustion, the residue will pass through a resource recovery system designed to extract ferrous and non-ferrous metals. The residue, approximately 2.1 percent by weight of the original raw waste, will be landfilled on site. In the event of a facility shutdown, storage facilities at the processing plant will be sufficient for storage of three to four days of incoming waste. If the plant should remain out of operation beyond three to four days, incoming raw wastes would be landfilled at the site. The facility does not intend to accept hazardous wastes.

13. During and at the conclusion of the site certification hearing, the public was given the opportunity to comment upon the application for site certification. No one not a party provided any verbal or written testimony, reports, or other evidence.

14. The Department of Environmental Regulation and the Applicant have agreed that no land use hearing was required because the proposed expansion is within the previously certified site.

15. The Applicant has accepted the proposed conditions of certification (Exhibit 1) and has agreed to comply therewith if certification is granted subject to a reservation of its right to exercise the Modification of Conditions procedure referenced in Exhibit 1 and a further reservation of its rights to object, if deemed necessary, to the application of any revised emission limitation rates contained in Exhibit 1 to its existing facilities. No objection to said reservations was entered by any party to this hearing.

16. The Florida Department of Environmental Regulation, the Public Service Commission, the Division of State Planning and Southwest Florida Water Management District, have all recommended certification of the proposed resource recovery facility subject to conditions. The stipulated conditions are attached hereto as Exhibit 1.

## CONCLUSIONS OF LAW

1. This proceeding was held pursuant to the Florida Electrical Power Plant Siting Act, Chapter 403, Part II, Florida Statutes, and Chapter. 17-17, Florida Administrative Code, to consider the subject application for site certification.

2. Notice in accordance with Chapter 403 and Chapter 120, Florida Statutes, and Chapter 17-17, Florida Administrative Code, has been given to all persons and parties entitled thereto, as well as to the general public. The defect in the required time period for publication of the notice in the Florida Administrative Weekly is deemed inconsequential and not prejudicial and is therefore waived.

3. The purpose of the site certification hearing was to receive testimony and evidence concerning whether the location and operation of the proposed facility will produce minimal adverse effects on human health, the environment, the ecology of the land and its wildlife, the ecology of State waters and their aquatic life, and to fully balance the increasing demand for electrical power plant location and operation with the broad interest of the public as provided in Chapter 403, Florida Statutes.

4. The record of this hearing consists of all pleadings and papers filed herein, including the site certification application, as amended, the transcripts of all hearings, all orders entered by the Hearing Officer, as well as all evidence and exhibits properly admitted.

5. Section 403.507(1)(a), Florida Statutes, provides that the Department of Community Affairs shall present a report as to the compatibility of the proposed electrical power plant with the State comprehensive plan. The Department of Community Affairs has made a report on the resource recovery facility and its report and recommendation have been submitted and introduced into evidence. The Department recommends certification subject to the conditions in Exhibit 1.



6. Section 403.507(1)(b), Florida Statutes, requires that the Florida Public Service Commission prepare a report and recommendation as to the present and future needs for electrical generating capacity in the area to be served by the proposed facility. Such a report and recommendation have been submitted and introduced into evidence. The Public Service Commission states that there will be some benefits derived from the generating capacity addition of the resource recovery facility and resulting reduction in oil consumption. The recommendation of the Public Service Commission is that the Pinellas County Waste Resource Recovery Facility be certified subject to the conditions in Exhibit 1.

7. Section 403.507(1)(c), Florida Statutes, requires the Water Management District in whose jurisdiction the resource recovery facility will be located to prepare a report as to matters within its jurisdiction. On September 22, 1983, the Southwest Florida Water Management District stated it did not object to the proposed expansion and encouraged the continued use of reclaimed water for such industrial non-potable needs.

8. Section 403.507(2), Florida Statutes, requires that the Department of Environmental Regulation conduct or contract for studies of the proposed electrical power plant including but not limited to:

- a. Cooling system requirements
- b. Construction and operational safeguards
- c. Proximity to transportation systems
- d. Soil and foundation conditions
- e. Impact on suitable present and projected water supplies for this and other competing uses
- f. Impact on surrounding land uses
- g. Accessibility to transmission corridors
- h. Environmental Impacts.

Such a report and recommendations have been submitted and introduced into evidence. The Department of Environmental Regulation recommends certification of the proposed facility subject to the conditions of certification which are attached as Exhibit 1.

9. The Applicant has accepted the proposed conditions of certification (Exhibit 1) and has agreed to comply therewith if certification is granted subject to a reservation of its right to exercise the Modification of Conditions procedure referenced in Exhibit 1 and a further reservation of its rights to object, if deemed necessary, to the application of any revised emission limitation rates contained in Exhibit 1 to its existing facilities. No objection to said reservations was entered by any party to this hearing.

10. The location and operation of the proposed facility, as described by the evidence in the record, if made subject to the conditions of certification attached, are 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. Section 403.502, Florida Statutes.

11. The operational safeguards for the proposed facility are technically sufficient for the welfare and protection of the citizens of Florida. Section 403.502(1), Florida Statutes.

12. The certification of the proposed facility is consistent with the provision of abundant low-cost electrical energy. Section 403.502(3), Florida Statutes.

13. The proposed air pollution control equipment should prevent the operation of the facility from causing significant deterioration of ambient air quality in the vicinity.

14. Construction and operation of the facility satisfy the prevention of significant deterioration criteria and the application of the Best Available Control Technology standards.

15. No land use hearing was required in this case because the proposed expansion is within the previously certified site and responsible zoning or planning authorities are precluded from changing land use plans or zoning ordinances so as to affect the site by Section 403.508(2), Florida Statutes.

16. The parties to this certification hearing have stipulated to this Recommended Order.

RECOMMENDED ORDER

Having reviewed the record of this proceeding, and based upon the Findings of Fact and Conclusions of Law set forth herein, it is hereby recommended that certification, pursuant to Chapter 403, Part II, Florida Statutes, be granted to Pinellas County for the construction and operation of its resource recovery facility expansion and associated facilities, as proposed in the amended application and described in the record of this proceeding. It is further recommended that this certification be made subject to the conditions of certification attached hereto as Exhibit 1.

However, pursuant to the stipulation of the parties to this certification hearing, to the extent of any conflict between previously imposed Conditions of Certification and the proposed Conditions of Certification contained in Exhibit 1 herein pertaining to air quality, the revised Conditions of Exhibit 1 shall not apply to the existing facilities until the proposed expansion which is the subject of this proceeding is operational, at which time the Conditions of Certification (Exhibit 1 herein) shall apply and the previous Conditions of Certification shall be deemed rescinded.

DONE AND ORDERED this        day of                    1984 in  
Tallahassee, Florida.

---

WILLIAM E. WILLIAMS  
Hearing Officer  
Division of Administrative Hearings  
The Oakland Building  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

Copies furnished to:

Van B. Cook  
Chief Assistant Pinellas County Attorney  
315 Court Street  
Clearwater, Florida 33516

Julie Cobb, Esq.  
Assistant General Counsel  
Department of Environmental Regulation  
2600 Blair Stone Road  
Twin Towers Office Building  
Tallahassee, Florida 32301

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

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting, DER  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Bonnie Davis, Esq.  
Public Service Commission  
Fletcher Building  
101 E. Gaines Street  
Tallahassee, Florida 32301-8153

Karen A. Lloyd, Esq.  
Southwest Florida Water Management District  
2379 Broad Street  
Brooksville, Florida 33512-9712

1553p/0033p

February 28, 1984

Mr. William E. Williams  
Division of Administrative Hearings  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery Project  
PA 83-18, DOAH Case No. 83-2355

Dear Mr. Williams:

Attached please find an amendment to the power plant siting application for the second phase of the Pinellas County Resource Recovery project. The Department has not reviewed this proposed amendment sufficiently to determine if it is complete, sufficient or if it provides reasonable assurance that air quality standards will not be violated.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSOjr/sb

cc: All Parties

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been furnished by U.S. Mail this 28th day of February, 1984 to the following named persons:

JOHN BOTTCHER, ESQUIRE  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

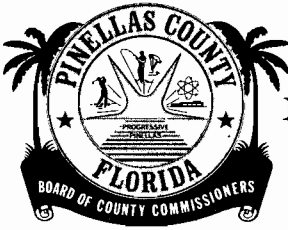
VAN B. COOK, ESQUIRE  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, FL 33516

LARRY KEESEY, ESQUIRE  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, FL 32301

STEPHEN A. WALKER, ESQUIRE  
Southwest Florida Water  
Management District  
2379 Broad Street  
Brooksville, FL 33512-9712

---

HAMILTON S. OVEN, JR., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301



BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT
2800 110TH AVENUE NORTH
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PHONE (813) 825-1565



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CHARLES E. RAINEY
BARBARA SHEEN TODD

Received DER

FEB 28 1984

P P S

February 27, 1984

Mr. Hamilton S. Oven, Jr., P.E.
Administrator, Power Plant Siting Section
State of Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Re: Air Emission

Dear Mr. Oven:

Enclosed herewith are proposed emission factors to be set in the Conditions of Certification for Unit No.3, as "not to exceed" values for the stipulated averaging periods. As you will note, the averaging periods stated are either of three (3) or twelve (12) month longevity. The County also proposes to implement immediately a Department-approved monitoring program at existing Units No. 1 and No. 2 to identify realistic short term emission rates. After a test period of duration and frequency to be stipulated by the Department, but prior to start-up of Unit No. 3, short term emission limitations (based on actual test results), can be imposed.

Table with 4 columns: No., Parameter, Proposed Emission Limitations (Unit 3), Averaging Times. Rows include SO2, NOx, CO, and Lead.

Mr. Hamilton S. Oven, Jr., P.E.  
February 27, 1984  
Page 2

Computer modeling results utilizing these emission factors are also submitted under this letter for Department review. These results indicate that neither ambient air quality or PSD increment consumption are significantly effected by plant operations.

It is requested that the Department make provisions in the Conditions of Certification (para. XII, Modifications of Conditions), to include the authority for the Secretary to modify Air Emission Limitations upon completion of the approved monitoring program as described above.

Sincerely,



D. F. Acenbrack, Director  
Solid Waste Management

ACE:ltl

Enclosure

Modelling Data

cc: Dan Williams, Tpa DER Office  
Gene E. Jordan, Dir, PW&U  
W. Gray Dunlap, County Attorney  
W. W. Dasher, Dir, PW Opns



**HDR**

PROJECTS \_\_\_\_\_

SUBJECT \_\_\_\_\_

COMPUTED \_\_\_\_\_ CHECKED \_\_\_\_\_ DATE \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_

27 FEB. 1984

REVISED PPSC APPENDIX II

TABLES :

II-1

II-2

II-3

II-5

II-6

II-7

II-8

II-9

II-10

Received DER

FEB 28 1984

P P S

ENCLOSED - TWO (2) SETS OF REVISED  
TABLES

Major Changes in  
Modeling from Previous Submissions

1. The emissions for the one area source modeled has been switched from SO<sub>2</sub> to TSP. This has brought some of the cumulative SO<sub>2</sub> impacts down somewhat.
2. The TSP emissions for Unit 3 are assumed to be 0.03 GR/DSCF as opposed to 0.08 GR/DSCF for Units 1 and 2. Lead emissions are assumed to be proportional to TSP emissions for each unit.
3. The two stacks are now assumed to be split rather than at the same location. Unit 3 stack is 135 feet north of Units 1 and 2 stack.
4. Building dimensions changed to: 104 ft. in height, 332 ft. in length, and 80 ft. in width.
5. Hot spot analysis was done only for the PSD sources, all three units, and Unit 3. Hotspots were analyzed only for the 3 and 24 hr. SO<sub>2</sub> standards and the 1 and 8 hr. CO standards. The analysis was done within 500 meters of the facility with a grid increment of 500 meters.
6. We reran the hot spot analyses without the wake effect to determine if wake effects were causing high concentrations to the west of the facility. We prepared a second set of impact tables for both the average and maximum emissions that use the hot spot runs without wake effects for those receptors to the west where wake effects cannot occur.

## ANNUAL AVERAGE EMISSIONS WITH WAKE EFFECTS

### II. AIR QUALITY ANALYSIS

#### A. INTRODUCTION

Available data indicate that emission levels as listed in Table II-1 are attainable by mass burn resource recovery facilities. These emission levels at a throughput of 1,050 TPD will be used in the modeling required for the PSD permit.

TABLE II-1  
EXPECTED EMISSIONS (ANNUAL AVERAGE)

Pollutant	lb of Pollutant per ton of MSW	lb of Pollutant per hour
Particulate	0.5	22.0
Sulfur Dioxide	3.0	131.0
Nitrogen Dioxide	3.5	153.2
Carbon Monoxide	1.5	65.6
Hydrocarbons	0.3	13.1
Lead	0.1	4.3
Mercury	0.01	0.44
Beryllium	$1.3 \times 10^{-6}$	$5.7 \times 10^{-5}$
Fluorides	0.1	4.4
Chlorides	4.0	175

Table II-1 is expanded in Table II-2 to indicate the equivalent emission factors used in the various parts of the Air Quality Analysis. The Resource Recovery Facility (RRF) is a PSD significant source for all criteria and several non-criteria pollutants. Table II-3 lists the stack parameters used in the analysis of this unit.

TABLE II-2  
3rd UNIT  
ANNUAL RRF EMISSIONS AND STACK PARAMETERS

Pollutant	lb per ton MSW	Equivalent Factors		
		lb/hr	TPY	gm/s
Particulate	0.5	22	96	2.8
Sulfur Dioxide	3.0	132	577	16.6
Nitrogen Dioxide	3.5	153	673	19.4
Carbon Monoxide	1.5	66	288	8.3
Hydrocarbons	0.3	13.1	58	1.68
Lead	0.1	4.4	38	0.55
Mercury	0.01	0.5	2.1	0.06
Beryllium	$1.3 \times 10^{-6}$	$5.7 \times 10^{-5}$	$2.5 \times 10^{-4}$	$7.2 \times 10^{-6}$
Fluorides	0.1	4.4	38	0.55
Chlorides	4.0	174	764	22

TABLE II-3  
STACK PARAMETERS

Parameters	Unit 3	
	Metric	English
Volumetric Flow	118.0 m <sup>3</sup> /s	251,000 acfm
Stack Diameter	2.37 m	7.8 ft
Stack Height	49.1 m	161 ft
Exit Velocity	26.8 m/s	88 ft/s
Exit Temperature	505°K	450°F

TABLE II-5  
IMPACT OF THE PROPOSED PROJECT

Pollutant	Averaging Time	Peak Modeled Concentration (ug/m <sup>3</sup> )	Location <sup>a</sup>
SO <sub>2</sub>	3-hour	26.2	(100m, 0m)
	24-hour	12.6	(-100m, 0m)
	Annual	0.48	(1500m, 90°)
TSP	24-hour	2.1	(-100m, 0)
	Annual	0.08	(1500m, 90°)
NO <sub>2</sub>	Annual	0.56	(1500m, 90°)
Lead	24-hour	0.42	(-100m, 0m)
	Quarterly	0.04	(500m, 90°)
Mercury	24-hour	0.042	(-100m, 0m)
Beryllium	24-hour	5.5 x 10 <sup>-6</sup>	(-100m, 0m)
Fluoride	24-hour	0.42	(-100m, 0m)
CO	1-hour	21.5	(300m, -100m)
	8-hour	8.1	(-100m, 0m)

T7018/8-24-83

<sup>a</sup>The locations of peak concentration are expressed with respect to the location of Units 1 and 2 (0,0). The 3-hour and 24-hour maximum locations are based on a Cartesian coordinate system while the others are based on a polar coordinate system.

TABLE II-6  
IMPACT OF THE ALL 3 UNITS OF RESOURCE RECOVERY PROJECT

Pollutant	Averaging Time	Peak Modeled Concentration (ug/m <sup>3</sup> )	Location <sup>a</sup>
SO <sub>2</sub>	3-hour	86.7	(300m, -100m)
	24-hour	47.3	(-300m, -100m)
	Annual	1.44	(1500m, 90°)
TSP	24-hour	7.3	(500m, 247.5°)
	Annual	0.51	(1500m, 90°)
NO <sub>2</sub>	Annual	1.68	(1500m, 90°)
Lead	24-hour	1.46	(500m, 247.5°)
	Quarterly	0.24	(500m, 90°)
Mercury	24-hour	0.16	(-300, -100m)
Beryllium	24-hour	2.0 x 10 <sup>-5</sup>	(-300m, -100m)
Fluoride	24-hour	1.6	(-300m, -100m)
CO	1-hour	54.2	(300m, -100m)
	8-hour	26.9	(-300m, -100m)

T7019/8-24-83

The locations of peak concentration are expressed with respect to the location of Units 1 and 2 (0,0).

TABLE II-7  
 CUMULATIVE IMPACTS OF THE PROJECT  
 AND OTHER MAJOR SOURCES OF SO<sub>2</sub> AND TSP

Pollutant	Averaging Time	Background Concentration (ug/m <sup>3</sup> )	Peak Modeled Concentration (ug/m <sup>3</sup> )	Cumulative Concentration (ug/m <sup>3</sup> )	Location <sup>a</sup>
SO <sub>2</sub>	3-hour	476	269	745	(3000 m, 90°)
	24-hour	104	96	200	(3000 m, 315°)
	Annual	8.8	13.7	22.5	(8000 m, 67.5°)
TSP	24-hour	89	46.8	135.8	(1000 m, 247.5°)
	Annual	44.6	4.1	48.7	(2000 m, 270°)

T7017/8-24-83

<sup>a</sup>The locations of peak concentration are expressed with respect to the location of Units 1 and 2 (0,0) and are expressed in terms of a distance and direction.

TABLE II-8  
 CUMULATIVE IMPACTS OF THE PROJECT  
 AND OTHER PSD SOURCES

Pollutant	Averaging Time	Peak Modeled Concentration (ug/m <sup>3</sup> )	PSD Class II Increment (ug/m <sup>3</sup> )	Location <sup>a</sup> (Distance, direction)
SO <sub>2</sub>	3-hour	253	512	(9000 m, 67.5°)
	24-hour	81	91	(8000 m, 157.5°)
	Annual	4.9	20	(8000 m, 67.5°)
TSP	24-hour	7.5	37	(500 m, 247.5°)
	Annual	0.58	19	(1500 m, 90°)

T7016/8-24-83

<sup>a</sup>The locations of peak concentration are expressed with respect to the location of Units 1 and 2 (0,0).



TABLE II-9  
 IMPACT OF THE PROJECT ON SO<sub>2</sub> AND TSP  
 NONATTAINMENT AREAS IN THE VICINITY OF THE PROJECT

Location of Nonattainment Areas	Nonattainment Pollutant	Averaging Time	Modeled Impact of Project
Tarpon Springs	SO <sub>2</sub>	3-hour	3.4
		24-hour	0.5
		Annual	0.03
Tampa	TSP	24-hour	0.11
		Annual	0.006

T7015/8-24-83

TABLE II-10  
 DE MINIMIS IMPACTS AS COMPARED WITH  
 MODELED IMPACTS FOR THE PROJECT

Pollutant	De Minimus Level (ug/m <sup>3</sup> )	Average Time	Modeled Concentration (ug/m <sup>3</sup> )
Carbon Monoxide	575	8-hour	8.1
Nitrogen Dioxide	14	Annual	0.56
Particulate	10	24-hour	2.1
Sulfur Dioxide	13	24-hour	12.2
Lead	0.1	24-hour	0.42
Mercury	0.25	24-hour	0.042
Beryllium	$5.0 \times 10^{-4}$	24-hour	$5.5 \times 10^{-6}$
Fluoride	0.25	24-hour	0.42

T7014/8-24-83



BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT
2800 110TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33702
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CHARLES E. RAINEY
BARBARA SHEEN TODD

February 27, 1984

Mr. Hamilton S. Oven, Jr., P.E.
Administrator, Power Plant Siting Section
State of Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301-8241

5th Floor

2 Karen Anthony

3 Tom Rogers
Bureau Air Quality Mgmt.

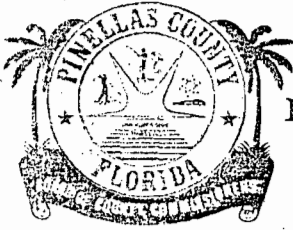
Re: Air Emission

Dear Mr. Oven:

Enclosed herewith are proposed emission factors to be set in the Conditions of Certification for Unit No.3, as "not to exceed" values for the stipulated averaging periods. As you will note, the averaging periods stated are either of three (3) or twelve (12) month longevity. The County also proposes to implement immediately a Department-approved monitoring program at existing Units No. 1 and No. 2 to identify realistic short term emission rates. After a test period of duration and frequency to be stipulated by the Department, but prior to start-up of Unit No. 3, short term emission limitations (based on actual test results), can be imposed.

Table with 4 columns: No., Parameter, Proposed Emission Limitations (Unit 3), Averaging Times. Rows include SO2, NOx, CO, and Lead.

Phone # 462-3128



BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 33516

Received DER

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GABRIEL CAZARES  
CHARLES E. RAINEY  
BARBARA SHEEN TODD

FEB 24 1984

W. GRAY DUNLAP  
COUNTY ATTORNEY

PPS

February 24, 1984

Mr. William E. Williams  
Division of Administrative Hearings  
The Oakland Building  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

Re: Pinellas County Resource Recovery Project  
PA 83-18, DOAH Case No. 83-2355

Dear Mr. Williams:

Enclosed please find the original and one copy of the Pre-Hearing Stipulation for the above-referenced matter.

The delay in providing this Stipulation to you was occasioned by further discussion between Petitioner and the Department of Environmental Regulation which took place through the first part of this week. As a result of those discussions, additional matters were agreed to thereby narrowing the issues and facts to be determined at the hearing on February 29, 1984. Accordingly, I was unable to obtain counsels' signatures and still provide this document to you as soon as possible.

I am, therefore, by copy of this letter, requesting that counsel for the Department of Environmental Regulation and the Department of Community Affairs arrange to stop by your office to sign the original Stipulation and file any exceptions to same. A copy of the Stipulation is being hand delivered this date to said counsel. I also intend to confirm this arrangement by telephone with all counsel.

Continuation of letter to  
Mr. William E. Williams  
February 24, 1984

Page Two

I am further requesting that counsel for the Southwest Florida Water Management District indicate his position with regard to this stipulation in writing as soon as possible.

Respectfully submitted,



Van B. Cook  
Chief Assistant County Attorney

VBC:dtr  
Enc.

cc: John Bottcher, Esq.  
Hamilton S. Oven, Jr., P.E.  
Larry Keeseey, Esq.  
Stephen A. Walker, Esq.

1698q/0033p

Received DER

STATE OF FLORIDA

FEB 24 1984

DIVISION OF ADMINISTRATIVE HEARINGS

PPS

In Re: PINELLAS COUNTY RESOURCE RECOVERY  
PROJECT, Application for Power  
Plant Site Certification

Case No. 83-2355

PRE HEARING-STIPULATION

Pursuant to the Hearing Officer's Order dated January 25, 1984, Petitioner submits this pre-hearing stipulation:

(a) Nature of Controversy -

In 1979 Pinellas County, Florida received site certification for a steam electric generating resource recovery facility. In September, 1983 Pinellas County submitted a new application for a third boiler at the previously certified site. The proposed project will be a third resource recovery boiler designed to increase total solid waste processing capacity to 3,150 tons per day, with steam generated from the new boiler increasing the gross capacity of the plant by approximately 29MW (gross). The certification hearing required by Section 403.508, Florida Statutes, is for the purpose of determining whether the Petitioner's application for the location and operation of the proposed facility will produce minimal adverse effects on human health, the environment, the ecology of the land and its wild life, the ecology of state waters and their aquatic life, and to fully balance the increasing demand for electrical power plant location and operation with the broad interest of the public as provided in Chapter 403, Florida Statutes.

(b) Statement of each party -

Petitioner, Pinellas County - It is the position of the Petitioner that its application for site certification of its proposed addition to its resource recovery facility should be granted as meeting the requirements and criteria of the applicable provisions of Chapter 403, Florida Statutes.

Department of Environmental Regulation -

DER recommends certification of the Petitioner's application if the Petitioner agrees to abide by conditions of certification proposed by the Department.

Public Service Commission -

The PSC has concluded a need exists for the expanded facility.

Department of Community Affairs -

DCA has concluded that for the most part the proposed addition meets most of the objectives, goals, and policies of the State Comprehensive Plan and concludes that the increased negative land use (and other) impacts generated by the proposed facility expansion are outweighed by the benefits the expansion would provide in; (1) reducing the amount of landfill area needed, (2) recovering metals, and (3) producing electrical power.

Southwest Florida Water Management District -

This department does not object to certification and encourages the use of reclaimed water for its industrial non-potable needs as proposed in Petitioner's application.

(c) Exhibits -

1. Petitioner, Pinellas County's revised application for power plant site certification of the proposed boiler expansion at its resource recovery facility.
2. The report of the Department of Community Affairs required by Section 403.507(1)(a), Florida Statutes.
3. The report from the Public Service Commission required by Section 403.507(1)(b), Florida Statutes.
4. The report of the Southwest Florida Water Management District required by Section 403.507(1)(c), Florida Statutes.
5. The report required by the Department of Environmental Regulation required by Section 403.507(2), Florida Statutes, dated January 27, 1984, as amended, including conditions of certification.

6. (Composite) Air quality emission data and modeling results.

7. Ambient Air Quality data for site and vicinity.

8. Land Use Plans, zoning ordinances and diagrams for the site and general vicinity.

(d) List of Witnesses -

Robert J. Van Deman  
1728-72nd Ave. No., St. Petersburg, Florida 33702

\*Expert witness - Engineering, Resource Recovery Facilities

James C. Andrews  
440 Bell Lane, Milton, Florida 32570

\*Expert witness - Environmental Sciences

Andrew Szurgot  
Signal-Resco Inc., 10 UOP Plaza, Des Plaines, Illinois 60016

\*Expert witness - Environmental Engineering

D. F. Acenbrack  
2800 110th Avenue North, St. Petersburg, Florida 33702

\*Expert witness - Civil Engineering

Hamilton S. Oven, Jr., P.E.  
Administrator, Power Plant Siting Section  
Department of Environmental Regulation  
2600 Blair Stone Road, Tallahassee, Florida 32301

\*Expert witness - Power Plant Siting

Peter A. Hessling  
Pinellas County Department of Environmental Management  
440 Court Street, Clearwater, Florida 33516

\*Expert witness - Air Quality

Larry Allen  
Management Analyst  
440 Court Street, Clearwater, Florida 33516

(e) Facts which are admitted -

Those facts contained in Petitioner's application for site certification (Exhibit 1), the Department of Environmental Regulation's staff analysis (Exhibit 5), and the reports required of the parties pursuant to Section 403.507,



Florida Statutes (Exhibits 2, 3, and 4), except to the extent same are conflicting or inconsistent in said exhibits, or are specified in (g) herein or are typographical, or are technical in nature and non-substantive or not material. Specifically included are those facts contained in Petitioner's application and the Department of Environmental Regulation's staff analysis pertaining to the general description of the proposed expansion, a general description of the site and facilities, a general description of the need for the facility, and existing land use and zoning regulations. Also specifically included are the findings of fact contained in the report of the Florida Public Service Commission pertaining to electrical system reliability and integrity and maintenance of an adequate electrical supply at a reasonable cost while reducing dependence on fossil fuel; the Department of Community Affairs' findings pertaining to alternative energy technologies and fuels, resource conservation and recovery, reuse of waste water, aesthetics, flooding, and land use compatibility; the Southwest Florida Management Districts' findings pertaining to the use of water; the Department of Environmental Regulations' findings pertaining to cooling system requirements, construction and operational safeguards, proximity to transportation systems, soil and foundation conditions, impact on suitable present and projected water supplies, impact on surrounding land uses, and accessibility to transmission quarters.

(f) Issues of law agreed to -

These proceedings are being held pursuant to applicable provisions of Chapter 403, Florida Statutes, pertaining to power plant site certification; statutory notice requirements have been complied with, providing notice to all persons and parties entitled thereto, as well as to the general public, with the exception of any technical defect pertaining to the required number of days prior notice, which shall be the subject of a motion for waiver of said defect as further defined in (j) herein; the record of the hearing shall consist of all

pleadings and papers filed therein including site certification application, as amended, the transcripts of all hearings, all orders entered by the hearing officer, and all other evidence and exhibits properly admitted; that the applicant and other parties to this proceeding will comply with the applicable provisions of Chapter 403, Florida Statutes pertaining to power plant site certification, and that the proposed facility is consistent and in compliance with existing land use plans and zoning ordinances and no land use hearing is required or necessary.

(g) Issues of fact to be litigated -

1. The appropriate emissions limitations and control technology pertaining to air quality (i.e. as contained in the proposed conditions of certification of the Department of Environmental Regulation),

2. The design and construction requirements for an electrostatic precipitator (i.e. contained in proposed conditions of certification),

3. Chlorination treatment requirements (i.e. proposed conditions of certification),

4. Appropriate treatment of cooling tower blow down (i.e. proposed conditions of certification),

5. Appropriate materials for daily cover (i.e. proposed conditions of certification),

6. Permissible materials which may be placed below maximum ground water levels and a definition of "fly ash" (i.e. proposed conditions of certification).

(h) Issue of law to be determined -

1. Whether the reports required pursuant to Section 403.507, Florida Statutes, recommend certification of the proposed facility.

2. Whether the Department of Environmental Regulation recommends certification of the proposed facility subject to the Department's recommended conditions of certification.

3. Whether the Department of Environmental Regulation's proposed conditions of certification are appropriate and, if not, what conditions of certification are appropriate.

4. Whether the location and operation of the proposed facility, as described by the evidence in the record, and subject to certain conditions of certification are expected to produce minimal adverse effects on human health, the environment, the ecology of the land and its wild life, and the ecology of state waters and their aquatic life.

5. Whether the operational safeguards for the proposed facility are technically sufficient for the welfare and protection of the citizens of Florida.

6. Whether the certification is consistent with the provision of abundant low cost electrical energy.

7. Whether proposed air pollution control equipment will prevent the operation of the facility from causing significant deterioration of ambient air quality in the vicinity.

8. Whether the construction and operation of the proposed facility will satisfy the prevention of significant deterioration criteria in the application of the best available control technology standards.

9. Whether certification, including conditions of certification, can or should be made applicable to the applicant's previous site certification granted July 20, 1979.

(i) Rules of evidence -

No disagreement.

(j) Motions -

Petitioner and the Department of Environmental Regulation intend to move instanter at the hearing in this cause for the waiver of any technical deficiency in notice requirements pertaining to the number of days of advance notice prior to the hearing.

(k) Signatures -



VAN B. COOK  
Chief Assistant County Attorney  
for Petitioner, Pinellas County

---

JOHN BOTTCHER, Esq.  
Department of Environmental  
Regulation

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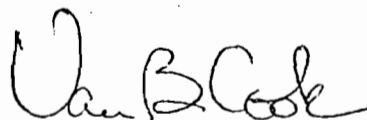
LARRY KEESEY, Esq.  
Department of Community Affairs

---

STEPHEN A. WALKER, Esq.  
Southwest Florida Water  
Management District

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing has been hand delivered to JOHN BOTTCHER, Esq., Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, FL 32301, and LARRY KEESEY, Esq., Department of Community Affairs, 2571 Executive Center Circle East, Tallahassee, FL 32301, and furnished by U. S. Mail to STEPHEN A. WALKER, Esq. Southwest Florida Water Management District, 2379 Board Street, Brooksville, FL 33512-9711, this 24th day of February 1984.



---

VAN B. COOK  
SPN 72241  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, Florida 33516  
(813) 462-3354

1533p/0033p

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 BROAD STREET, BROOKSVILLE, FLORIDA 33512-9712  
PHONE (904) 796-7211 SUNCOM 684-0111



- BRUCE A. SAMSON, *Chairman, Tampa* • Wm. O. STUBBS, JR., *Vice Chairman, Dade City* •
- JAMES H. KIMBROUGH, *Secretary, Brooksville* • RONALD B. LAMBERT, *Treasurer, Wauchula* •
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- GARY W. KUHL, *Executive Director* • STEPHEN A. WALKER, *General Counsel* •
- JAMES M. HARVEY, *Deputy Executive Director* •

February 10, 1984

Received DER

FEB 17 1984

P P S

Hamilton S. Oven, Jr., P. E.  
 Administrator, Power Plant Siting Section  
 Twin Towers Office Building  
 2600 Blair Stone Road  
 Tallahassee, Florida 32301-8241

Re: Pinellas County Resource Recovery Project

The Southwest Florida Water Management District submitted its report pursuant to Section 403.507(1)(c), Florida Statutes, on September 22, 1983, respecting the subject application for proposed boiler expansion at this previously certified resource recovery site.

Such report is contained within the report prepared by the Department of Environmental Regulation and approved by the Secretary, including attached Conditions of Certification on January 27, 1984.

The District has no further comment to submit and wishes to advise that its September 22, 1983 report is its final Report.

Further, the District has no objection to an expedited final hearing but it does not expect to participate therein.

Sincerely,

STEPHEN A. WALKER  
 General Counsel

SAW/KAL/dl

cc: G. W. Kuhl  
 W. D. Courser

cc Rodney Dehan  
Leslie Williams



# BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565



## COMMISSIONERS

JOHN CHESNUT, JR., CHAIRMAN  
BRUCE TYNDALL, VICE-CHAIRMAN  
GABRIEL CAZARES  
CHARLES E. RAINEY  
BARBARA SHEEN TODD

Received DER

February 7, 1984

FEB 10 1984

P P S

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section  
State of Florida  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301-8241

Dear Mr. Oven:

Enclosed is a six month summary of the virus and Legionella monitoring program being conducted at the Pinellas Resource Recovery Facility by the HRS Epidemiology Research Center. This report is submitted as supplementary information to the Alternative Disinfection Proposal forwarded to the Department on January 13, 1984.

If you have any questions, please do not hesitate to call.

Sincerely,

D. F. Acenbrack, Director  
Solid Waste Management

ACE:rlb

Enclosures

cc: Dan Williams, DER Tampa  
Gene E. Jordan, Dir. PWS&J  
W. W. Dasher, Dir. PW Opns  
W. Gray Dunlap, County Attorney



DEPARTMENT OF

# Health & Rehabilitative Services

Bob Graham, Governor

Epidemiology Research Center  
4000 West Buffalo Avenue, Tampa, Florida 33614

Received DER

January 10, 1984

D. F. Acenbrack, Director  
Solid Waste Management  
Pinellas County Solid Waste System  
2800 110 Avenue, North  
St. Petersburg, FL 33702

FEB 10 1984

PPS

Dear Mr. Acenbrack:

Enclosed is a six month summary of our virus and Legionella monitoring at the Resource Recovery Facility. I must apologize for not sending you a three month report, which according to the date of the contract would have been in August. Unfortunately, we did sample the facility in May but due to problems with the mobile laboratory and our other commitments, samples were not obtained in June. Therefore, I believe the official starting date should be 7-20-83 as stated in the report. We will just ignore the May samples. They were negative anyway.

My major concern is whether or not this will pose any problem for the fiscal officers. I read the Purchase Order carefully. Because there is no cut-off date, there should be no problem in extending the work to July 19, 1984, as opposed to May, 1984.

I am more than pleased with the results to date. That one isolate as far as I am concerned can be attributed to a faux pas on the part of the design of the Northwest Treatment Plant. It is being fitted now for alum feed and we will hope that breakthrough will not recur.

The invoice for the six months work has been submitted to the Finance Department, 315 Court Street, Clearwater, as requested on the Purchase Order.

If you have any questions about the report, please feel free to contact me.

Sincerely,

Flora Mae Wellings, Sc.D.  
Director  
Epidemiology Research Center

FMW:ms  
enc.

RECEIVED

JAN 13 1984

# 60616  
PIRELLAS COUNTY  
SOLID WASTE DEPT.



SEMI-ANNUAL REPORT

VIRUS AND LEGIONELLA SURVEILLANCE  
AT THE SOLID WASTE RESOURCE AND RECOVERY FACILITY  
PINELLAS COUNTY, FLORIDA  
January 10, 1984

By  
Flora Mae Wellings, Sc.D.  
Director  
Epidemiology Research Center  
State of Florida  
Department of Health & Rehabilitative Services  
Office of Laboratory Services  
4000 West Buffalo Avenue  
Tampa, Florida 33614



#### EXECUTIVE SUMMARY

After six months of surveillance for viruses and Legionella at the Solid Waste Resource Recovery Facility, virus was demonstrated only once (7-20-83) in the recirculated water. This was probably due to a direct by-pass of high solids containing water from the inflow to the circulating blow-down waters. This cannot be considered as a significant finding in view of the preponderance of negative samples. No Legionella have been demonstrated.

VIROLOGICAL MONITORING AT PINELLAS COUNTY  
SOLID WASTE RESOURCE RECOVERY FACILITY

Virological monitoring of the Pinellas County Solid Waste Resource Recovery Facility was initiated on July 20, 1983. The cooling water for the facility was obtained from the City of St. Petersburg's Northeast Wastewater Treatment Plant (NEWTP). Because these waters were treated extensively, i.e., secondary biological treatment, clarification, alum coagulation, filtration, and chlorination, few, if any, viruses were anticipated to be present in the reclaimed water.

In addition to the viral monitoring, samples were processed for the presence of Legionella organisms. These have been demonstrated, though infrequently, in cooling tower waters in other areas of the country.

This report covers the first six months of surveillance activities .

#### MATERIALS AND METHODS

##### Sample Collection

Three samples were obtained monthly from the NEWTP, from the chlorinated reclaimed water entering the Resource Recovery Facility and from the recirculated water which represents the blow-down water.

##### Virus Concentration

Viruses in the small influent samples were concentrated by the polyethylene glycol (PEG) hydroextraction method. Briefly, this consisted of placing the 500 mL sample into a dialysis tubing with a 24 A pore size clamped shut at one end. After filtering, the other end was securely clamped and the tubing exposed to PEG overnight at 4°C. The following morning the residual in the tubing was carefully removed into a sterile container and the tubing thoroughly washed with eluting medium at pH 9. This was added to the sterile beaker containing the initial residual and the suspension was subjected to sonication. Following this, the suspension was centrifuged and filtered to remove bacteria, treated with antibiotics and stored at -70°C until assayed for virus.

Viruses in large samples were concentrated by the cellulose nitrate Millipore filter technique. A 50 gallon sample was collected in a plastic drum. With the addition of sufficient 10 N HCl and  $MgCl_2 \cdot 6H_2O$ , a pH 3.5 and a magnesium ion concentration of 0.05M were achieved. Celite (diatomaceous earth) was added to prolong the life of the membrane. The prepared sample was passed under pressure through a 0.45 um pore sized Millipore filter(s). Following filtration, the filter(s) was eluted in situ with 500 mL of eluting medium at pH 9.0. The filtrate was placed in a resealable plastic bag. The membrane(s) was placed in a resealable plastic bag(s) containing approximately 50 mL of eluting medium. All samples and membranes were held at 4°C for transport to the base laboratory. Here the filtrate was further concentrated by PEG hydroextraction as was the eluting medium in each of the membrane filter bags following thorough extraction in the Stomacher Apparatus. Concentrates were held at 4°C until assayed.

#### Virus Assay

Concentrates were thawed rapidly at 37°C, tested for toxicity by inoculation into tube cultures of Buffalo green monkey (BGM) kidney cells. If toxicity was not noted, specimens were inoculated in 0.5 mL amounts onto BGM cell cultures in 25 cm<sup>2</sup> plastic bottles. If the concentrate were toxic, it would be extracted with chloroform before inoculation. After a two hour adsorption period during which the bottles were slowly rocked on a mechanical rocker, the bottles were overlaid with a maintenance medium containing agarose, followed in 72 hours by a second comparable overlay containing neutral red. Observations for plaque forming units (PFU) were made daily for fourteen days. Individual plaques were picked and inoculated into BGM tube cultures to confirm the PFU and to produce sufficient virus for identification.

#### Virus Identification

Virus identification was based on neutralization tests using pooled immune sera in the microneutralization method in plates.

Legionella Sample Collection

Three 1000 ml (1L) water samples were obtained aseptically on a monthly basis. Sodium thiosulfate was added to a sterile container and the container filled carefully. Samples were held at ambient temperatures until delivered to the base laboratory.

Legionella Concentration

The sample water was passed through one or more 47 mm, 0.4 um Nucleopore membrane filters under vacuum. The filters were placed in 10 mL of the filtrate and sonicated to dislodge organisms from the filter. A portion of the resulting suspension was acidified to pH 2, plated on beef buffered charcoal yeast extract (BCYE) agar and incubated at 37°C for 4 to 5 days. Positive controls included Legionella inoculated sample water and filtered sample water.

Typical colonies were picked and transferred to BCYE agar at 37°C and 20°C and to Tryptone Sagar agar at 37°C and 20°C. Those colonies growing only on BCYE agar at 37°C were considered to be Legionella isolates.

RESULTSInfluent

Relatively large numbers of viruses entered the NEWTP over the study period, ranging from a low of 72.67 PFU/L to a high of  $\geq 413.33$  PFU/L with an average of  $\geq 201.60$  PFU/L. (See Table 1 in Appendix) The results of the December samples are not complete so these data represent a five month period.

Reclaimed Water

No virus was demonstrable in the reclaimed water entering the Resource Recovery Facility.

Blow-down Water

The only virus isolate obtained was from a 21 gal sample of blow-down water on 7-20-83. Three samples were obtained but only one yielded a virus which was

Identified as coxsackie type B5. Based on the volume sampled that day, the number of PFU/L was 0.004.

#### Legionella Studies

No Legionella isolates were obtained from the 24 liters of water tested even though the residual chlorine in the blow-down water was inactivated at the time of collection. (See Table 4, Appendix.) All controls were positive.

#### DISUCSSION

The single isolate obtained from the blow-down water was unexpected. However, it does reaffirm the fact that viruses are never homogeneously distributed in any medium. There are probably several possible explanations for the virus being present in the recirculated waters. The most likely is that it entered the recirculation cycle directly from the inflowing reclaimed water. This opinion is based on the fact that on 7-20-83, the reclaimed water was difficult to filter, i.e., only 30 gal could be processed through two filters, whereas, usually 50 gal were filtered without difficulty. (See Table 2, Appendix.) The same problem occurred with the recycled water, but it was even more pronounced. The three specimens processed that day required three filters each for the 20 gal, 18 gal and 21 gal samples, whereas, on other days, only two filters were used for processing 50 gal. (See Table 3, Appendix.) This usually indicates that solids are present which prematurely clog the membranes.

It should be noted that the recirculated water was sampled before the reclaimed water. It is possible that a surge of poorly treated reclaimed water entered the circulation system during the sampling period. By the time the reclaimed water was sampled the surge, which may have contained the bulk of the virus, was abating because the amount of water that could be processed per filter had increased to 15 gal versus the 6 to 7 gal/filter of the recirculated water.

Why this should have occurred is not clear. However, during the same period the Northwest Wastewater Treatment Plant (NWWTP) on several occasions had to discharge their effluents into the distribution lines. At that plant, there is no alum feed and the filter is a dual media constant backwash filter which at times does not function as efficiently as it should. The fact that no virus was demonstrable in the NEWTP reclaimed water during this period would appear to strengthen the theory that the problem stemmed from the NWWTP.

The failure to isolate Legionella organisms may be due to the high level of chlorine maintained in the blow-down water or due to the fact that the numbers present are below detectable limits. The number of samples were doubled in November and December but still no Legionella were demonstrated.

The technique is being altered in two aspects to enhance the sensitivity of the test. First, large volumes (25 gal) will be filtered on site and the membranes returned to the laboratory for processing. Secondly, several approaches will be tried to reduce the final volume to a level where the entire concentrate can be assayed economically. Through these concentration procedures, we should increase the sensitivity of the test significantly.

APPENDIX

TABLE 1

## INFLUENT - NORTHEAST WASTEWATER TREATMENT PLANT

Date	Volume Tested (mL)	Number of PFU	Average Number of PFU/L/Month
07-26-83	500	>109	<u>&gt;287.33</u>
	500	>169	
	500	>153	
08-16-83	500	21	<u>&gt;72.67</u>
	500	17	
	500	71	
09-20-83	500	>82	<u>&gt;159.33</u>
	500	>76	
	500	>81	
10-18-83	500	57	75.33
	500	31	
	500	25	
11-30-83	500	>240	<u>&gt;413.33</u>
	500	>240	
	500	>140	
Average			<u>&gt;201.60</u>



## Station 12C - Influent - Resource Recovery Facility

ACCESSION NUMBER	DATE	VOLUME TESTED	PFU	PFU	FINAL PFU	AVERAGE NUMBER OF PLAQUE FORMING UNITS		FILTER	pH
			DAY 7	DAY 14		PER SAMPLE	PER LITER		
J-18 J-19	07-20-83	IWHE 30 gal	0	0	0			MCX2*	3.5
J-20 J-21		IWHE 30 gal	0	0	0			MCX2	3.5
J-22 J-23		IWHE 30 gal	0	0	0			MCX2	3.5
J-33 J-34	08-22-83	IWHE 50 gal	6/6**		0			MCX2	3.5
J-35 J-36		IWHE 50 gal	0	0	0			MCX2	3.5
J-37 J-38	08-23-83	IWHE 50 gal	0	0	0			MCX2	3.5
J-48 J-49	09-19-83	IWHE 50 gal	0	0	0			MCX2	3.5
J-50 J-51		IWHE 50 gal	0	0	0			MCX2	3.5
J-61 J-62	10-17-83	IWHE 50 gal	0	0	0			MCX2	3.5
J-63 J-64		IWHE 50 gal	0	0	0			MCX2	3.5
J-65 J-66		IWHE 50 gal	0	0	0			MCX2	3.5
J-79 J-80	11-29-83	IWHE 50 gal	0	0	0			MCX2	3.5
J-81 J-82		IWHE 50 gal	0	0	0			MCX2	3.5
J-83 J-84		IWHE 50 gal	0	0	0			MCX2	3.5

(Continued)

\* X2 = Number of membranes used.

\*\*Toxic after chloroform treatment.

TABLE 2 (Continued)

## Station 12C - Influent - Resource Recovery Facility

ACCESSION NUMBER	DATE	VOLUME TESTED	PFU	PFU	FINAL PFU	AVERAGE NUMBER OF PLAQUE FORMING UNITS		FILTER	pH
			DAY 7	DAY 14		PER SAMPLE	PER LITER		
J-97	12-12-83	IWHE	0	0	0			MCX2	3.
J-98		50 gal							
J-99		IWHE	0	0	0			MCX2	3.
J-100		50 gal							
J-101		IWHE	0	0	0			MCX2	3.
J-102		50 gal							

ACCESSION NUMBER	DATE	VOLUME TESTED	PFU DAY 7	PFU DAY 14	FINAL PFU	AVERAGE NUMBER OF PLAQUE FORMING UNITS		FILTER	p
						PER SAMPLE	PER LITER		
J-12	07-20-83	IWHE	0	0	0	0.33	0.004	MCX3*	3
J-13		20 gal							
J-14		IWHE							
J-15	18 gal	0	0	0	0.33	0.004	MCX3	3	
J-16		IWHE	0	0	1**			MCX3	3
J-17		21 gal							
J-27	08-22-83	IWHE	0	0	0			MCX2	3
J-28		50 gal							
J-29		IWHE	0	0	0			MCX2	3
J-30		50 gal							
J-31		IWHE	0	0	0			MCX2	3
J-32		50 gal							
J-42	09-19-83	IWHE	0	0	0			MCX3	3
J-43		50 gal							
J-44		IWHE	0	0	0			MCX3	3
J-45		50 gal							
J-46		IWHE	0	0	0			MCX3	3
J-47		50 gal							
J-55	10-17-83	IWHE	0	0	0			MCX2	3
J-56		50 gal							
J-57		IWHE	0	0	0			MCX2	3
J-57		50 gal							
J-59		IWHE	0	0	0			MCX2	3
J-60		50 gal							
J-70	11-29-83	IWHE	0	0	0			MCX2	3
J-71		50 gal							
J-72		IWHE	0	0	0			MCX2	3
J-73		50 gal							
J-74		IWHE	0	0	0			MCX2	3
J-75		50 gal							

(Continued)

\* X3 = Number of membranes used.

\*\*Serologically identified as Coxsackie virus B5

TABLE 3 (Continued)

## Station 21 - Blow-down Water

ACCESSION NUMBER	DATE	VOLUME TESTED	PFU	PFU	FINAL PFU	AVERAGE NUMBER OF PLAQUE FORMING UNITS		FILTER	pH
			DAY 7	DAY 14		PER SAMPLE	PER LITER		
J-91	12-12-83	IWHE	0	0	0			MCX2	3.
J-92		50 gal							
J-93		IWHE	0	0	0			MCX2	3.
J-94		50 gal							
J-95		IWHE	0	0	0			MCX2	3.
J-96		50 gal							

TABLE 4

LEGIONELLA RESULTS SUMMARY

ate	Volume Tested (L)	Number of Suspect Colonies Tested	Number Growing at 37°C in BCYE Only
<del>07-20-83</del>	1	12	0
	1	35	0
	1	4	0
<del>08-22-83</del>	1	41	0
	1	16	0
	1	0	0
<del>09-1-83</del>	1	6	0
	1	0	0
	1	8	0
<del>10-7-83</del>	1	5	0
	1	4	0
	1	7	0
<del>11-22-83</del>	1	4	0
	1	1	0
	1	0	0
	1	2	0
	1	3	0
	1	10	0
<del>1-15-83</del>	1	9	0
	1	0	0
	1	1	0
	1	4	0
	1	1	0
	1	3	0

February 6, 1984

Mr. William E. Williams  
Division of Administrative Hearings  
The Oakland Building  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery Project  
PA 83-18, DOAH Case No. 83-2355

Dear Mr. Williams:

Enclosed please find copies of the News Release, newspaper notice and Florida Administrative Weekly notice for the power plant site certification hearing for the Pinellas County Resource Recovery Project.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

H80jr/sb

cc: All Parties

DER - Pinellas County

2/6/84

Buck Owen	DER	(904) 488-0130
Gray Dunlap	City Atty - P.C.	813 462-3354
Bob Van Deman	MDR	813-577-9455
Vivi Andrews	MDR	904-432-2481
Ace Acenbrack	P/C	813-825-1565
Van B. Cook	Pin Co.	813 462-3354
Gene E. Jordan	Pin. Co.	813/462-3251
Andrew M. Szurgot	SIGNAL RESCO	312/391-3744
Bruno R. Dunn	SIGNAL RESCO	312 391-3519
Peter A. Hessling	Pinellas Co. Dept. Env. Mgt.	813-530-6522
Ed Palagyi	DER, BAQM	(904) 488-1344
Bill Thomas	" "	488-1344

Precipitator - designed for .03

Removal XIV A.2

delete 9 on review for period testing

~~about~~ Stack Emission Limitations

can't guarantee - SO<sub>2</sub> emission limit

1.2 lbs/10<sup>6</sup> BTU - Battelle paper

Visible emission.

want 20% - NO guarantee

Recognize start up - in rules spike

Limits on CO, NO<sub>x</sub> + Pb. are literature values - too restrictive

24  
1972  
1992

1050 TPD  
24

1.9 lbs/Ton

44 T/h  
1.9

2.5 x 10<sup>3</sup>  
1.9

396  
44  
83.6

2.5 lbs/Ton

47  
1050  
90  
90

AP-42

24



# AGENDA

PINELLAS REFUSE TO ENERGY  
UNIT 3 PPSA STAFF COMMENTS  
6 FEB. 1984

1. INTRODUCTION & MEETING OBJECTIVES
2. SECTION XIV.A.3.d - SO<sub>2</sub> MONITORS - same as old
3. SECTION XIV.A.1.B - EMISSIONS TEST BASIS
4. SECTION XIV.A.2 - ESP DESIGN & OPERATION
5. SECTION XIV.D.2.a - SITE GROUNDWATER CLASS. ✓
6. SECTION XIV.E.9 - HAZARDOUS WASTE <sup>delete</sup> DETERMINATION
7. SECTION XIV.E.6 - FLY ASH Look at ✓
8. SECTION XIV.A.1.a - EMISSIONS LIMITATIONS
  - 1.9 <sup>lbs/Ton</sup> A. SO<sub>2</sub>
  - B. VISIBLE EMISSIONS
  - C. CO, NO<sub>x</sub> & LEAD - O.K.

9. SECTION XIV.E.6 - ZONE OF DISCHARGE ✓  
wants to boundary  
~~3.6~~ 3.6 max 24 hr.

Remodeled @ 3 lbs/Ton SO<sub>2</sub> - 131 lbs/hr. Max 24 hr avg

@ 3.5 lbs/Ton NO<sub>2</sub>

1.5 " " CO

1.0 " " Lead

No real problem

6 lbs/Ton - Max 3 hr avg -  
3 lbs/Ton - Max <sup>24 hr</sup> annual Average  
1.9 lbs/Ton - Annual Average

Handwritten calculations:  
1.16  
1.22  
1.79  
4.50  
2.54  
1.6  
1.19  
14.4  
16.4  
3.04

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Address		
To: <u>Buck Owen</u>	Loctn.: <u>Permitting</u>	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: <u>Don Kell</u>	Date: <u>2/7/84</u>	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Hamilton Owen, Jr., Professional Engineer, Administrator  
Bureau of Permitting

THROUGH: Rodney S. DeHan, Administrator *RSD*  
Groundwater Section

FROM: Don Kell, Engineer *DK*  
Groundwater Section

DATE: January 31, 1984

SUBJECT: Pinellas County Resource Recovery Plant: Treatment of  
Tertiary Waste Water Makeup to Cooling Towers

We have no adverse comment regarding Pinellas County's proposal.

DK/mj

*Buck*  
*I have reviewed Pinellas Co. plan. I agree with Dr. Walling. I have no problem with it - as long as monitoring continue to indicate no water survival.*  
*Rodney*  
*2/6/84*

The Department of Environmental Regulation announces a public hearing scheduled by the Environmental Regulation Commission to which interested persons are invited.

DATE AND TIME: February 29, 1984, 9:00 A.M.

PLACE: Fourth Floor Conference Rooms, Twin Towers Building, 2600 Blair Stone Road, Tallahassee, Florida.

PURPOSE: To receive testimony and public comment and take action on management, including project elevation, bypass, and removal, of the Fiscal Year 1984 Priority and Advance Allowance Lists for Wastewater Treatment Works. Projects potentially subject to priority list management action are Okaloosa County 644100 (EPA I.D. Number), St. Petersburg 631090, Key West 465080, and Atlantic Beach 747030. A project potentially subject to Advance Allowance List management action is Williston 649020.

For further information, contact the Bureau of Wastewater Management and Grants, 2600 Blair Stone Road, Tallahassee, FL 32301.

The Florida Department of Environmental Regulation announces a public hearing to which the public is invited.

DATE AND TIME: February 29, 1984, at 10:00 a.m.

PLACE: Pinellas County Courthouse, 5th Floor Assembly Room, 315 Court Street, Clearwater, Florida

PURPOSE: To conduct a hearing relative to the effects of Pinellas County's proposed site for a 29 megawatt Resource Recovery power plant as required by the Florida Electrical Power Plant Siting Act, Section 403.508, Florida Statutes. Mr. William Williams, Hearing Officer, will conduct the hearing. Anyone wishing to become a party to the proceeding should contact Mr. Williams at the Division of Administrative Hearings, the Oakland Building, 2009 Apalachee Parkway, Tallahassee, Florida 32301.

The Florida Public Service Commission announces a hearing to be held in the following docket, to which all interested persons are invited.

Docket No. 830377-EU — Proceedings to implement cogeneration rules.

DATE AND TIME: Tuesday, February 14, 1984, 9:30 A.M.

PLACE: Room 106, Fletcher Building, 101 East Gaines Street, Tallahassee, Florida 32301

PURPOSE: To conclude hearing held on January 19, 1984.

The Florida Public Service Commission announces a hearing to be held in the following docket, to which all interested persons are invited.

Docket No. 830465-E1 — Petition of Florida Power and Light Company for an increase in rates.

DATE AND TIME: Monday, February 20, 1984, 12:00 — 4:30 P.M. and 6:00 — 8:30 P.M.

PLACE: Holiday Inn Riverfront, Clipper Room, 2066 West 1st Street, Fort Myers, Florida

PURPOSE: To permit members of the public to give testimony regarding the rates and service of Florida Power

and Light Company. The procedure at this hearing will be as follows: the Company will present a brief summary of its case and then members of the public may present testimony.

The Florida Public Service Commission announces a hearing to be held in the following docket, to which all interested persons are invited.

Docket No. 820519-WS — Application of Ocean Reef Club, Inc. for certificates to operate a water and sewer utility in Monroe County, Florida.

DATE AND TIME: Thursday, February 23, 1984, 10:00 A.M.

PLACE: Key Largo Holiday Inn, African Queen Meeting Room, Mile Marker 100, US1, Key Largo, Florida

PURPOSE: To allow the Commission an opportunity to hear evidence in support of the positions of the parties and to resolve those issues consistent with the laws of the State of Florida and Commission policy.

The Northwest Florida Water Management District announces a public hearing to which all interested persons are invited.

DATE AND TIME: February 23, 1984, 1:15 EST

PLACE: Auditorium, Apalachicola River and Bay National Estuarine Sanctuary, on Market Street adjacent to Mill Pond in Apalachicola

PURPOSE: To incorporate unanticipated funds into the current operating budget.

A COPY OF THE AGENDA MAY BE OBTAINED by contacting Ann Roberts, Agency Clerk, Northwest Florida Water Management District, Route 1, Box 3100, Havana, Florida 32333, (904)487-1770

The Southwest Florida Water Management District announces the following public hearings and meetings to which all interested persons are invited:

PEACE RIVER BASIN BOARD

DATE AND TIME: Wednesday, February 8, 1984 at 10:00 a.m.

PLACE: Bartow Sub-District Office, 2020 SR 60 East, Bartow, Florida

PURPOSE: Consideration of Basin Business

A copy of the agenda for any of the above meetings or hearings may be obtained by writing to the Southwest Florida Water Management District, 2379 Broad Street, Brooksville, Florida 33512.

If a person decides to appeal any decision made by the board with respect to any matter considered at a hearing or these meetings, he will need a record of the proceedings, and for such purpose he may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.



BOARD OF COUNTY COMMISSIONERS

Received DER

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 33516

COMMISSIONERS

JOHN CHESNUT, JR., CHAIRMAN  
BRUCE TYNDALL, VICE-CHAIRMAN  
GABRIEL CAZARES  
CHARLES E. RAINEY  
BARBARA SHEEN TODD

FEB 3 1984

W. GRAY DUNLAP  
COUNTY ATTORNEY

PPS

February 1, 1984

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Re: Pinellas County Site Certification

Dear Mr. Oven:

This letter is to confirm arrangements made over the telephone regarding the time of our forthcoming meeting. The meeting will be held on Monday, February 6, at 10:30 A.M. at your offices. I will be accompanied by Messrs. Dunlap, Jordan, Acenbrack and Andrews.

Very truly yours,

Van B. Cook  
Chief Assistant County Attorney

VBC:dtr

cc: John Bottcher, Esq.  
D. F. Acenbrack, Director Solid Waste  
W. Gray Dunlap, County Attorney  
Gene Jordan, Director of Public Works

1539q/0023p

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Mr. Buck Oven, Power Plant Siting

THROUGH: Dr. G. J. Thabaraj, Chief, BWA *gjt*  
Dr. Landon T. Ross, Chief Biologist  
Administrator of Biology Section *[Signature]*

FROM: Leslee A. Williams, Biology Section *SAW*

DATE: January 31, 1984

SUBJECT: Monitoring - General; Pinellas County Resource Recovery Facility

**RECEIVED**  
FEB 1 1984  
DIV. ENVIRONMENTAL  
PERMITTING

As requested, I have reviewed the document entitled "Proposed Cooling Tower Makeup Treatment Plan for Tertiary Treated Wastewater at the Pinellas County Resource Recovery Facility" and have prepared the following comments for your consideration.

The treated effluent from both the City of St. Petersburg's Northeast Wastewater Treatment Plant and the Largo Wastewater Plant appears to be of high quality, that is, equivalent to tertiary treatment technology.

Through the virus monitoring studies conducted by Dr. F. M. Wellings, the chlorination practice used at the St. Petersburg Plant is sufficient to reduce virus to a "no detection" level. The described treatment level of the Largo Facility seems to be similar to St. Petersburg, although viral studies have not been done.

I have no objection to the use of an alternate chlorine compound in lieu of chlorine dioxide for the purpose of disinfection in cooling tower makeup waters. However, until the Largo Facility demonstrates the same high level of effluent treatment through virus monitoring studies, I would caution against a total chlorine residual determination rather than the specified free chlorine residual as a measure of disinfection levels. Oxidizing biocides for the control of slime growth in the cooling towers will, of course, be periodically necessary, in any case.

Upon the demonstration of a "no detection" viral level in the Largo effluent, I see no further problems with the proposed treatment plan.

LAW/cdw

# NOTICE OF CERTIFICATION HEARING ON AN APPLICATION TO CONSTRUCT AND OPERATE AN ELECTRICAL POWER PLANT ON A SITE TO BE LOCATED NEAR PINELLAS PARK, FLORIDA

*Reduced from original floor sheet  
which was 12" x 13.5"  
KKW  
1/24/95*

1. Application number 83-18 for certification to authorize construction and operation of an addition to an electrical power plant near Pinellas Park, Florida, is now pending before the Department of Environmental Regulation, pursuant to the Florida Electrical Power Plant Siting Act, Part II, Chapter 403, F.S.
2. The resource recovery facility site is located in Pinellas County within the existing Pinellas County Resource Recovery Facility property 2 miles northeast of Pinellas Park, south of 114th Avenue, north and west of 28th Street North. The proposed additional plant will consist of one 1050 ton per day solid waste-fired unit with a 29 MW turbine generator. The power plant will be owned by Pinellas County.
3. The Department of Environmental Regulation has evaluated the application for the proposed power plant. Certification of the plant would allow its construction and operation. The application and the Department's analysis of the impacts of the plant are available for public inspection at the following addresses:

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
Southwest District Office  
7601 Highway 301 North  
Tampa, Florida 33610

PINELLAS COUNTY  
Department of Solid Waste Management  
2800-110th Avenue North  
St. Petersburg, Florida 33702

HERNANDO COUNTY DEPARTMENT OF PLANNING AND ZONING  
156 East Jefferson  
Brooksville, Florida 33512

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT  
2379 Brood Street (South U.S. 41)  
Brooksville, Florida 33512

4. Pursuant to Section 403.508, Florida Statutes, the certification hearing will be held by the Division of Administrative Hearings on February 29, 1984, at 10:00 a.m., at the Pinellas County Courthouse, 5th Floor Assembly Room, 315 Court Street, Clearwater, Florida, in order to take written or oral testimony on the effects of the proposed electrical power plant or any other matter appropriate to the consideration of the site.

Need for the facility has been predetermined by the Public Service Commission at a separate hearing. Written comments may be sent to William Williams (Hearing Officer) at Division of Administrative Hearings, 2009 Apalachee Parkway, Tallahassee, Florida, 32301, on or before February 21, 1984.

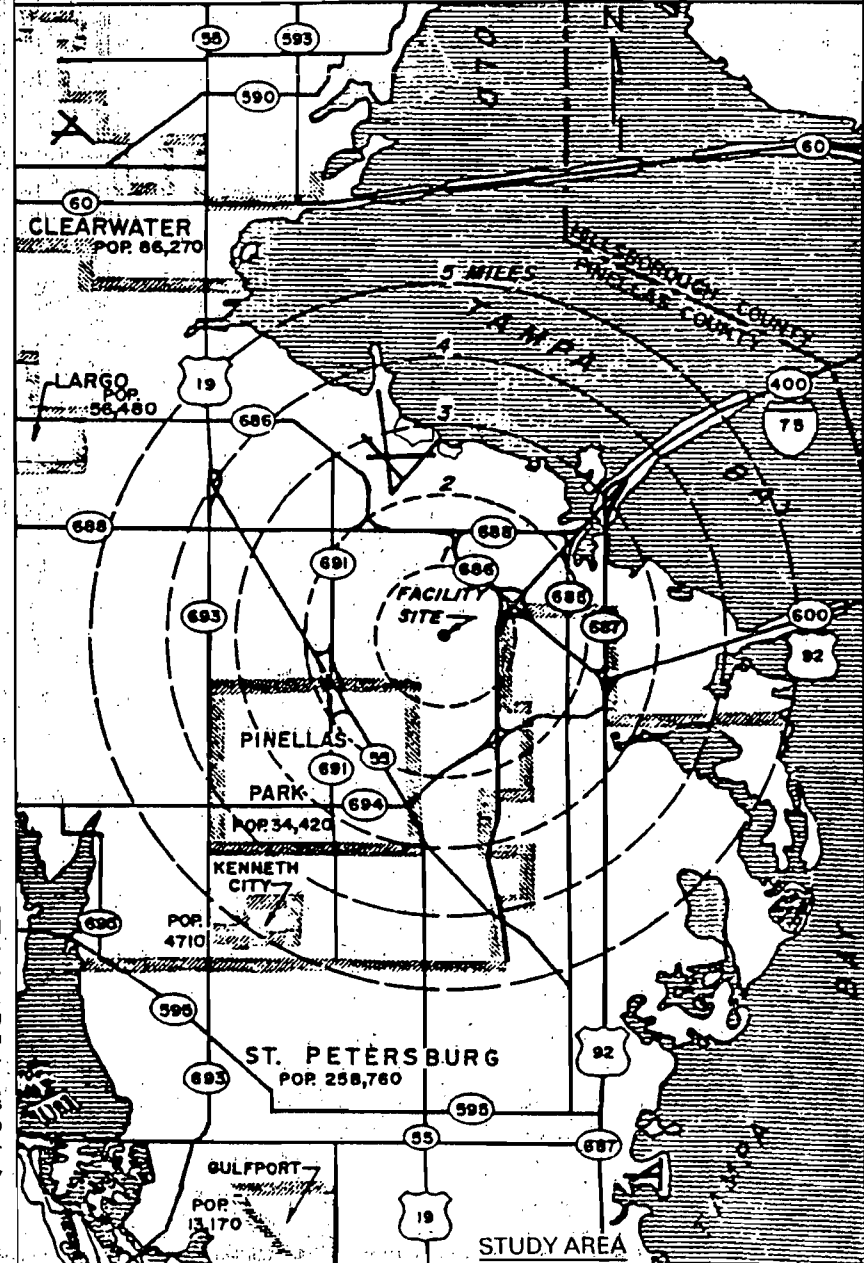
5. Pursuant to 403.508(4), F.S.: (a) Parties to the proceeding shall include: the applicant; the Public Service Commission; the Division of State Planning; the water management district as defined in Chapter 373, in whose jurisdiction the proposed electrical power plant is to be located; and the Department. (b) Upon the filing with the Department of a notice of intent to be a party at least 15 days prior to the date set for the land use hearing, the following shall also be parties to the proceeding:

1. Any county or municipality in whose jurisdiction the proposed electrical power plant is to be located.
2. Any state agency not listed in paragraph (a) as to matters within its jurisdiction.
3. Any domestic non-profit corporation or association formed in whole or in part to promote conservation or natural beauty; to protect the environment, personal health, or other biological values; to preserve historical sites; to promote consumer interests; to represent labor, commercial or industrial groups; or to promote orderly development of the area in which the proposed electrical power plant is to be located.
- (c) Notwithstanding paragraph (4)(d), failure of an agency described in subparagraphs (4)(b)1 and (4)(b)2 to file a notice of intent to be a party within the time provided herein shall constitute a waiver of the right of the agency to participate as a party in the proceeding.

(d) Other parties may include any person, including those persons enumerated in paragraph (4)(b), who failed to timely file a notice of intent to be a party, whose substantial interests are affected and being determined by the proceeding and who timely file a motion to intervene pursuant to chapter 120, F.S., and applicable rules. Intervention pursuant to this paragraph may be granted at the discretion of the designated hearing officer and upon such conditions as he may prescribe any time prior to 15 days before the commencement of the certification hearing.

(3) Any agency whose properties or works are being affected pursuant to s.403.509(2) shall be made a party upon the request of the department of the applicant.

6. Those wishing to intervene in these proceedings must be represented by an attorney or other person who can be determined to be qualified to appear in administrative proceedings pursuant to Chapter 120, F.S., or Chapter 17-1.21, FAC.



Buck -- here are the only sufficiency questions I have on Pinellas County:

Section 3.4.1 - When available, please provide the evaluation results of the blowdown sump water disposal on tidal wetlands.

Section 2.2. - When was the site rezoned from M-1 to P? While we recall the omission of the Commercially zoned parcel, we do not recollect the Public zoning being done as part of the certification's land use/zoning ratification.



Victoria J. Tschinkel  
Secretary

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

2600 Blair Stone Road  
Tallahassee, Florida 32301

# News Release

OFFICE OF PUBLIC INFORMATION (904) 488-9334/5

January 27, 1984  
Kathy Cavanaugh

TALLAHASSEE - Certification to authorize construction and operation of an addition to an electrical power plant near Pinellas Park is pending before the Department of Environmental Regulation, and a hearing on the subject is scheduled for Feb. 29 in Clearwater.

The site of the resource recovery facility is located in Pinellas County within the existing Pinellas County Resource Recovery Facility property two miles northeast of Pinellas Park, south of 114th Avenue, and north and west of 28th Street North.

The proposed additional plant will consist of one 1050-ton per day solid waste-fired unit with a 29 MW turbine generator. The power plant will be owned by Pinellas County.

The DER has evaluated the application for the proposed power plant. Certification of the plant would allow its construction and operation. The application and department analysis of the impacts of the plant are available for public inspection by contacting Buck Oven, (904) 488-0130 in Tallahassee.

The Feb. 29 certification hearing by the Division of Administrative Hearings will begin at 10 a.m. at the Pinellas County Courthouse, 5th Floor Assembly Room, 315 Court Street, Clearwater.

Need for the facility has been predetermined by the Public Service Commission at a separate hearing.



Written comments may be sent to William Williams (Hearing Officer) at Division of Administrative Hearings, 2009 Apalachee Parkway, Tallahassee, Florida, 32301, on or before Feb. 21.

#

#

#

Best Available Control Technology (BACT) Determination  
Public Works and Utilities  
Pinellas County

The applicant plans to construct a third municipal solid waste fired boiler to increase the throughput of the existing resource recovery facility located in Pinellas County, Florida. The proposed mass burn Martin combustion system will be similar to the two existing units. The new unit will be capable of incinerating 1050 tons per day of municipal waste, and will increase the solid waste processing capacity of the facility to 3150 tons per day.

The proposed mass burn unit is designed for a heat input of 411 million Btu per hour based upon a waste heat content of 5000 Btu per pound. This added unit will increase the processing throughput of the facility to allow incineration of the solid waste expected to be generated over the next ten years.

Potential Air Pollutant Emissions (tons/year)

Particulate	- 109	(25)*
Sulfur Dioxide	- 577	(40)*
Nitrogen Oxides	- 577	(40)*
Carbon Monoxide	- 288	(100)*
Lead	- 58	(0.6)*
Beryllium	- .0002	(.0004)*
Mercury	- 2.1	(0.1)*
Hydrogen Fluoride	- 28	(3)*

\* Regulated Air Pollutants - Significant Emission Rates.  
Florida Administrative Code Rule 17-2.500, Table 500-2

The steam generated will be used to produce electrical power for distribution into the peninsula grid system. The new source is being reviewed according to Florida Administrative Code Chapter 17-17, Electrical Power Plant Siting and Rule 17-2.500, Prevention of Significant Deterioration. The Bureau of Air Quality Management is performing the air quality review and the BACT determination for the siting committee. The certification number for the existing facility is PA 78-11.

BACT Determination Requested by the Applicant:

An electrostatic precipitator (ESP) will be installed to control the discharge of particulate matter at 0.03 gr/dscf, or less, corrected to 12% CO<sub>2</sub>. The ESP will also control lead, beryllium and mercury emissions. Sulfur dioxide emissions will be limited by firing municipal waste, a low sulfur content fuel. Burner design and operating procedures will be the methods used to limit NO<sub>x</sub> emissions.

Burner controls will be installed to minimize the emission of CO due to incomplete combustion.

Date of Receipt of a BACT Application:

September 7, 1983

Date of Publication with Florida Administrative Weekly:

September 16, 1983

Review Group Members:

Bob King - New Source Review Section  
Clair Fancy - Central Air Permitting  
Tom Rogers - Air Modeling Section  
Jim Estler - SW District Office  
Jacob Stowers - Pinellas County DEM

BACT Determination by DER:

Pollutant	Emission Limits
Particulates	0.03 grains/dscf, corrected to 12 percent CO <sub>2</sub>
Sulfur dioxide	83 pounds/hour
Nitrogen Oxides	132 pounds/hour
Carbon Monoxide	66 pounds/hour
Lead	1.3 pounds/hour
Mercury	3200 grams/day [1]
Visible Emissions	10% opacity

[1] When more than 2205 lb/day of municipal sewage sludge is fired, compliance with the mercury emission limit shall be demonstrated in accordance with 40 CFR 61, Method 101 Appendix B.

Compliance with the limitations for particulates, sulfur oxides and nitrogen oxides will be demonstrated in accordance with Florida Administrative Code Rule 17-2.700, DER Methods, 1,2,3,5,6 and 40 CFR 60, Appendix A; Method 7. Compliance with the opacity limit shall be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6)(2)9., DER Method 9.

A continuous monitoring system to measure the opacity of emissions shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710 - Continuous

Monitoring Requirements. The CEM must be installed and operational prior to compliance testing.

#### BACT Determination Rationale

The proposed mass burn combustion unit will have a charging rate more than 50 tons per day, and therefore, subject to the provisions of 40 CFR 60.50, Subpart E, New Source Performance Standards (NSPS). The NSPS for particulate matter emissions is a rate not to exceed 0.08 grains/dscf corrected to 12 percent CO<sub>2</sub>. The applicant has proposed to limit the particulate emissions rate not to exceed 0.03 grains/dscf corrected to 12 percent CO<sub>2</sub>. An electrostatic precipitator (ESP) will be installed to control particulate emissions at the proposed rate. The two existing mass burn units have a permitted particulate emission limit not to exceed 0.08 grains/dscf (NSPS).

The Department agrees that the use of an ESP is an air pollution control technology currently capable of achieving the 0.03 grain/dscf particulate emission limit, and is considered BACT for this source. The baghouse is another control device capable of achieving the particulate emission limit determined as BACT, but was not recommended for two reasons: 1) the existing combustion units use ESPs, therefore the spare parts inventory is minimized, and 2) maintenance and operating personnel have experience with this type of control device.

The mercury emission limit is the National Emission Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The proposed source would be subject to the provisions of NSPS, 40 CFR 60.150, Sewage Treatment Plants, if more than 2205 pounds per day (dry basis) of municipal sewage sludge is charged. The Department has determined the emission limit for mercury to be 3200 grams per day applicable only when more than 2205 pounds per day (dry basis) of municipal sewage sludge is charged into the mass burn combustion unit. The Department has determined the limit for SO<sub>2</sub> emissions to be 83 pounds per hour. The amount of SO<sub>2</sub> generated when burning municipal type waste is less than the SO<sub>2</sub> emissions from the burning of distillate fuel oil containing 0.5 percent sulfur and the use of low sulfur fuel oil is considered one method of controlling SO<sub>2</sub> emissions, therefore, the installation of a flue gas desulfurization system is not warranted.

The combustion of plastics can result in the emission of acid gases, such as hydrogen chloride and hydrogen fluoride. Polyvinyl chloride (PVC), one of the many polymers, has been implicated as causing the most serious disposal problem due to the release of HCl gas when burning. This problem has long been realized resulting in other polymers being used in packaging.

Polypropylene and polystyrene, for example, produce carbon monoxide or the monomer styrene when burned. Both HCl and HF are hydrogen halides and are soluble in water. A water scrubbing system will remove approximately 75% of the HF and HCl gases. The Department does not believe the air quality impact due to these emissions justifies the cost of installing a wet scrubber system.

During combustion of municipal solid waste, NO<sub>x</sub> is formed in high temperature zones in and around the furnace flame by oxidation of atmospheric nitrogen and nitrogen in the waste. The two primary variables that affect the formation of NO<sub>x</sub> are the temperature and the concentration of oxygen. Techniques such as the method of fuel firing, the distribution of combustion air between overfire and underfire air, exhaust gas recirculation and decreased heat release rates have been used to reduce NO<sub>x</sub> emissions. A few add-on control techniques such as the catalytic reduction with ammonia process and the thermal de-NO<sub>x</sub> are still experimental, and are not considered to be demonstrated technology for the proposed project.

In their application, the applicant proposes to use the distribution of combustion air between overfire and underfire air technique to minimize NO<sub>x</sub> emissions. The proposed NO<sub>x</sub> emission rate is 132 pounds per hour as indicated in their air quality analysis. Annual emissions of NO<sub>x</sub> will be 577 tons. This level of control is judged to represent BACT.

Lead emissions from the incinerator occur because this element is present in varying amounts in the solid waste. The inlet temperature of the ESP is estimated at 425-475 °F. At these temperatures the lead emissions should be in a nonvaporous state, and will be removed in the ESP along with the rest of the particulates.

The visible emissions opacity limit is based on operating data from the two existing units.

Carbon monoxide is a product of incomplete combustion where there is insufficient air. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The Department agrees with the applicant that BACT is the use of state-of-the-art boiler controls to insure sufficient underfire and overfire air so that the emissions of products of incomplete combustion are minimized. The proposed CO emission rate is 66 pounds per hour. This level of control is judged to represent BACT.

The air quality impact of the proposed emissions has been analyzed. Atmospheric dispersion modeling has been completed and used in conjunction with an analysis of existing air quality to determine maximum ground-level ambient concentrations of the

pollutants subject to BACT. Based on these analyses, the department has reasonable assurance that the proposed source at the Pinellas County RRF, subject to the these BACT emission limitations, will not cause or contribute to a violation of any PSD increment or ambient air quality standard.

Details of the Analysis May be Obtained by Contacting:

Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Recommended by:

C. H. Fancy, Deputy Bureau Chief

Date: \_\_\_\_\_

Approved:

Victoria J. Tschinkel, Secretary

Date: \_\_\_\_\_

January 27, 1984

Mr. William E. Williams  
Division of Administrative Hearings  
The Oakland Building  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery Facility  
PA 83-18, DOAH Case No. 83-2355

Dear Mr. Williams:

Attached please find a copy of the Department's staff analysis report for the Pinellas County Resource Recovery Facility as required by section 403.504(8), F.S.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSOjr/sb

cc: All parties

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Notice has been furnished in person or by U.S. Mail this 27th day of January, 1984 to the following named persons:

VAN B. COOK  
SPN 72241  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, FL 33516

JOHN BOTTCHEE, ESQUIRE  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

LARRY KEESEY, ESQUIRE  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, FL 32301

STEPHEN A. WALKER, ESQUIRE  
SWFWMD  
2379 Broad Street  
Brooksville, FL 33512-9712

BONNIE DAVIS, ESQUIRE  
Public Service Commission  
Fletcher Building  
101 East Gaines Street  
Tallahassee, FL 32301-8153

---

HAMILTON S. OVEN, JR., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301



STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

In Re: PINELLAS COUNTY RESOURCE RECOVERY )  
PROJECT, Application for Power )  
Plant Site Certification ) CASE NO. 83-2355  
)  
)  
)  
)  
)

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NOTICE OF HEARING

A hearing will be held in this case in 5th Floor Assembly Room, Pinellas County Courthouse, 315 Court Street, CLEARWATER, FLORIDA at 10:00 a.m., or as soon thereafter as can be heard, on FEBRUARY 29, 1984. Continuances will be granted only by order of the Hearing Officer for good cause shown.

ISSUES: Whether the subject power plant siting application should be approved.

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AUTHORITY: Section 403.501, et seq., Florida Statutes.

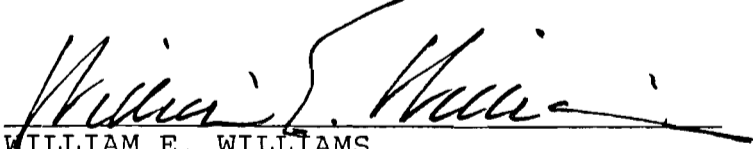
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The parties shall arrange to have all witnesses and evidence present at the time and place of hearing. Subpoenas will be issued by the Hearing Officer upon request of the parties. All parties have the right to present oral argument and to cross-examine opposing witnesses. All parties have the right to be represented by counsel or other qualified representative, in accordance with Rule 28-5.1055, Florida Administrative Code.

January 25, 1984  
(Date)

Copies furnished:

See attached page

  
WILLIAM E. WILLIAMS  
Hearing Officer  
Division of Administrative Hearings  
The Oakland Building  
2009 Apalachee Parkway  
Tallahassee, Florida 32301  
(904) 488-9675

CASE NO. 83-2355

John Bottcher, Esq.  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Larry Keeseey, Esq.  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, Florida 32301

Stephen A. Walker, Esq.  
Southwest Florida Water  
Management District  
2379 Broad Street  
Brooksville, Florida 33512-9712

Van B. Cook, Esq.  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, Florida 33516

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

In Re: PINELLAS COUNTY RESOURCE )  
RECOVERY PROJECT, Application ) CASE NO. 83-2355  
for Power Plant Site Certification )  
 )  
 )  
\_\_\_\_\_ )

O R D E R

THIS CAUSE having been scheduled for hearing on  
FEBRUARY 29, 1984, it is

ORDERED:

1. Counsel for all parties shall meet together no later than ten (10) days prior to the date agreed upon for final hearing in this cause and shall:
  - (a) discuss the possibility of settlement;
  - (b) stipulate to as many facts and issues as possible;
  - (c) draw up the prehearing stipulation required by this Order;
  - (d) examine and number all exhibits and documents proposed to be introduced into evidence at the hearing;
  - (e) furnish opposing counsel the names and addresses of all witnesses;
  - (f) complete all other matters which may expedite the hearing in this case.
  
2. Counsel for Petitioner shall initiate arrangements for the attorneys' conferences. However, all attorneys in this cause are charged with the duty of meeting in such conferences and of complying with the schedule set forth in this Order.

3. The prehearing stipulation shall contain:
- (a) a concise statement of the nature of the controversy;
  - (b) a brief, general statement of each party's position;
  - (c) a list of all exhibits, which shall be prenumbered, to be offered at the hearing, noting any objections thereto, and the grounds for each objection;
  - (d) a list of the names and addresses of all witnesses intended to be called at the hearing by each party. Expert witnesses shall be so designated;
  - (e) a concise statement of those facts which are admitted and will require no proof at the hearing, together with any reservations directed to such admission;
  - (f) a concise statement of those issues of law on which there is agreement;
  - (g) a concise statement of those issues of fact which remain to be litigated;
  - (h) a concise statement of those issues of law which remain for determination by the Hearing Officer;
  - (i) a concise statement of any disagreement as to the application of the rules of evidence;
  - (j) a list of all motions or other matters which require action by the Hearing Officer;
- and
- (k) the signature of counsel for all parties.

4. The parties shall file their prehearing stipulation no later than ten (10) days prior to the date set for final hearing in this cause. Failure to comply with the requirements of this Order may result in cancellation of the hearing on the Hearing Officer's own motion.

DONE AND ORDERED this 25th day of January,  
1984, at Tallahassee, Florida.



WILLIAM E. WILLIAMS  
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 \_\_\_\_\_  
day of January, 1984.

Copies furnished to:

See attached page

CASE NO. 83-2355

John Bottcher, Esq.  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Larry Keeseey, Esq.  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, Florida 32301

Stephen A. Walker, Esq.  
Southwest Florida Water  
Management District  
2379 Broad Street  
Brooksville, Florida 33512-9712

Van B. Cook, Esq.  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, Florida 33516

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
ELECTRIC POWER PLANT SITE CERTIFICATION REVIEW  
FOR  
PINELLAS COUNTY RESOURCE RECOVERY FACILITY  
PHASE II  
CASE NO. PA 83-18

Staff Analysis

Power Plant Siting Section  
Bureau of Permitting  
Division of Environmental Permitting  
Tallahassee, Florida  
32301

This report was prepared by the Power Plant Siting Section after coordination with, and receipt of oral and written review and comments from many other Departmental staff members, in particular, the following:

Division of Environmental Permitting  
Bureau of Permitting  
Hamilton S. Owen, Jr. (Power Plant Siting)  
Karen W. Anthony (Power Plant Siting)  
Susan Boyd

Southwest Florida District Office  
Jim Estler  
Dan Williams  
Pat Lewis

Division of Environmental Programs  
Bureau of Air Quality  
Tom Rodgers  
Ed Palagyi  
Bob King

Bureau of Groundwater Protection and  
Waste Management  
Dr. Rodney DeHan (Groundwater)  
Don Kell (Groundwater)  
John Reese (Solid Waste)  
Dennis Wile (Noise)

Bureau of Water Analysis  
Dr. Larry Olsen (Biology)

Office of General Counsel  
Bill Deane

Also participating in this review were personnel of the Resource Recovery Council.

Pursuant to Chapter 403, Part II, Florida Statutes, this report constitutes the Department of Environmental Regulation's required analysis and recommended Conditions of Certification for the Pinellas County Resource Recovery Facility, PA 83-18. This report and attached Conditions of Certification are hereby approved.

Jan 27, 1984

Date

Terry Cole for

Victoria J. Tschinkel  
Secretary



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State of Florida Department of Environmental Regulation  
Pinellas County - Resource Recovery Facility  
Electric Power Plant Site Certification Review  
Case No. PA 83-18

I. INTRODUCTION

Pursuant to Section 403.505, Florida Statutes, Pinellas County applied in October 1978 for certification of a steam electric generating, resource recovery facility at a site about one mile northeast of the town of Pinellas Park on the county's existing Bridgeway Acres Phase I landfill tract. The site was certified by the Governor and Cabinet on July 20, 1979. After filing an incomplete application in July 1983, Pinellas County submitted a new, complete application for a third boiler at the previously certified site on September 6, 1983.

The proposed project will be a third resource recovery facility boiler which could use up to 1050 tons per day of refuse as fuel. The proposed boiler expansion will increase the total solid waste processing capacity of the plant to 3150 tons per day. The steam from the new boiler will be sent to a turbine generator increasing the gross capacity of the plant by 29 MW (gross) from 50.6 MW to 79 MW (gross). Pinellas County will contract with UOP, Inc., to design, construct, and operate the plant for 20 years. Generated electricity will be transmitted to the Florida Power Corporation (FPC) Gandy Substation via the existing transmission line for distribution over the FPC transmission system. The net generating capacity of the expanded plant should be approximately 72 MW.

The primary purpose of the facility is to dispose of solid waste. Ferrous metals, aluminum, and electricity will be recovered resources. Non-processible waste (including non-combustibles and demolition debris) and unusable residue will be buried at the associated sanitary landfill. The sale of electricity, as well as other processed and recovered resources,

will help offset the overall cost of owning and operating the facility.

## II. DESCRIPTION OF SITE AND FACILITIES

### A. Site

The existing Resource Recovery Plant buildings are located on approximately 20 acres within the County's existing Bridgeway Acres Phase I landfill tract. The Phase I landfill site is situated in the northernmost 80 acres of a total of approximately 225 acres located just south of 114th Avenue North and west of 28th Street North. Areas of the plant site not previously disturbed by landfilling activities were occupied either by pine flatwoods or wet weather ponds. Original topography was fairly level, with the elevation ranging from 5 to 10 feet above sea level across the tract. In undeveloped areas of the site, an overburden of sand, marl and clay lies over solution-riddled limestone and dolomite which forms the Floridan aquifer. The overburden forms a subsurface reservoir called the shallow aquifer. The site now contains a 20 acre stormwater retention pond, the resource recovery facility, a materials storage building, solid waste administration building, scale house, aeration/oxidation ponds and a Class I landfill. A Class I landfill is defined by 17-7.05(1)(a) as "those which receive solid waste, and which receive a monthly average of 20 tons or more of solid waste per day as weighed by scale if available, or 50 cubic yards or more of solid waste per day as measured in place after covering. Such sites shall receive an initial cover at the end of each working day. If such a site is limited to the receipt of only trash or yard trash, it shall be classified as a Class III landfill".

The proposed facilities will consist of a 29 MW steam electric generating turbine; one 1050 tons per day solid waste fired boiler; an additional cell for the mechanical draft cooling tower utilizing treated sewage effluent; a new 161 floor flue gas stack and an electrostatic precipitator. Minimal other changes to the existing facility will be made to connect the third unit to

the existing facility.

An existing 230 KV transmission line will be used to transmit the electricity from the Resource Recovery Facility (RRF).

### III. NEED FOR THE FACILITY/POWER

The primary purpose for the proposed facility is to dispose of the county's refuse and trash. The escalating cost of land for landfilling operations, limitations on land availability, and environmental concerns such as leaching of contaminants from putrescible materials into the already stressed groundwater system were all factors in determining the need for a better solid waste handling system. The proposed resource recovery facility helps allow the retirement of the other county landfills, the conservation of land by reduction of the amount needed for future landfilling, a reduction of pollution of groundwater, a reduction of flies, odors, rodents and birds associated with current landfills.

The sale of recovered waste materials and the sale of electricity will help offset the cost of the system. Over the life of the plant, the new facility is estimated to save several million dollars over the cost of landfilling for a similar length of time. The new unit will allow for a higher available capacity for solid waste reduction and electrical generation during times of maintenance of other unit shutdowns. Also, the recovery of aluminum, ferrous, and other non-ferrous materials will help reduce overall national energy consumption by deleting some of the energy costs entailed in mining and processing of such materials. Resource recovery is becoming more necessary because of the growing scarcity of many of the materials which can be saved by the recycling process.

Electric system reliability will be increased by the addition of a small generating facility because it offsets some of the problems associated with a large unit when that unit goes down. The cost to the consumer per unit of electricity may be less than a similarly sized coal-fired unit, because it does not require certain air pollution control equipment such as SO<sub>2</sub> scrubbers

necessary for a coal-fired plant. Production of resource conservative electric power which does not depend on oil is in conformance with state and federal energy policy. It is also in conformance with the legislative intent of the Florida Electrical Power Plant Siting Act to provide abundant, low cost electrical energy that is of minimum adverse impact on human health and the environment and with the legislative intent of the Florida Resource Recovery and Management Act (Ch. 403, Part IV, Florida Statutes).

The Florida Public Service Commission has determined that the facility is needed. Their conclusions are contained in a latter section of this report.

#### IV. ZONING AND LAND USE PLANNING

Zoning for the Resource Recovery Facility building area and also the associated landfill was originally light industry and manufacturing. The Resource Recovery building was in the unincorporated area of Pinellas County, under the county's M-1, Light Manufacturing and Industry District. Permitted uses in this zone include public service facilities such as "public utility, electrical . . . water or sewerage . . . right-of-ways", "public . . . utility sub-stations . . .", and "landfills and excavations".

The major landfill/stormwater retention areas of the site are in the incorporated city limits of Pinellas Park. The zoning designation there was also M-1 (Light Industrial and Warehousing District) at the time of certification of the first units, but at the time when Pinellas County submitted the Resource Recovery Facility application, the specifications for this M-1 zoning did not parallel the County's zoning language in reference to landfilling. Pinellas Park's M-1 category at that time did not specifically allow landfilling. Uses which might be considered similar to landfills, such as "junk yards, scrap and salvage yards", as well as ". . . uses . . . not of a nature specifically or provisionally permitted herein . . ." were prohibited.

Pursuant to the Land Use and Zoning hearing held on January 25, 1979, the Hearing Officer recommended to the Governor and

Cabinet that the Applicant should make the necessary application for rezoning of the landfill/stormwater retention area before any further action be taken on the complete application. On March 20, 1979, the Governor and Cabinet adopted that recommendation and remanded the case back to the Hearing Officer for further hearing on the matter. Pinellas County has since sought with the cooperation of the City of Pinellas Park to amend the M-1 zoning category to allow publicly operated landfills.

During the Land Use and Zoning Hearing, it was discovered that one small portion of the landfill area of the site was zoned Commercial (C-2), which would not permit landfilling. The Site Certification application was amended to exclude this parcel from the site.

The effective 1974 Land Use Plan for Pinellas County showed the entire site to be within the manufacturing designation and has been determined to be consistent.

Present land uses which characterize the immediate area surrounding the site include light industry/manufacturing, and experimental sod farm, and former and existing landfills.

The Florida Power Corporation transmission line route and I-275 form eastward and westward borders for the area which may effect future development patterns. The Comprehensive Land Use Plan of Pinellas County indicated that the desired land use for this particular area would be primarily industrial. Areas abutting the site to the south and southwest were indicated as low and medium density residential areas. However, it has been stated by the applicant that the medium density tract can be expected to be at least partially rezoned for industrial purposes. The Department has also noted that a tract of land (see Figure 1) between the western boundary of the site and the Florida Power Corporation right-of-way, zoned for Low Density Residential Use, is still vacant. In order to avoid future citizen complaints due to noise, dust, aesthetics or health problems, the Department of Environmental Regulation recommended that all of the tract be rezoned as well, to a use that precludes residential development.

The 1983 application for certification of the new boiler

showed changes in zoning on Figures 2-2, 2-3, and 2-4 incorporated herein and indicated the following responses to the department's recommendations:

"The COC for the original application recommended actions on three parcels of land on and adjacent to the certified site. These issues were resolved as follows:

1. The 5 acre parcel zoned C-2 and located south of the plant and west of 28th Street was omitted from the certified site description.
2. The majority of the 160 acre portion of the certified site which was zoned M-1 was rezoned, by special ordinance, to IH, heavy industrial. This designation permits, among other things, solid waste landfills. A small portion of this tract, located in the southwest corner and nearest the residential area, was rezoned as P, public. This designation allows for the disposal of boiler residue only (see Figure 2-4).
3. Attempts by Pinellas County to implement the recommendations of the Department concerning zoning and development of the tract of land between the western boundary of the site and the Florida Power Company (FPC) right-of-way were less than successful. Neither the owner, U.S. Home, Inc., nor the City of Pinellas Park were willing to rezone the tract; however, they both agreed to provide a buffer zone by constructing a large lake. This effort has the effect of insuring that no residence is located closer than approximately one-half mile from the Plant."

Currently, some of this future industrial area is utilized for agriculture or as minor commercial tracts, or is "open space" and pine flatwoods.

Land uses further from the site include the St. Petersburg/Clearwater Airport, located approximately 2 1/2 miles northwest of the site; an abandoned shell quarry to the northeast; a storm drainage/environmental education center some two miles south of the proposed facility; and the cities of Pinellas Park,



Kenneth City, and St. Petersburg to the south; Clearwater and Largo to the northwest. Old Tampa Bay is approximately three miles away to the north and east of the site.

V. AGENCY COMMENTS

Copies of the application were furnished in July and September 1983 to the Department of Administration, Division of State Planning, and to the Florida Public Service Commission as required by Section 403.507, F.S. Shortly thereafter, copies of the application were furnished to the following agencies for their review and comment:

1. Florida Department of Natural Resources
2. Florida Game and Fresh Water Fish Commission
3. Florida Department of Transportation
4. Florida Department of Commerce
5. Florida Department of Community Affairs
6. Southwest Florida Water Management District
7. Florida Department of Health and Rehabilitative Services
8. Florida Department of Agriculture and Consumer Services
9. Tampa Bay Regional Planning Council
10. St. Petersburg Pollution Control
11. Pinellas County Pollution Control

A. Public Service Commission

The Florida Public Service Commission has reviewed the resource recovery facility application and furnished comments to the Department on October 17, 1983. PSC Order No. 12611 of Docket 830 417-EU was adopted by the PSC as their Final Report as indicated by their Notice of Proposed Agency Action October 14, 1983.

The Final Report states as follows:

"Under the Florida Electrical Power Plant Siting Act, Section 403.501, Florida Statutes, the Commission is charged with the responsibility of determining whether construction of a proposed electrical generation facility is necessary to meet the present or expected need for electricity in all or part of Florida. Under the Act, the Department of Environmental Regulation must determine whether the proposed plant will comply with all relevant environmental standards and whether the proposed site for the plant is suitable for that use. Weighing all of these determinations, the Governor and Cabinet, sitting as the Power Plant Siting Board, ultimately determine whether approval will be granted for construction of the proposed plant.

"Certification under the Act must be obtained for the construction of any generating facility greater than 50 MW or for the expansion of any existing electrical power plant. Pinellas County currently owns an existing solid waste-fired power plant containing a single 50.9 - megawatt (gross) turbine generator and two incinerator/boilers located near Pinellas Park in Pinellas County, Florida, and has an existing Power Plant Site Certification for the facility. Pinellas County proposes to construct and operate an additional incinerator/boiler, and a single 29-megawatt (gross) turbine generator facility at the same site.

The proposed incinerator/boiler will be similar to the two incinerator/boilers currently owned by the County and will have the capacity to burn up to 1050 tons per day of 5000 BTU per pound solid waste. This is a small power production facility within the meaning of PURPA and Rules 25-17.87, Florida Administrative Code.

"The steam generated by the proposed incinerator/boiler plant will be used to drive a single 29-megawatt (gross) turbine generator which will produce electricity that will be sold to Florida Power Corporation. The projected in-service date for the unit is July 1986, with construction scheduled to begin in the summer of 1984. The existing facility is selling an average of 38-40 MW a year to Florida Power Corporation. With increasing fuel supply and capacity expansion, the facility will ultimately have about 60 MW available for sale to Florida Power Corporation in mid-1990's. By a petition filed on August 29, 1983, Pinellas County seeks an affirmative determination of need for the 29 MW generating plant.

"While the Power Plant Siting Act requires the Commission to determine whether a need exists for the proposed generating facility, the purpose of the Commission's need determination is to protect electric utility ratepayers from unnecessary expenditures. The statute lists four criteria the Commission must consider in determining need:

- 1) the need for electrical system reliability and integrity;
- 2) the need for adequate electricity at a reasonable cost;
- 3) whether the proposed plant is the most cost effective alternative available; and
- 4) conservation measures taken or reasonably available that might mitigate the need for a new plant (sec. 403.519, F.S.)

"Congress and the Florida Legislature have determined that cogeneration and small power production should be encouraged on the premise that they constitute alternate sources of power that either displace production of fossil fuel electricity or use fossil fuels more efficiently. Moreover, the proliferation of cogeneration and small power production facilities may obviate the need for construction of additional generating facilities by electric utilities. Therefore, in the present context, we find that the County's proposed small power production facility will increase electrical system reliability and integrity and will maintain the supply of adequate electricity at a reasonable cost while reducing our dependence on fossil fuel. When viewed as an alternative to construction of additional generating facilities by electric utilities, and considering the permissible level of payments to small power producers outlined in Rules 25-17.80 through 25-17.87, Fla. Admin. Code, the proposed facility is the most cost effective alternative available. Finally, construction of the plant is a conservation measure which we have encouraged precisely because it may mitigate the need for additional construction by electric utilities. Therefore, the relief sought in this petition, an affirmative determination of need, will be and the same is hereby granted. It is, therefore,

"ORDERED by the Florida Public Service Commission that this Order constitute the final report required by Section 403.507(1)(b), Florida Statutes, the report concluding that a need exists, within the meaning of Section 403, Florida Statutes, for the construction of the 29 MW generating facility proposed by Pinellas County, Florida. It is further

"ORDERED that a copy of this Order be furnished to the Department of Environmental Regulation, as required by Section 403.507(1)(b), Florida Statutes. It is further

"ORDERED that any person adversely affected by the action proposed herein may file a petition for a formal proceeding, as provided in Rule 25-22.29, within 21 days of the date of this order, November 4, 1983, in the form provided by Rule 25-22.36(7)(a) and (f). It is further

"ORDERED that in the absence of such a petition, this Order shall become effective and final as provided by Rule 25-22.29(6), as stated in a subsequent order.

"By Order of the Florida Public Service Commission, this 14th day of OCTOBER 1983."

On November 7, 1983 the Public Service Commission sent the following letter:

"The attached orders constitute the Commission's final reports, as required by Section 403.507(1)(b) of the Power Plant Siting Act, on the applications of Pinellas and Hillsborough Counties for power plant certification.

"As the orders indicate, the matter was handled in the form of a Proposed Agency Action. No person requested a hearing within the required time; therefore, the Commission's finding that a need exists for the proposed plants has become final.

"By the Commission:

"By Order No. 12611, this Commission proposed to take certain action, subject to a Petition for Formal Proceeding as provided in Rule 25-22.29, Florida Administrative Code. No response has been filed to the order and it has become effective. It is, therefore,

"ORDERED by the Florida Public Service Commission that this Order constitute the final report required by Section 403.507(1)(b), Florida Statutes, the report concluding that a need exists, within the meaning of Section 403, Florida Statutes, for the construction of the 29 MW generating facility proposed by Pinellas County, Florida. It is further

"ORDERED that a copy of this Order be furnished to the Department of Environmental Regulation, as required by Section 403.507(1)(b), Florida Statutes. It is further

"ORDERED that Order No. 12611 be and the same is hereby determined to be effective and final on November 4, 1983, as provided in Rule 25-22.29(6), Florida Administrative Code. It is further

"ORDERED that this docket be closed.

"By ORDER of the Florida Public Service Commission, this day

14th of November, 1983."

B. Department of Community Affairs

On November 17, 1983, the following letter was received from the Department of Community Affairs:

"Attached is the Department of Community Affairs' report on Pinellas County's Resource Recovery Facility (Phase II) power plant site certification application for an additional 29 megawatt generating capacity. Pursuant to Section 403.507, Florida Statutes, the report assesses the compatibility of the proposed electric power plant expansion with the State Comprehensive Plan.

"After reviewing the application against the stated goals, objectives and policies of the State Comprehensive Plan, we find that the proposed resource recovery facility expansion is compatible with the State Comprehensive Plan."

The entire DCA report is attached as Appendix B of this report. The conclusion of that report states as follows:

"In conclusion, we find that the proposed facility would be consistent with the following element policies:

"Energy Nos. 2 and 4  
Land Development Nos. 18 and 63  
Utilities Nos. 8, 17, 29, 38, 46 and 57

"The proposed facility would be inconsistent with the following element objectives and policies:

"Health Objectives E, L  
Housing and Community Development No. 65  
Utilities No. 55

"The facility expansion would be consistent with a portion of Land Development Element Policy No. 23 while being inconsistent with another portion of the same policy.

"In making our overall judgment on compatibility, we place particular emphasis on these pertinent facts:

1. "This is an expansion of an existing facility. Most of its impacts are already known and have been mitigated. According to the Phase II site certification application, no additional facility expansion (i.e., no more boilers) will occur at this site in the future.
2. "In 1979 the DCA found Phase I of the Pinellas County Resource Recovery Facility to be consistent with the State Comprehensive Plan. Three years of successful operation of that facility have affirmed that earlier conclusion.
3. "We do not find the incompatible land uses at the southwest boundary of the site (landfill and residential uses) to be consistent with the directives of the SCP. However, as explained in the discussion under Health Element Objective L, there are several mitigating circumstances that reduce the magnitude of this impact.

"In our opinion the increased negative land use (and other) impacts generated by the proposed facility expansion are outweighed by the benefits the expansion would provide in (1) reducing the amount of landfill area needed, (2) recovering metals, and (3) producing electrical power.

"The Florida Department of Community Affairs therefore finds the proposed facility to be compatible with the State Comprehensive Plan."



C. Southwest Florida Water Management District

In a report submitted on September 22, 1983, the Southwest Florida Water Management District gave its assessment of the anticipated impact of the facility on the water resources of their district. This report states that:

"The Southwest Florida Water Management District (SWFWMD) Staff has reviewed the above referenced August 1983 application. As stated in Section 2.2, 'Changes in Regional Demography, Land and Water Use', and Section 2.5.2 'Water Withdrawals', no onsite water withdrawals are required or proposed, and the county has acquired a guaranteed supply of non-potable water from the City of St. Petersburg's reclaimed water supply and potable water from the Pinellas County Water System. Therefore, the project's water use will not require District Consumptive Use Permits.

"The county is using reclaimed water for its industrial non-potable needs, which reduces the demand for potable water and promotes water conservation. We encourage the use of reclaimed water for this and other similar projects."

D. Department of Health and Rehabilitative Services

On September 27, 1983, the Department of Health and Rehabilitative Services offered the following comments and recommendations on the resource recovery facility application:

"I have had staff in program areas of environmental health, radiological health and contaminated waste disposal carefully review the referenced application. It is the consensus opinion of these professionals that the application is appropriate and reflects a primary need in Pinellas county.

"Our review of records through conferences with Pinellas county health officials also indicates operation of the present unit is very good and that planned waste disposal meets current standards. The public health impacts should be positive and the Department recommends approval of the application."

E. Department of State, Division of Archives, History, and  
Records Management

In a letter dated August 4, 1983, the Bureau of Historic  
Preservation submitted the following comments:

"As per the provisions of Chapter 17-17, Florida Admin-  
istrative Code ('Rules of State of Florida Department of  
Environmental Regulation, Electrical Power Plant Siting'),  
we have reviewed the above referenced project for potential  
impact to significant archaeological and historical sites  
and properties.

"A review of the Florida Master Site File indicates that  
no archaeological or historical sites are recorded for  
the project area. Furthermore, because of the location  
of the project, it is considered highly unlikely that any  
significant, unrecorded sites exist in the vicinity. There-  
fore, it is the opinion of this office that the proposed  
project will have no effect on any sites of national, state  
or local significance."

F. Department of Natural Resources

On August 23, 1983, the Department of Natural Resources submitted a statement concerning the proposed Resource Recovery Facility that the staff had " . . . reviewed the referenced Application and finds no problem with the Application. Accordingly, the staff submits a 'no adverse comments' on this Pinellas County Application."

G. Game and Fresh Water Fish Commission

On August 10, 1983, the Florida Game and Fresh Water Fish Commission submitted the following comments:

"The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission has reviewed the referenced power plant site certification application regarding impacts on fish and wildlife resources. Together with the original application for site certification for this facility, the information contained in the referenced document appears to be sufficient for us to review. Moreover, the impacts of the proposed project of fish and wildlife resources are expected to be minimal, and we anticipate having no further comments on this project unless the project is substantially modified. If such a modification is made, please forward that information to us for review."

H. Department of Agriculture and Consumer Services

On August 2, 1983, the Division of Forestry of the DACS submitted the following comments:

"We have reviewed this application for the Department since the land use impacts are forestry related rather than agricultural and have no particular problems with the proposal. The trade-off of 30 acres of pine flatwoods for the foreseen reduction in use of land for sanitary landfills seems a good one to us."

I. Department of Commerce

On August 11, 1983, the Department of Commerce submitted the following comments:

"This project is consistent with the goals and objectives of the Florida Department of Commerce. Using waste material as fuel eliminates the need for burying it in a landfill, thereby freeing that land for better uses. This is particularly important in Pinellas County since it is the most densely populated area in Florida.

"In addition to having direct economic benefits, this plant will be a very visible high technology facility which will contribute to Pinellas County's image of a progressive area. This will assist us in selling Pinellas as a plant site in the extremely competitive endeavor of recruiting high technology industries."

J. The following comments were received from the Pinellas County Department of Environmental Management on November 7:

"The Pinellas County, Division of Air Quality, has reviewed the above noted application with regard to air quality impact. The revised application was received September 15, 1983 and the missing supplements to the appendices were received September 30, 1983.

"The proposed third unit, a mass-burn Martin combustion system, is similar to the existing units. The capacity, heat input and design/operational characteristics are all similar to the other two units. The proposed/estimated air emissions and the expected ambient air quality impacts contained in the BACT and Air Quality Analysis sections of the application are addressed as follows:

1. "The BACT determination for particulate emissions proposed by the applicant is 0.03 gr/dscf, corrected to 12% CO<sub>2</sub>. The NSPS TSP emissions limits established by Florida and EPA for incinerators of this size and type are 0.08 gr/dscf corrected to 50% EA. Previous EPA and FDER BACT determinations for similar units (the Dade Co. RRF and the existing two units of Pinellas County RRF) established the NSPS limits as BACT for those units. The proposed controls (four field ESP) will surpass these requirements for particulate emissions as well as aiding in the increased control of lead, beryllium and particulate mercury. Based upon the available information included in the application the modeling analysis does not appear to indicate a problem with TSP impacts of the project even



with the downwash scenario of the ISCST model. The existing TSP monitoring facilities should be adequate for this project.

2. "A BACT determination and emissions limitations for SO<sub>2</sub> were not proposed by the applicant. As stated in the application, use of low sulfur fuel is considered to meet BACT for SO<sub>2</sub> emissions from municipal incinerators. The expected sulfur content is less than .2%. The expected emission rate of 1.9 lb/Ton MSW (83 lb/hr) is well below the limit imposed on electric utility steam generating units classified as Resource Recovery Facilities in 40 CFR, Subpart Da, Section 60.43a(d) which allows 1.2 lb/MMBTU heat input (or approximate 493 lb/hr for this unit). Therefore, the emission rate of 1.2 lb/MMBTU of heat input should be the applicable limiting standard. Again it is expected that the existing monitoring data systems should be sufficient for this project in order to monitor compliance and evaluate ambient impacts. It may, however, be prudent to also require SO<sub>2</sub> stack sampling analysis, during the annual compliance testing which will be required for particulates, as a means of certifying compliance with the standard imposed. Modeling appears to indicate no significant problems associated with the impacts of the project.

3. "The NO<sub>x</sub> and CO emissions are stated to be controlled by 'state-of-the-art' boiler design and operation. This is requested as BACT by the applicant. Again, no expressed emission limitation is proposed for these criteria pollutants. Neither is it discussed how the critical elements for proper combustion parameters will be monitored to 'control' the emissions of these pollutants. If this project were compared to a solid fuel fired steam generator as above (40 CFR Subpart Da) the allowed emission rate would be 0.6 lb NO<sub>x</sub>/MMBTU heat input, and/or 65% reduction of the potential combustion concentration. This would yield an allowable rate of 246 lb/hr for this unit (at a firing rate of 411 MMBTU/hr heat input). The expected emission rate is 132 lb/hr. While this is only slightly more than half of an allowable rate the aspect of achieving 65% reduction of the potential concentration should be addressed via detailed analysis if feasible. Continuous in-stack monitoring may be applied if deemed necessary for compliance assurance purposes. The modeled expected impacts for NO<sub>x</sub> and CO do not appear to indicate a significant problem. The Certification document and/or BACT determination should prescribe the specific emissions limiting standard of 0.6 lb NO<sub>x</sub>/MMBTU heat input.

4. "The control of particulate lead, beryllium and mercury are effected by the ESP. The expected levels of mercury and beryllium emissions are well below the De Minimus levels established under PSD. However, lead exceeds the De Minimus impact level by  $.15 \text{ ug/m}^3$ . The modeling indicates that the likelihood of an exceedance is only slight. It is expected that the existing ambient monitoring analysis will provide adequate compliance assurance.
5. "The notably high expected emissions of chlorides is not addressed in the analysis of impacts. Comment should be provided regarding possible control and limiting emissions. It is the largest in quantity pollutant being emitted. If burner design and operation can be utilized as the "control" for "unburned" plastics and other chloride sources then it should be discussed in the proposal.
6. "While fluoride emissions exceed the PSD De Minimus levels the expected ambient air impact as well as the impact on soils and vegetation are considered slight. The monitoring and/or stack analysis for fluorides is not considered necessary for this source at this time.
7. "The expected level of hydrocarbon emissions is 58 T/yr. Combined with hydrocarbon emissions from the existing two units this facility is a major source. Considering that Pinellas County is still technically an ozone non-attainment area, an emission limitation should be established for

the facility. Additional controls are impractical but a limiting standard could be set. The means of verifying compliance would have to be decided upon; i.e. whether stack analysis or continuous monitoring are feasible.

"It should be noted that the comments above regarding modeling aspects of the application are solely based on the limited information provided for review. The detailed study of the modeling should be addressed by BAQM personnel.

"The limited resources and capabilities of this agency prohibit a more detailed analysis of this project. As the local agency it was felt that some comment should be provided on the project regardless of our affiliation with the project applicant. If there are any questions regarding this review or if further comment is required please contact this office at SUNCOM 570-4761."

## VI. DEPARTMENT OF ENVIRONMENTAL REGULATION EVALUATIONS

Florida's Electric Power Plant Siting Act (PPSA), specifically subsections 403.507(2)(a-h), F.S., and Ch. 17-17, FAC, identify minimum criteria which must be studied by the Department in its review of a steam electric facility. The review process is concerned with many of the same factors as an environmental impact statement. This includes some factors more socio-economic in nature than environmental, but which may have associated environmental impacts. An example of this would be land use plans. Proper land use planning can help steer development away from environmentally sensitive areas, and also into areas more suited for certain types of development as well.

In return, facility-specific environmental impacts, particularly ones adverse to human health, welfare and safety, may preclude site development in areas thought to be appropriate from land use planning perspectives. An example of this would relate to air pollution. If emissions cannot be controlled within the limits of the new source emission standards, or if the ambient air quality standards in the area reasonably considered to be affected by the facility cannot be achieved, then further review is unwarranted and the site may be considered unacceptable. The concerns with water are adequacy of supply and chemical and biological effects of discharges. The long-term effects of noise and the disposal of solid wastes are additional aspects to be considered.

With these factors in mind, the Power Plant Siting Act criteria and others have been evaluated in the following sections. PPSA criteria include: accessibility to transmission corridors; proximity to transportation systems; cooling system requirements;

environmental impacts; soil and foundation conditions; impact on water supplies; impact on terrestrial and aquatic plant and animal life; impact on water and air quality; site specific studies; impact on surrounding land uses; impact on public lands and submerged lands; impact on archaeological sites and historic preservation area; and construction and operational safeguards.

#### A. Accessibility to Transmission

Florida Power Corporation (FPC) currently operates the "Gandy Substation", about 1½ miles southeast of the proposed resource recovery facility. A switchyard was constructed on the site and a 230 KV feeder line was constructed from the switchyard to the substation during Phase I of the project. The new boiler and turbine will use the existing facilities.

#### B. Fuel

The fuel for the electrical generating unit is solid waste collected from within Pinellas County. The new mass-fired boiler capable of burning 1050 tons per day has a guaranteed total capacity of 7350 tons per week or 383,250 tons per year.

The availability of energy, and of the fuels to supply that energy, is of grave concern to the State and the Nation. The choice of processed refuse as the primary fuel source has three benefits. (1) It reduces the amount of putrescible material deposited in landfills, which reduces potential water pollution from water leaching through putrescible organic material placed in a landfill. (2) Generation of electricity by the burning of refuse at this new facility is anticipated to reduce the amount of imported fuel oil by over 1,370,000 barrels per year. (3) The use of solid

waste as fuel to generate electricity conforms to state and federal energy and resource recovery policies.

#### C. Proximity to, and Impacts on Transportation Systems

The site for the resource recovery facility is located approximately one-half mile west of Interstate 275, two miles east of U.S. 19, approximately two and one-half miles at the nearest point to Tampa Bay. The St. Petersburg/Clearwater Airport is located approximately two and one-half miles northwest of the proposed facility. The Seaboard Coastline Railroad line at its nearest point is approximately two and one-half miles from the site.

More immediate transportation routes are 28th St. North, bounding the site on the east, 114th Avenue on the north, and 110th Avenue on the south of the facility buildings.

There will be some impact on the roads surrounding the site due to increased utilization by construction and operation vehicles. It is expected that the existing roads will be maintained by the County. Neither aquatic nor rail transportation systems are expected to be utilized nor subsequently impacted as a result of the facility.

Since the wastes to be processed at the facility are normally transported to the landfills, there is expected to be little difference in the types of transportation modes necessary as a result of the facility. Distances traveled may be increased, and thus fuel consumption with its associated air pollution impact and energy penalties but the resultant environmental and socio-economic impacts from increases in transportation are expected to be less than those of county-wide continuance of landfilling.

Operation of the resource recovery facility is expected to diminish interference with airport operations to a degree; it should reduce the garbage-feeding areas for seagull populations in the airport vicinity. Landfills have been recognized as contributing to aviation hazards because of scavenger bird-airplane collisions. Landfilling of only residue and large non-putrescible items and incineration of garbage should reduce the number of birds congregating in the area.

#### D. Cooling System Requirements

The new refuse fired steam generating boiler will be cooled by adding an additional cell to the wet mechanical draft, cross-flow, cooling tower. The design rate for heat dissipation for the new facility is 675 million BTU/hr of cooling. Flow rate through the cooling tower of treated sewage effluent will be increased from 37,500 gpm to 50,100 gpm with makeup effluent being added at the maximum rate of 817 gpm. Evaporation rate from the tower is expected to be a maximum of 1383 gpm, drift loss, a maximum of 62 gpm. Maximum cooling tower blowdown rate will be 306 gpm.

Consumptive use, i.e., discharge to the atmosphere, of the treated sewage effluent will be 1445 gpm maximum, or approximately 2.08 million gallons per day. Excess stormwater collected on site may also be used as cooling water. The primary source of cooling water will be from the City of Largo's sewage treatment plant, although the current supply now comes from the St. Petersburg Northeast Advanced Wastewater Treatment Plant.



## E. Environmental Considerations and Impacts

### E.1. Soil and Foundation Conditions

The facility site is covered by approximately eighteen feet of sand which overlays a marl/clay zone. The surficial soils are nearly level and poorly drained, consisting primarily of sand, sandy loam, and shell. Depth to bedrock varies from 33 to 55 feet below the land surface.

The deep limestone bedrock under the site is riddled with solution channels but the overburden should be of sufficient thickness to forestall any related foundational problems. Dewatering of the site will be necessary during construction, but since facility construction and operational water needs will not be supplied by on-site wells, a major drawdown effect which might lead to ground subsidence or sinkholes is not expected. Site foundation construction and elevation will alter the overburden characteristics to make it suitable for structural support of the facility. No significant problems were encountered during construction of the existing facilities. Consequently, none are expected during the construction of the new boiler.









A detailed hydrogeological study will be completed to determine the feasibility of using a bentonite slurry curtain wall around the site to contain any contaminated leachate on site.

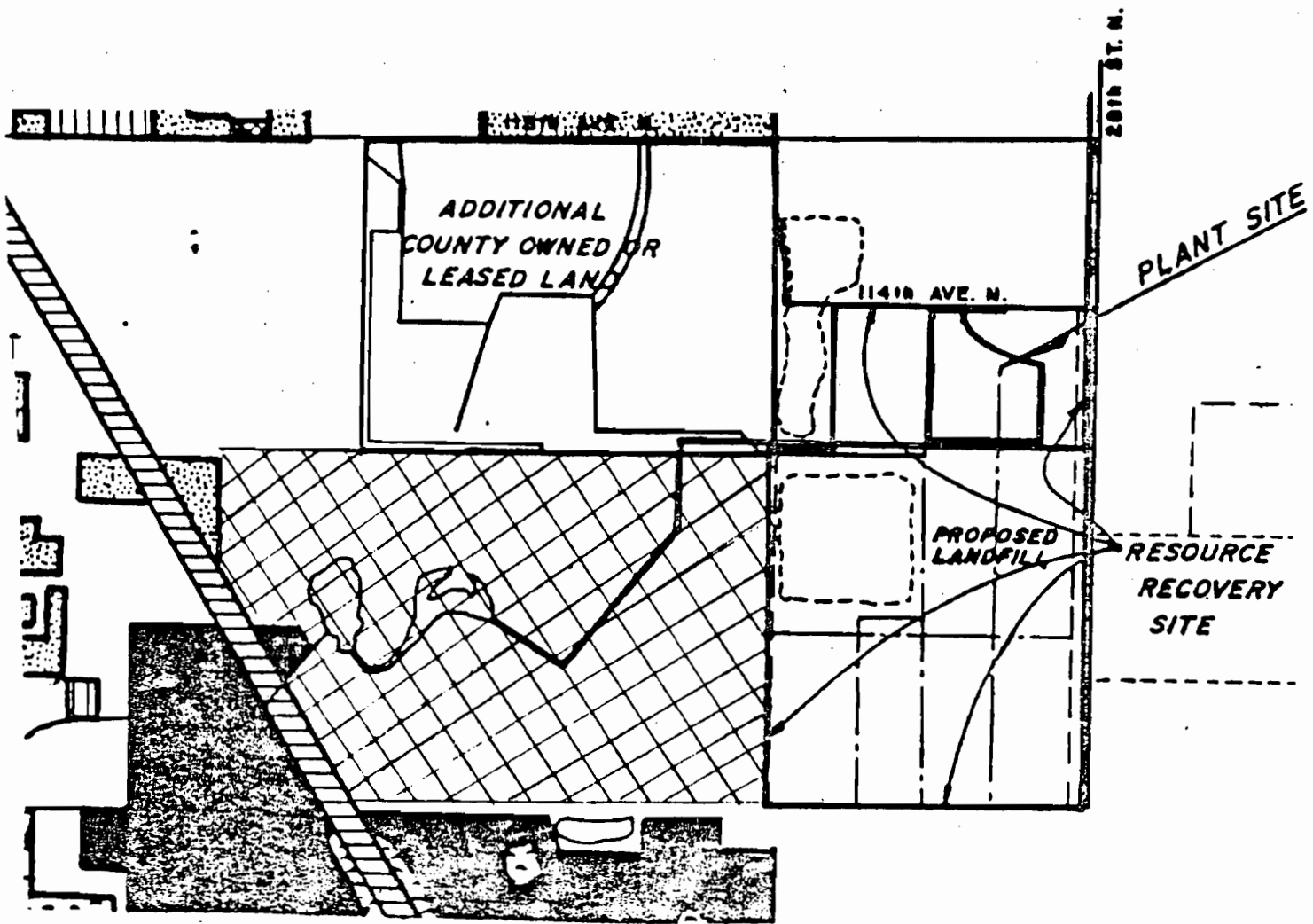
### E.2. Availability of Water

Potable water for the site is obtained from the Pinellas Park water system. During construction, total water needs are estimated to be 90 million gallons. Operational needs will be at an average rate of 167,000 gpd.

Figure 1  
 AREA RECOMMENDED FOR REZONING  
 and  
 Local Land Use

**LEGEND**

-  Single Family Residential
-  Recreation/Open Space
-  Industrial
-  Agricultural
-  Transportation & Utilities
-  Commercial/Services
-  Vacant
-  Area the Department recommends be rezoned



Cooling tower water and makeup is now primarily obtained from the City of St. Petersburg tertiary treatment effluent system with sewage effluent from the City of Largo considered to be of better quality as the supply of the future. As an additional source of supply, the sewage effluent will be supplemented with stormwater runoff from an on-site retention pond.

### E.3. Site Modifications

Site modifications will include construction of the third boiler north of the existing boilers, an electrostatic precipitator, 161 ft. stack, an additional cell to the cooling tower system, a second turbine generator and associated equipment. All new additions will be adjacent to the existing facilities on previously cleared land.

### E.4. Plant and Animal Communities/Rare or Endangered Species

The site before construction of Phase I was flatwoods, wet weather ponds and ditches. The site is bordered by an existing landfill, a sod farm, and other types of uses which would tend to discourage the presence of animals unable to adapt to a stressed environment. No rare or endangered species of plants or animals were detected during construction. No adverse impacts on rare or endangered species of animals or vegetation are expected due to construction on the previously disturbed site.

### E.5. Wastewater/Water Quality Impacts

#### a. Plant Waters -

The following volumes of water are expected to be produced by the resource recovery facility during normal daily operation:

1. Cooling Tower Blowdown	279 gpm
2. Boiler Blowdown	32 gpm
3. Cooling Tower Evaporation and Drift	1311 gpm
4. Boiler Demineralization Backflush Water	45 gpm
5. Sanitary Wastes	50 gpm

Maximum cooling tower blowdown rate will be 306 gpm, and boiler blowdown at maximum will be 33 gpm; boiler demineralization backflush water (53 gpm Max) will be combined with boiler and cooling tower blowdown to form a process stream of 392 gpm maximum. Approximately 45 gpm of the process stream will be utilized for boiler grate residue quenching. The remaining process stream will be combined with the sanitary flow discharge. The plant effluents will be discharged to Pinellas Park's South Cross Bayou sewage treatment plant.

b. Surface Water -

Surface water impacts would largely arise from stormwater runoff from site alteration, construction of buildings, parking lots, and other impermeable surfaces. Also, foundation soils for the plant will probably be less permeable than naturally-occurring soils, thereby increasing runoff.

Perimeter ditches, a central holding pond, and associated treatment facilities will be used to collect, contain, and treat runoff originating on the site. Runoff will consist of stormwater originating from the plant site and the landfill area. This collection and treatment system has been constructed to be of sufficient size to prevent any stormwater discharge from the site except during periods of extremely heavy rainfall.

Stormwater runoff will be diverted to a twenty-two acre holding pond via perimeter drainage ditches and interception canals. If the water levels become too high, this runoff may be pumped from the holding pond to the leachate/stormwater treatment system. Any excess stormwater

will then be treated similar to leachate, or can be used for cooling tower makeup. Under normal conditions, the stormwater storage lagoon will essentially function as a percolation/evaporation pond. If a bentonite slurry wall is constructed around the site, evaporation via the cooling tower may become mandatory to prevent discharges from the site.

c. Groundwater -

Review of chemical characteristics of the shallow aquifer water, as supplied by the applicant from USGS monitor wells in the area, indicates that groundwater in this vicinity is Class G-II (as defined by section 17-3.403, FAC, Water Quality Standards). Movement of shallow aquifer groundwater in the area was indicated to be generally northeasterly towards Old Tampa Bay, at a rate of one to ten feet per year. The area of the site is underlain by a clay/marl zone at a depth of about 19 feet, which would tend to slow the vertical migration of leachates. At times of heavy rainfall, the water table surface has been noted as high as to be within two feet of the ground surface. There has previously been an impact on shallow aquifer groundwater quality in the vicinity of the site due to adjacent landfilling operations and saltwater intrusion. Leaching of the decomposition materials from putrescible waste, and water table mounding, the latter due to an up-building of land during landfilling at the adjacent sites, has already altered the natural state and quality of the shallow aquifer.

One ameliorating factor with regard to the low water quality in the area is that the shallow aquifer waters are not being utilized as a drinking water source. However, the Floridan aquifer below the shallow one is a potential source of potable water. Investigations into possible

impacts from area landfills on that source of water have been conducted by the USGS.

The Floridan aquifer is separated from the surficial aquifer by an aquiclude. Drilling tests by the USGS have not yet indicated significant contamination of the Floridan, although levels of BOD, phosphorous, nitrate-nitrogen in the Floridan aquifer are as high or higher than those of the shallow aquifer or surface waters. It was suggested that the sprayfield activities of the nearby sod farm create an impact which might be the source of these high parameters. If this is the case, then leaching through the aquiclude does occur in amounts which may someday create a significant impact on the Floridan aquifer. How soon such an impact would become a significant problem is unknown. However, drinking water for the Pinellas area is taken from several miles north of the site in Pinellas and Pasco Counties. Since landfill materials from the resource recovery facility should primarily be boiler residue and non-putrescible wastes such as demolition debris, it is felt that any groundwater impacts from these new landfill materials will be much less than that from previously landfilled putrescible materials. There is the possibility that some residue materials such as heavy metals might contaminate groundwaters if they were allowed to leach due to contact with acidic leachate from putrescible wastes.

d. Leachate/Stormwater Treatment -

Leachate, or any other drainage from lifts will be minimized by allowing water to run off the fill rather than being allowed to percolate through the filled material. Leachate which does form by percolation through an active fill will be accumulated at the low point of the active cell. This accumulation will be pumped, via portable pumps,

directly to the aeration pond. It is possible that some leachate may move in the direction of the stormwater holding pond but would still be contained on-site. At no time should raw refuse be deposited in standing water.

The aeration lagoon will be of sufficient size to allow a detention time of one day at the design flow rate of 300 gallons per minute (422,081 gallons per day). Wastewater would then leave the aeration lagoon and enter two water treatment ponds utilizing cattails. The ponds have been designed to allow a maximum detention time of 13.7 days at the design flow rate. Cattails are being used as a mechanism for removing nutrients and heavy metals from the runoff waters. Upon leaving the ponds, wastewater should be chlorinated for bacteria and virus control and pumped to the landspreading area on the southern portion of the site. The irrigation field is approximately 55 acres in size which has a design capability of 300 gpm (application rate of 2 inches per week). Any runoff from the spray field would finally enter a perimeter ditch for evaporation/percolation and/or return to the stormwater holding pond.

Chlorination of waters containing putrescible waste leachate is necessary because of the unknown contents of household garbage, such as diapers and other personal hygiene items. Landfill leachate can be more virulent than sewage.

The spray irrigation area is the closest portion of the site to residential areas but will be shielded somewhat by the site's sight-screening levees. It is, therefore, felt that although the wastewaters to be irrigated should be chlorinated, the degree of treatment need not be quite as stringent as that for public access areas.

Two points of concern over the leachate/stormwater treatment proposal have been (1) whether pumping leachate from the cells to the unlined aeration and treatment ponds might simply move the leaching problem from one area to another (the three ponds themselves may contaminate groundwater by leaching materials, prior to the treatment processes having become effective); and (2) the effectiveness of the treatment process for heavy metal and nutrient removal when done by vegetation. The proposal to surround the site with a clay slurry wall would mitigate concern.

As described above, leachate and stormwater are intended to be treated and contained on the site. Drainage of treated wastewaters from the perimeter canals should be discharged only during emergency, heavy rainfall conditions. Such discharge would occur from an emergency overflow structure located in the middle of the east side of the site.

#### E.6. Air Quality/Meteorological Effects

##### a. Construction

The primary sources of air pollutants during construction of the facility will originate from vehicular and heavy equipment exhaust emissions and fugitive dust from wind and the movement of equipment and vehicles over unpaved areas.

The acts of stripping and filling of the construction site will produce some dust clouds; the volume of such particulate matter is difficult to quantify but will probably be less than those levels generated by the trucks, cranes and bulldozers associated with the existing landfill.



Estimates by the EPA indicate that suspended dust levels from heavy construction activities approximate 1.2 tons per acre per month of construction activity. As landfilling and construction will occur simultaneously it is anticipated that dust levels affecting nearby roadways (i.e. 28th Street and 100th Avenue) will be aggravated. The Applicant indicates that water sprays will be applied on problem sites as necessary.

There should be no open burning of land clearing debris.

b. Operation

(i) Emissions

During operation of the facility, expected stack emissions will be particulates, SO<sub>2</sub>, fluorides, lead, carbon monoxide, hydrocarbons, mercury, beryllium, chlorides and oxides of nitrogen. Other site emissions will arise from cooling tower evaporation and drift, and fugitive dust from landfilling and truck movement around the site. Odor is not expected to be a problem because plant air will be drawn towards the boiler, where odor-causing chemicals in the air stream will be combusted.

The emission of particulate matter from the boilers has been proposed to be controlled by a three-field electrostatic precipitator (ESP). Such emissions are limited by subsection 17-2, FAC, to 0.08 grains per standard cubic foot corrected to 5% excess air and by subsection 17-2.600(1), FAC, to 20% opacity of visible emissions. The applicant has proposed to meet an emission limit of 0.03 grains per dry standard cubic foot at 12% CO<sub>2</sub>. An estimated 96 tons per year of particulates will be emitted by the third boiler at the resource recovery facility.

The three-field electrostatic precipitator has been designed to allow installation of a fourth field to improve the collection of efficiency, if subsequently required. The existing precipitators have been tested and demonstrated compliance with the emission standard. The boiler has the capability of burning alternate fuels, but a shift to an alternate fuel could alter the emission rate, overload the precipitator and require reassessment of ambient air quality impacts.

Hydrocarbon emissions from the plant will be approximately 58 tons per year from the boiler. Oxides of nitrogen will be emitted at a rate of approximately 577 tons per year.

The amount of sulfur found in garbage is normally quite low. Consequently, there are no SO<sub>2</sub> emission limitations for incinerators. However, if a sufficient volume of refuse is incinerated, resultant emission loadings can trigger Prevention of Significant Deterioration (PSD) criteria which require an assessment of emissions exceeding 100 tons per year. The resource recovery facility is proposing to incinerate enough refuse to emit an average of 364 tons per year of SO<sub>2</sub>. The Department has conducted a "Best Available Control Technology" analysis for the resource recovery facility (see below) and has proposed an SO<sub>2</sub> emission rate for the facility.

## Impacts on Air Quality

### 1. Air Quality

#### a. Rule Applicability

The proposed site of the Pinellas County Resource Recovery Facility (RRF) is located in an area designated as nonattainment for ozone under 40 CFR 81.310 and Rule 17-2.410, Florida Administrative Code, and attainment under 40 CFR 81.310 and Rule 17-2.420, for all other criteria pollutants.

The maximum emissions for the proposed resource recovery facility and significant emission rates (40 CFR 52.21(b)(23) and Rule 17-2.500-2), in tons per year, are as follows:

<u>Pollutant</u>	<u>Maximum Emission</u>	<u>Significant Emission Rate</u>
Particulate Matter (PM)	109	25
Sulfur Dioxide (SO <sub>2</sub> )	364	40
Nitrogen Oxides (NOx)	577	40
Carbon Monoxide (CO)	288	100
Hydrocarbons (HC)	58(1)	40(VOC)
Lead (Pb)	5.7	0.6
Mercury (Hg)	2.1	0.1
Beryllium (Be)	0.00025	0.004

Fluorides	19	3
Chlorides	764(2)	1 (vinyl chloride)

- (1) non-methane HC emissions (VOC will be less than 40 tons per year
- (2) vinyl chloride emissions will be less than 1 ton per year

The proposed facility has the potential to emit more than 100 tons per year of one or more regulated pollutants and is, therefore, subject to review for prevention of significant deterioration (PSD) under 40 CFR 52.21 and Rule 17-2.500(5)(c). PSD review consists of a determination of best available control technology (BACT) and an air quality impact analysis for each attainment and non-criteria pollutant that would be emitted in a significant amount. For the proposed facility, PSD review is required for seven pollutants: PM, SO<sub>2</sub>, NO<sub>x</sub>, CO, lead, mercury, and fluorides.

The proposed facility is not subject to nonattainment review for volatile organic compounds (VOC) because it is a minor source of this pollutant and the proposed increase will be less than 100 tons per year.

b. Control Technology Review

An electrostatic precipitator (ESP) will be installed to control the discharge of particulate matter at 0.03 gr/dscf, or less, corrected to 12% CO<sub>2</sub>. The ESP will also control lead, beryllium, and mercury emissions. Sulfur dioxide emissions will be limited by firing municipal waste, a low sulfur content fuel. Burner design and operating procedures will be the methods used to limit NO<sub>x</sub>

emissions. Burner controls will be installed to minimize the emission of CO due to incomplete combustion.

Based on an analysis of the economic, environmental, and energy impacts of the proposed project - the construction of a third Martin combustion unit, the Department has made a preliminary BACT determination for the boiler. The emission limits from the BACT determination are as follows:

<u>Pollutant</u>	<u>Emission Limit</u>
Particulate Matter	0.03 gr/dscf, corrected to 12 percent CO <sub>2</sub>
Sulfur Dioxide	83 pounds per hour, maximum 3-hour average
Nitrogen Oxides	132 pounds per hour
Carbon Monoxide	66 pounds per hour
Lead	1.3 pounds per hour
Mercury	3200 grams per day*
Visible Emissions	10% opacity

\* When more than 2,205 lb/day of municipal sewage sludge (dry basis) is fired, compliance with the mercury emission limit shall be demonstrated in accordance with 40 CFR 61, Method 1 Appendix B.

Compliance with the limitations for particulates, sulfur dioxide, visible emissions, and nitrogen oxides should be demonstrated in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 1, 2, 3, 5, 6 and 40 CFR 60, Appendix A; Method 7. Compliance with the opacity limit shall be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6)(2)9., DER Method 9.

A continuous monitoring system to measure the opacity of emissions shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710, Continuous Monitoring Requirements. The system must be installed and operational prior to compliance testing.

(1) BACT Determination Rationale

The proposed mass burn combustion unit will have a charging rate more than 50 tons per day, and therefore, subject to the provisions of 40 CFR 60.50, Subpart E, New Source Performance Standards (NSPS). The NSPS for particulate matter emissions is a rate not to exceed 0.08 grains/dscf corrected to 12% CO<sub>2</sub>. The applicant has proposed to limit the particulate emissions rate not to exceed 0.03 grains/dscf corrected to 12% CO<sub>2</sub>. An electrostatic precipitator (ESP) will be installed to control particulate emissions at the proposed rate. The two existing mass burn units have a permitted particulate emission limit not to exceed 0.08 grains/dscf (NSPS).

The Department agrees that the use of an ESP is an air pollution control technology currently capable of achieving the 0.03 grains/dscf particulate emission limit, and is considered BACT for this source. The baghouse is another control device capable of achieving the particulate emission limit determined as BACT, but was not recommended for two reasons: 1) the existing combustion units use ESP's; therefore the spare parts inventory is minimized, and 2) maintenance and operating personnel have experience with this type of control device.

The mercury emission limit is the National Emission Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The proposed source would be subject to the provisions of NSPS, 40 CFR 60.150, Sewage Treatment Plants, if more than 2205 pounds per day (dry basis) of municipal sewage sludge is charged. The Department has determined the emission limit for mercury to be 3200 grams per day applicable only when more than 2205 pounds per day (dry basis) of municipal sewage sludge is charged into the mass burn combustion unit. The Department has determined the limit for SO<sub>2</sub> emissions to be 83 pounds per hour. The amount of SO<sub>2</sub> generated when burning municipal type waste is less than the SO<sub>2</sub> emissions from the burning of distillate fuel oil containing 0.5% sulfur and the use of low sulfur fuel oil is considered one method of controlling SO<sub>2</sub> emissions; therefore, the installation of a flue gas desulfurization system is not warranted.

The combustion of plastics can result in the emission of acid gases, such as hydrogen chloride and hydrogen fluoride. Polyvinyl chloride (PVC), one of the many polymers, has been implicated as causing the most serious disposal problem due to the release of HCl gas when burning. This problem has long been realized resulting in other polymers being used in packaging. Polypropylene and polystyrene, for example, produce carbon monoxide or the monomer styrene when burned. Both HCl and HF are hydrogen halides and are soluble in water. A water scrubbing system will remove approximately 75% of the HF and HCl gases. The Department does not believe the air quality impact due to these emissions justifies the cost of installing

a wet scrubber system.

During combustion of municipal solid waste,  $\text{NO}_x$  is formed in high temperature zones in and around the furnace flame by oxidation of atmospheric nitrogen and nitrogen in the waste. The two primary variables that affect the formation of  $\text{NO}_x$  are the temperature and the concentration of oxygen. Techniques such as the method of fuel firing, the distribution of combustion air between overfire and underfire air, exhaust gas recirculation and decreased heat release rates have been used to reduce  $\text{NO}_x$  emissions. A few add-on control techniques such as the catalytic reduction with ammonia process and the thermal de- $\text{NO}_x$  are still experimental and are not considered to be demonstrated technology for the proposed project.

In their application, the applicant proposes to use the distribution of combustion air between overfire and underfire air technique to minimize  $\text{NO}_x$  emissions. The proposed  $\text{NO}_x$  emission rate is 132 pounds per hour as indicated in their air quality analysis. Annual emissions of  $\text{NO}_x$  will be 577 tons. This level of control is judged to represent BACT.

Lead emissions from the incinerator occur because this element is present in varying amounts in the solid waste. The inlet temperature of the ESP is estimated at 425-475°F. At these temperatures the lead emissions should be in a nonvaporous state and will be removed in the ESP along with the rest of the particulates.

The visible emissions opacity limit is based on operating data from the two existing units.



Carbon monoxide is a product of incomplete combustion where there is insufficient air. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The Department agrees with the applicant that BACT is the use of state-of-the-art boiler controls to insure sufficient underfire and overfire air so that the emissions of products of incomplete combustion are minimized. The proposed CO emission rate is 66 pounds per hour. This level of control is judged to represent BACT.

The air quality impact of the proposed emissions has been analyzed. Atmospheric dispersion modeling has been completed and used in conjunction with an analysis of existing air quality to determine maximum ground-level ambient concentrations of the pollutants subject to BACT. Based on these analyses, the department has reasonable assurance that the proposed source at the Pinellas County RRF, subject to these BACT emission limitations, will not cause or contribute to a violation of any PSD increment or ambient air quality standard.

c. Air Quality Impacts

As noted in section I. 1. a., the proposed source at the Pinellas County RRF will result in significant emissions of the criteria pollutants PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and lead, and of the non-criteria pollutants mercury and fluorides.

The air quality impact analysis required for these pollutants includes:

- \* An analysis of existing air quality;
- \* A PSD increment analysis (for PM and SO<sub>2</sub> only);
- \* An Ambient Air Quality Standards (AAQS) analysis;
- \* An analysis of impacts on soils, vegetation, visibility, acid rain, and growth-related air quality impacts, and;
- \* A "good engineering practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses depend on air quality modeling carried out in accordance with EPA guidelines.

Based on these required analyses, the department has reasonable assurance that the proposed source at the Pinellas County RRF, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A discussion of the modeling methodology and required analyses follows.

(1) Modeling Methodology

Two EPA-approved dispersion models, the Single Source CRSTER model and the Industrial Source Complex Short-term (ISCST) model, were used in the air quality impact analysis. Both of these models relate ground-level concentrations at some distance to pollutant emissions of some inert gas or small particles from a point source by imposing a Gaussian solution to the steady-state mass conservation equation. The CRSTER model, which is confined by the collocation of all point sources, was used to identify the critical years of meteorology. The ISCST model, which allows for separation of sources and several other features, such as the inclusion of downwash, was used to refine the analysis.

The surface and upper air meteorological data used in these models were National Weather Service data collected at Tampa, Florida, during the period 1970-1974. Since five years of data were used, the highest, second-high short-term predicted concentrations may be used to compare with the appropriate ambient standard or PSD increment.

The stack parameters and emission rates used in evaluating the ambient impacts are contained in Table I-1 and Table I-2, respectively. Only for the pollutants SO<sub>2</sub> and PM were all the sources evaluated. Total ambient air quality impacts were based on the modeled impacts plus the monitored "background" concentrations.

## (2) Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review. In general, one year of quality assured data using an EPA-reference, or the equivalent, monitor must be submitted. Sometimes less than one year of data, but no less than four months, may be accepted when department approval is given. An exemption to this requirement can be obtained if the maximum air quality impact, as determined through modeling, is less than a pollutant-specific de minimus concentration. In addition, if current monitoring data already exist and these data are representative of the proposed source

area, then at the discretion of the department these data may be used.

The predicted maximum air quality impacts of the proposed project (Unit 3) for each of the seven pollutants subject to review are given in Table I-3 along with the monitoring de minimus levels. From this table it is seen that PM, NO<sub>x</sub>, CO, and Hg have maximum air impacts less than the de minimus level; therefore no preconstruction monitoring is required. Sufficient data in the area of the source already exist for SO<sub>2</sub> and Pb to define existing air quality for these pollutants. The department did not require additional monitoring for these pollutants. Although fluorides are subject to monitoring requirements, no EPA-approved method currently exists to measure ambient concentration of this pollutant.

Table I-4 shows the monitored ambient air quality levels for the most recent complete year (1982) for all the criteria pollutants, including the required data for SO<sub>2</sub> and Pb. These data were collected from existing monitors in Pinellas County.

### (3) PSD Increment Analysis

The Pinellas County RRF is located in an area where the Class II PSD increments apply. The facility is also located approximately 75 kilometers from the Class I Chassahowitzka

National Wilderness Area. As such an analysis of the impact on this area must be performed.

A PSD increment analysis is required for the pollutants SO<sub>2</sub> and PM only. The PSD increments represent the amount that new sources in the area may increase ambient ground-level concentrations of these pollutants for various time averages. At no time, however, can the increased loading of these pollutants into the atmosphere from these new sources cause or contribute to a violation of the ambient air quality standards.

For the Pinellas County RRF the proposed Unit 3 along with the previously built Units 1 and 2 all consume PSD increment. In addition, several other new sources in the area have been identified which may interact with the Pinellas County RRF in consuming the allowed PSD increments. These sources are the McKay Bay RRF and the TECO Big Bend power plant.

Atmospheric dispersion modeling was performed, as discussed previously, taking into account only those new sources which consume PSD increment. The results of this modeling are summarized in Table I-5.

The impact of these sources on the nearest Class I area was not explicitly modeled. The models used in this air quality analysis are not appropriate for predicting ground-level concentrations beyond 50 kilometers. However, the impact on the

Class I area may be extrapolated from the modeling results showing the proposed Unit 3 impact on the two distant non-attainment areas. An SO<sub>2</sub> nonattainment area is located near Tarpon Springs approximately 23.5 kilometers from the Pinellas County RRF. The impacts of Unit 3 alone on this area are 2.2 ug/m<sup>3</sup>, 3-hour average; 0.3 ug/m<sup>3</sup>, 24-hour average; and 0.02 ug/m<sup>3</sup>, annual average. These values are less than significant for impacts on nonattainment areas and would be much less at the distance of the Class I area. A PM nonattainment area is located in Tampa, 14.4 kilometers from the RRF. Here, the impacts of Unit 3 alone are 0.01 ug/m<sup>3</sup>, 24-hour average and 0.006 ug/m<sup>3</sup>, annual average. Again, these impacts are less than significant for nonattainment areas and the concentrations would be much less at the distance of the Class I area. Table I-5 indicates the results of all the PSD increment modeling.

#### (4) AAQS Analysis

Given existing air quality in the area of the Pinellas County RRF, the proposed Unit 3 emissions are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are contained in Table I-6.

Of the pollutants subject to PSD review only the criteria pollutants SO<sub>2</sub>, PM, CO, NO<sub>2</sub>, and Pb have an AAQS to compare with. All sources listed in Table I-1 were modeled to determine the maximum ground-level impacts for SO<sub>2</sub> and PM. For CO, NO<sub>2</sub>, and Pb

only the three units at the Pinellas County RRF were modeled to determine the maximum ground-level concentrations resulting from this facility.

The total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentrations. This "background" concentration takes into account all sources of the particular pollutant in question that were not explicitly modeled. A conservative estimate of these "background" concentrations is given by the second highest monitored concentration as listed in Table I-4. This is a conservative estimate because sources used in the modeling may have contributed to the monitored value and this would be contributing doubly to the total impact.

#### (5) Analysis of Impacts on Soils, Vegetation, Visibility, and Acid Rain and Growth-Related Air Quality Impacts

##### (a) Impact on Soils and Vegetation

The maximum ground-level concentrations predicted to occur as a result of emissions from the proposed project in conjunction with all other sources, including a background concentration, will be below all applicable AAQS including the secondary standards designed to protect public welfare-related values. No soils or species of vegetation highly sensitive to these



emissions in the concentrations predicted are known to occur in the site vicinity, or in the Chassowitzka Class I area.

(b) Impact on Visibility

A level I visibility screening analysis was performed to determine if any impact may occur in the Class I area. The analysis showed that there was no potential for an adverse impact on visibility in this area.

(c) Acid Rain Impact

The increased emissions of SO<sub>2</sub> and NO<sub>x</sub>, precursors to possible acid formation and subsequent acidic rain, from the proposed Unit 3 project are relatively small. In comparison with the emissions of these pollutants from nearby power plants the increased loading due to the proposed project is inconsequential. Thus, no adverse impact on the acidity of rainfall is expected as a result of this project.

(d) Growth-Related Air Quality Impacts

The construction of the proposed Unit 3 will require between 200 and 300 persons. Nearly all will be from the local area. The project is not expected to stimulate any additional growth or shift the nature of projected growth to the extent that an air quality impact will result.

(e) GEP Stack Height Determination

Good engineering practice (GEP) stack height means the greater of: (1) 65 meters; or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. For the proposed project the building height is 35.4 meters and the building width is 35.0 meters. Thus definition (2) above leads to a GEP stack height of 87.9 meters.

Due to the proximity of the facility to an airport, the stack height cannot be built to the GEP height. The applicant has addressed the possible increased ground-level concentrations (as a result of aerodynamic effects of the nearby building) by including a downwash mechanism in the modeling.

TABLE I-1  
PINELLAS COUNTY RESOURCE RECOVERY PROJECT  
SOURCE PARAMETERS USED IN MODELING

Source	UTM-E (km)	UTM-N (km)	Stack Height (m)	Exit Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)
RRF Unit 3	335.2	3084.1	49.1	505	26.8	2.37
RRF Units 1-2	335.2	3084.1	49.1	505	26.8	2.37
McKay Bay RRF	360.0	3091.9	45.7	500	21.3	1.91
TECO Big Bend	361.9	3075.0	149.4	426	15.6	7.00
FPC Bartow	342.4	3082.7	91.4	408	44.0	3.35
FPC Higgins	336.5	3098.5	53.0	422	10.4	3.81
Anclote Unit 1	324.9	3119.0	152.1	416	50.0	3.66
Anclote Unit 2	324.9	3119.0	152.1	416	28.3	3.66
Hooker Pt. Units 1,2	360.0	3087.5	61.0	427	8.1	4.30
Hooker Pt. Units 3,5	360.0	3087.5	93.3	400	26.9	3.20
Hooker Pt. Unit 4	360.0	3087.5	93.3	438	42.4	2.90
Hooker Pt. Unit 6	360.0	3087.5	93.3	417	23.4	5.40
TECO Gannon Units 1-5	385.0	3091.0	85.3	403	9.2	3.43
TECO Gannon Unit 6	385.0	3091.0	85.3	403	18.0	2.87

Area Source	UTM-E (km)	UTM-N (km)	Release Height (m)	Area Width (m)
Golden Triangle	330.0	3085.0	12.45	100

TABLE I-2  
 PINELLAS COUNTY RESOURCE RECOVERY PROJECT  
 MAXIMUM HOURLY EMISSION RATES

Source	SO <sub>2</sub> (g/s)	PM (g/s)	NO <sub>x</sub> (g/s)	CO (g/s)	HC (g/s)	Pb (g/s)	Hg (g/s)	Be (g/s)	Fluorides (g/s)	Chlorides (g/s)
RRF Unit 3	10.5	2.8	16.6	8.3	1.7	0.17	0.06	7.2x10 <sup>-6</sup>	0.55	22.0
RRF Units 1-2	21.0	5.6								
McKay Bay RRF	21.4	4.1								
TECO Big Bend	6002.2	79.2								
FPC Bartow	722.2	30.9								
FPC Higgins	286.7	8.9								
Anclote Unit 1	1631.9	58.1								
Anclote Unit 2	816.0	29.0								
Hooker Pt. Units 1,2	328.0	15.1								
Hooker Pt. Units 3,5	384.8	16.7								
Hooker Pt. Unit 4	142.6	9.6								
Hooker Pt. Unit 6	832.6	10.1								
TECO Gannon Units 1-5	130.7	11.8								
TECO Gannon Unit 6	58.3	2.6								

TABLE I-3

MAXIMUM AIR QUALITY IMPACTS (UNIT 3 ONLY)  
FOR COMPARISON TO DEMINIMUS AMBIENT LEVELS

<u>Pollutant</u>	<u>Maximum Modeled Concentration (ug/m<sup>3</sup>)</u>	<u>Deminimus Ambient Impact Level (mg/m<sup>3</sup>)</u>
SO <sub>2</sub> (24-hour)	15.6	13
PM (24-hour)	4.1	10
NO <sub>2</sub> (Annual)	0.9	14
CO (8-hour)	8.6	575
Pb (24-hour)	0.25	0.1
Hg (24-hour)	0.082	0.25
Fluorides (24-hour)	0.82	0.25

TABLE I-4

PINELLAS COUNTY 1982 MONITORING DATA IN THE VICINITY OF  
THE PINELLAS COUNTY RESOURCE RECOVERY FACILITY

<u>Pollutant</u>	<u>Site</u>	<u>Averaging Time</u>	<u>Maximum Concentration(ug/m<sup>3</sup>)</u>	<u>2nd Maximum Concentration(ug/m<sup>3</sup>)</u>
SO <sub>2</sub>	3980 023	3-hour	642	485
		24-hour	205	112
		Annual	24	-
PM	3980 023	24-hour	67	64
		Annual	33	-
NO <sub>2</sub>	3980 018	Annual	27	-
CO	3980 018	1-hour	14000	11000
		8-hour	7000	6000
Pb	3980 024	Quarterly	0.8	0.7

TABLE I-5  
COMPARISON OF NEW SOURCE IMPACTS  
WITH PSD INCREMENTS

Pollutant and Time Average	PSD Class II Increment (ug/m <sup>3</sup> )	Predicted Concentration (ug/m <sup>3</sup> )	Increment Consumed (%)	PSD Class I Increment (ug/m <sup>3</sup> )	Predicted Concentration (ug/m <sup>3</sup> )
SO <sub>2</sub>					
3-hour	512	246	48	25	<<25
24-hour	91	81	89	5	<<5
Annual	20	5	25	2	<<2
PM					
24-hour	37	6	16	10	<<10
Annual	19	0.4	<0.1	5	<<5

TABLE I-6  
COMPARISON OF TOTAL IMPACTS WITH  
AMBIENT AIR QUALITY STANDARDS

Pollutant and Time Average	Maximum Impact Unit 3 (ug/m <sup>3</sup> )	Maximum Impact All Sources (ug/m <sup>3</sup> )	Existing Background (ug/m <sup>3</sup> )	Maximum Total Impact (ug/m <sup>3</sup> )	Florida AAQS (ug/m <sup>3</sup> )
SO <sub>2</sub>					
3-hour	24	269	485	754	1300
24-hour	16	96	112	208	260
Annual	0.6	14	24	38	60
PM					
24-hour	4	6	64	70	150
Annual	0.2	0.7	33	34	60
NO <sub>2</sub>					
Annual	1	3	27	30	100
CO					
1-hour	13	39	11000	11039	40000
8-hour	9	27	6000	6027	10000
Pb					
Quarterly	0.3	0.7	0.8	1.5	1.5



## Fog -

A steam plume will be visible from the cooling tower when the concentration of water vapor in the cooling tower exhaust exceeds the capacity of the ambient air to hold water vapor. This becomes more noticeable in the cooler, winter months. Plant induced fog has been estimated to occur on an average of 14 days per month. Since cooling-tower induced air saturation will decrease with distance from the tower, the potential for fogging will be accordingly reduced. It is thus not anticipated that plant induced fogging will significantly impact major roadways such as Interstate 275 or the airport.

## E.7. NOISE

### a. Construction -

During construction of the plant, noises will be those associated with earth moving, foundation work, erection of steel, pouring of concrete, normal plant operations, and waste landfilling. The nearest residential area subject to potential impact from construction noise is approximately 0.8 mile away. Landfilling and previous construction have been going on in the area producing noises very similar to construction work; thus construction is not expected to introduce any "new" noises. The simultaneous operation of both landfilling and construction equipment is expected to increase noise levels only slightly above that of just landfilling. However, the residents may be annoyed by the increased duration of the noise during daylight hours.

### b. Operation -

The addition of the power plant/resource recovery facility itself should not result in a significant increase in noise levels present in the nearest residential areas. Activities associated with the operation

of the plant such as the residue landfilling and the truck traffic bringing refuse to the plant will likely be the significant sources of noise. Truck traffic into the plant will be from the north, through the industrial area, removing it from residential roadways. Noise levels from the mobile sources will depend on types of equipment utilized over the years, and the degree of maintenance given. Concentration of vehicular noise at the plant should be buffered by the plant's enclosed tipping area, site levees, and landscaping. The elimination of large scale landfilling in the area should bring a reduction in overall noise levels.

Although the State does not currently have noise limitations, both Pinellas County and the City of Pinellas Park either have noise ordinances or zoning standards pertaining to noise with which the resource recovery facility construction and operation will be expected to comply.

#### E.8 Solid Waste/Hazardous Materials

Construction debris such as paper, concrete, and plastic will be landfilled, while scrap metals will be recovered for possible recycling.

During plant operation, the refuse is sorted for large items or non-combustibles such as demolition debris; remaining refuse will be incinerated. Following combustion, the residue passes through a resource recovery system designed to extract ferrous and non-ferrous metals. The residue which then remains is approximately 2.1 percent by weight of the original raw waste. At a guaranteed level of 530,000 tons-incoming-raw-waste-per-year, approximately 11,130 tons of unusable residue will remain. This waste will be landfilled on the site. Pinellas County estimates that approximately one acre per year will be required for residue disposal.

In the event of a facility shutdown, storage facilities at the processing plant will be sufficient for storage of 3 to 4 days of incoming waste. If the plant would remain out of operation beyond 3 to 4 days, incoming raw wastes would be landfilled at the site until processing operations could resume.

The original plan of operation for the facility indicated that wastes would be landfilled in lifts which might extend as much as twenty feet below ground surface. In the past, the limiting depth of the lifts was the level to which the cells could be kept dewatered during filling. At times, groundwater levels come within one foot of the ground surface, which would inundate wastes buried that deeply.

The recently amended Section 17-7.04, FAC, now prohibits the disposal of solid waste in any artificial body of groundwater (a landfill cell with groundwaters seeping into it would fit that definition). However, if the pit or cell is dewatered, then disposal of solid waste can occur, but only if permanent leachate controls are provided. A permanent control would be one that is effective after the cell is covered, throughout the life of the site, and beyond as well, until the wastes have decayed to innocuous residues.

The original operation plan indicates pumping of leachates and groundwaters from active cells, but did not make provisions for control of groundwater inundation once pumping has halted. The County has proposed using a clay slurry wall keyed into subsurface clays as a permanent leachate control measure. The County has also shown that boiler residue is not a hazardous waste although there is a potential for several parameters to violate water quality criteria.

The operational plan does indicate a buffer space between the landfill area and the boundary of the site, of approximately 250 ft. At the maximum horizontal flow rate of 10 ft. per year (see groundwater section), this could delay migration of contaminated groundwaters across the site boundary approximately 25 years. This delay could provide sufficient time for dilution of contaminants to water quality standards at the site boundary. The County has requested a zone of discharge up to the site boundary. However, a more effective means of protecting groundwaters from contamination would be to remove the potential for groundwater contact altogether by placing the putrescible wastes (which will hopefully be in small quantities) above the maximum groundwater level. This would then be in accord with Chapter 17-17, FAC, since no permanent leachate controls have been installed.

#### F. Impacts on Surrounding Land Use and Population Density

The area surrounding the site does not have a high population density. Some commercial and industrial complexes are located to the northwest of the site, as well as some agricultural areas. The land adjoining the facility site is either used for landfills or is utilized as an experimental sod farm for treatment of sewage sludges. The closest residential properties at this time are located approximately a mile to the southwest in Pinellas Park.

The 1977 Population estimated for Pinellas Park and the City of St. Petersburg, respectively, were 34,420 and 258,260, with population densities of 5.4 and 7.2 persons per acre. Both the population levels and densities in the entire county have increased substantially over 1970 estimates to 728,531 in 1980, further contributing to the Pinellas County solid waste problem. The County estimates a population increase of 68,000 people over the five year period from 1980 to 1985. The population is expected to increase 38% over a 20 year period.

One of the impacts of local land use seems to be that of the sod farm

sewage effluent spray irrigation percolation on the area's groundwater quality. Groundwater data suggest contaminated plume spreading from the sod farm. Another similar water quality impact from a particular land use is that of high fecal coliform levels in surface waters monitored west of the proposed facility due to seagull populations feeding off raw garbage in the existing landfill. This impact is likely to decline, concurrent with termination of putrescible waste landfilling and operation of the incineration/power production facility.

Impact on land use and population due to the construction of the resource recovery plant, on an overall basis, is not considered to be a negative one.

#### G. Impact on Public Lands and Submerged Lands

Other than the site itself, no other public land will be directly affected by the construction of the new boiler.

Neither the facility nor the transmission lines are located in the proximity of submerged lands. Therefore, no impacts on those lands can be expected.

#### H. Impact on Archaeological Sites and Historic Preservation Areas

The facility site is to be located on the premises of an existing landfill. It was thus not expected to have any historical significance, an expectation concurred with by the Deputy State Historic Preservation Officer (see Agency Comments section).

An archaeological survey was previously conducted for the entire landfill tract. No archaeological sites were located. The plant site is not located in the proximity of any inventoried sites of historical or archaeological significance, and so should have no impact on off-site locations.

## VII. CONSTRUCTION AND OPERATIONAL SAFEGUARDS

As outlined in the application, construction procedures, including runoff control facilities and practices to avoid contamination of state waters, must be implemented. The construction site will be isolated from the general public by appropriate means which may include fences and guards. Compliance with OSHA standards and the provisions of Section 440.56, F.S., should adequately protect construction workers and operating personnel.

The conceptual design of most of the major pollution control equipment appears sufficient to protect the public and to protect the environment from significant harm.

## VIII. COMPLIANCE AND VARIANCES

### A. Compliance

As currently designed, the Pinellas County Resource Recovery Facility will not contribute to a violation of ambient air quality standards.

The disposal of solid waste and boiler residue in unlined cells will produce contaminate leachate that makes compliance with groundwater quality criteria at site boundaries uncertain. If the combustion waste storage area is surrounded by a bentonite clay slurry wall keyed into underground clays, if raw garbage is kept above the water table, and if the conditions of certification are complied with, then ground water quality criteria should not be degraded.

## IX. CONCLUSIONS AND RECOMMENDATIONS

### A. Conclusions

#### 1. Construction Impacts

Construction of the proposed facilities would have the following impacts:

a. Disruption of previously disturbed land adjacent to the existing facility.

b. Construction noise levels (excluding pile driving and steam blowout of boiler tubes) should be slightly less than 55 dB(A) equivalent to EPA's guidelines at the boundary of the site. This should not be an annoyance to outside activities at the nearest residences. Steam blowout may cause noticeable noise levels at the nearest residence. Steam blowout will occur intermittently over a two week period. Pinellas County should attempt to notify the neighboring residents prior to the start of steam tube blowout in an effort to partially mitigate any annoyance caused by the loud noises.

c. Construction traffic to and from the site should not cause any additional congestion in the plant vicinity.

#### 2. Operation

a. The Resource Recovery Facility (RRF) will burn solid waste. Impacts on air quality will include emissions such as sulfur dioxide, oxides of nitrogen, particulate matter and other minor constituents. These emissions will be limited by use of control technology considered to be the best available. Fugitive dust from vehicles, heavy equipment and ash handling

will be controlled by a variety of methods to reduce adverse impacts. The control equipment is designed to comply with federal and state emission limitations. Under most meteorological conditions, the RRF plant will not contribute to violations of ambient air quality standards.

b. There is sufficient water available from the nearby sewage treatment plants to supply the volume requirements of the cooling system.

c. There will be no consumptive use of fresh groundwater at the RRF due to use of treated sewage effluent in the cooling system. A small amount of potable water will be obtained from the Pinellas Park municipal water system.

d. The Southwest Florida Water Management District stated the following in their report dated September 22, 1983:

"The county is using reclaimed water for its industrial non-potable needs, which reduces the need for potable water and promotes water conservation. We encourage the use of reclaimed water for this and other similar projects."

e. The percolation of leachate from the solid waste disposal areas may violate groundwater criteria both beneath and beyond the site boundaries due to the permeability of the sands underlying the site. Leachate containing heavy metals may adversely affect the creeks and wetland communities bordering the site to the east.



f. Noise from operation of the plant addition should not greatly increase noise levels in the area. The operation of the sanitary landfill and its associated traffic will tend to mask operational noise of the RRF.

3. The original site was found by the Governor and Cabinet to be in compliance with local land use plans and zoning regulations.

4. The Public Service Commission has concluded a need exists for the expanded facility.

5. The Department of Community Affairs concluded that for the most part the proposed RRF meets most of the objectives, goals and policies of the State Comprehensive Plan.

6. The Division of Archives, History and Records Management determined that the proposed plant was not likely to affect significant archaeological or historical sites.

7. The construction and operation of the resource recovery facility will permit the closing of current landfills and a reduction in land area that would otherwise be required for future landfills.

8. Use of the facility will reduce groundwater pollution due to cessation of the disposal of raw garbage in the County's existing landfills; there will be a concurrent reduction in air and noise pollution, odors, flies, scavenging birds, and other vectors due to the closure of landfills containing putrescible wastes.

9. Ninety-eight percent of the solid waste received will be reduced. Recovery will be either as recyclable materials or as electricity. The remaining two percent will be landfilled as a relatively inert residue (ash).

10. Putrescible wastes should be landfilled in separate cells from the boiler residues, to minimize the possibility of enhancement of metallic leachate formation through chemical interactions between the organic acids formed from the decomposition of putrescible wastes and the boiler residue.

11. Utilization of treated sewage effluent for cooling purposes conserves higher-quality water for more quality-dependent purposes.

12. Noise generated by the construction of the plant may create a slight nuisance to the existing residential areas; operational noise should be no greater than currently occurring in the area.

#### B. Recommendations

If Pinellas County agrees to abide by the conditions of certification, the DER would recommend certification of the Resource Recovery Plant. This recommendation is based on the following rationale.

1. Full load operation of the RRF would not violate ambient air quality standards.

2. Proper management of stormwater runoff and installation of permanent leachate controls such as a slurry wall around the site should prevent violations of water quality criteria off site.

3. The conversion of solid waste into energy reduces the potential for groundwater contamination and public health hazards and will benefit electric utility customers by producing electricity not dependent on expensive imported oils.

State of Florida Department of Environmental Regulation  
 Pinellas County  
 Resource Recovery Facility  
 Case No. PA 78-11 and PA 83-18  
 CONDITIONS OF CERTIFICATION

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State of Florida Department of Environmental Regulation  
Pinellas County  
Resource Recovery Facility  
Case No. PA 78-11 and 83-18  
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 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, production increases, or process modifications which may result in new, different, or increased discharges or pollutants, change in fuel, or expansion in steam generating capacity must be reported by submission of a new or supplemental application pursuant to Chapter 403, Florida Statutes.

II. NON-COMPLIANCE NOTIFICATION

If, for any reason, the permittee does not comply with or will be unable to comply with any limitation specified in this certification, the permittee shall notify the Southwest Florida District Manager of the Department by telephone during the 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. Such systems are not to be bypassed without prior Department approval.

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 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 permit, and
- B. To have access to and copy any records required to be kept under the conditions of this certification, 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. REVOCAION OR SUSPENSION

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

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.

XI. 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 provision 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 general or special 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 or, in the alternative by the use of the commonly accepted meaning as determined by the Department.

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, related time schedules, or any special studies conducted, as necessary to attain the objectives of Chapter 403, Florida Statutes.

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

XIII. CONSTRUCTION

The facility shall be constructed, as a minimum, pursuant to the design standards presented in the application.

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 insure against spillage or discharge of excavated material that may cause turbidity in excess of 50 Jackson Turbidity Units above background in Waters of the State. Control measures may consist of sediment traps, barriers, berms, and vegetation plantings. Exposed or dis-

turbed soil shall be protected and stabilized as soon as possible to minimize silt and sediment laden runoff. The pH shall be kept within the range of 6.0 to 8.5.

## 2. Burning

Open burning in connection with land clearing shall be in accordance with Chapter 17-5, FAC, and County Ordinance 76-18. No additional permits shall be required, but prior to each act of burning, the Division of Forestry shall be contacted to determine if satisfactory conditions exist for burning. Open burning shall not occur if the Division of Forestry 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, FAC.

## 5. Noise

Construction noise shall not exceed local noise ordinance specifications, nor those noise standards imposed by zoning.

## 6. Dust

The County shall employ proper dust-control techniques to minimize fugitive dust emissions.

## 7. Transmission Lines

The directly associated transmission lines from the Resource Recovery Facility electric generators to the existing Florida Power Corporation Gandy substation shall be cleared, maintained and prepared without the use of herbicides.

## B. Environmental Control Program

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

If unexpected or harmful effects or evidence of irreversible environmental damage are detected during construction, the permittee shall notify the DER Southwest Florida District Office, 7601 Highway 301 North, Tampa, Florida, 33610, by telephone during the working day that the effect or damage



occurs and shall confirm this in writing within seventy-two (72) hours of becoming aware of such conditions, and shall provide in writing an analysis of the problem and a plan to eliminate or significantly reduce the harmful effects of damage.

C. Reporting

1. Starting three (3) months after certification, a quarterly construction status report shall be submitted to the Southwest Florida District Office of the Department of Environmental Regulation. The report shall be a short narrative describing the progress of construction.

2. Upon completion of construction the DER Southwest Florida District Office will be notified in order that a pre-operational inspection can be performed.

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

a. Stack emissions shall not exceed the following:

(1) Particulate matter: 0.03 grains per standard cubic foot dry gas corrected to 12% CO<sub>2</sub>

(2) SO<sub>2</sub>: 83 lbs/hr of Sulfur Dioxide

(3) Nitrogen Oxides: 132 lbs/hr

(4) Carbon Monoxide: 66 lbs/hr

(5) Lead: 1.3 lbs/hr

(6) Mercury: 3200 grams/day when more than 2205 lbs/day of municipal sludge is fired. Compliance shall be determined in accordance with 40 CFR 61, Method 101, Appendix B.

(7) Odor: there shall be no objectionable odor.

(8) Visible emissions: opacity shall be no greater than 10% except that visible emissions with no more than 20% opacity may be allowed for up to three minutes in any one hour. Opacity compliance shall be demonstrated in accordance

with Florida Administrative Code Rule 17-2, 700(6)(2)9;, DER Method 9.

- b. The height of the boiler exhaust stacks shall not be less than 161 feet above grade.
- c. The incinerator boilers shall not be loaded in excess of their rated capacity of 87,500 pounds 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 and lead shall be determined in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 1, 2, 3, 5, 6, and 40 CFR 60, Appendix A, Method 7. The stack test shall be performed at  $\pm$  \_\_\_% of the maximum steam rate of \_\_\_ pounds per hour.

## 2. Electrostatic Precipitator

The three-field electrostatic precipitator shall be designed and constructed to allow the installation of a fourth field in the event that the three-field ESP fails to perform as specified, or if other parameter of the facility's operation are subsequently modified, necessitating additional control.

## 3. Air Monitoring Program

- a. The permittee shall install and operate continuously monitoring devices for stack oxygen and opacity. The monitoring devices shall meet the applicable requirements of Chapter 17-2.710, FAC, and 40 CFR 60.45, and 40 CFR 60.13, including certification of each device.
- b. The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports in accordance with Section 17-2.700 (4), FAC.
- c. The permittee shall have a sampling test of the stack emissions performed by a commercial testing firm within 90 days of the start of operation of the boilers and annually from the date of testing thereafter.

- d. The permittee shall install and operate two continuous SO<sub>2</sub> monitors and one continuous wind direction and velocity monitor in the immediate vicinity of the site. The monitors shall be specifically located as designated by the DER and shall conform to 40 CFR 53. Monitoring shall begin upon commencement of operation.

#### 4. Reporting

- a. Two copies of the results of the stack tests shall be submitted within forty-five days of testing to the DER Southwest Florida District Office.
- b. Stack monitoring shall be reported to the DER Southwest District Office on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR, Part 60, Section 60.7.
- c. SO<sub>2</sub> monitoring shall be reported to the DER Southwest Florida District Office on a monthly basis.

#### B. Fuel

The Resource Recovery Facility shall utilize refuse such as garbage and trash (as defined in Chapter 17-7, FAC) as its fuel. Use of alternate fuels would necessitate modification of these Conditions of Certification.

#### C. Cooling Tower

##### 1. Makeup Water Constituency

The Resource Recovery Facility shall utilize only treated sewage effluent or stormwater runoff from the stormwater holding pond as cooling tower makeup water. The effluent shall have received prior to use in the tower, as a minimum, secondary treatment, as well as treatment described in Condition XIV.C.2. below. Use of waters other than treated sewage effluent or site stormwater, i.e., higher quality potable waters or lower quality less-than-secondarily treated sewage effluent, will require a modification of conditions agreed to by the Southwest Florida Water Management District and the Department and must be approved by the Governor and Cabinet.

##### 2. Chlorination

Free chlorine levels in the cooling tower makeup water shall continuously be monitored, prior to insertion in the cooling towers. Sewage effluent used as makeup shall be treated if necessary to maintain a 1.0 mg/liter free chlorine residual after fifteen minutes contact time. Chlorination should occur at an effluent turbidity of 5 Nephelometric Turbidity Units or less.

### 3. Special Studies

Upon satisfactory demonstration to the Department that the number of viruses entering the towers in the effluent makeup can be reduced to an undetectable level with the use of a lesser amount of chlorination or alternate treatment, the above requirement may be altered. This demonstration may occur through performance of special studies approved by the Department. Alteration of the chlorination requirements must still insure adequate treatment for the control of bacterial growth in the cooling towers.

#### D. Water Discharges

##### 1. Surface Water

- a. Any discharges from the site stormwater/leachate treatment system via the emergency overflow structure which result from any 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 State Water Quality Standards, Chapter 17-3, FAC.
- b. Sampling of water quality in the aeration pond, the cattail ponds, and an analysis of the tissues of the cattails utilized as part of the leachate/stormwater treatment system shall be conducted prior to pumping of leachate or stormwater through this system to verify background levels and concentrations of any metals, especially heavy metals, already present in the ponds or the vegetation. Within three months after commencement of stormwater/leachate pumping through this system, and quarterly thereafter, the pond waters and cattail tissues, as well as root detritus or other sediments on the bottom of the ponds shall again be sampled to determine the degree and effectiveness of heavy metal uptake treatment in this system, and for correlation with groundwater monitoring data. If analyses indicate that toxic levels of materials are present in the cattail tissues, root detritus, or other pond precipitates, then these materials shall be incinerated or otherwise removed from contact with the natural environment and groundwaters. Results of analyses conducted shall be sent to the Department for review of system effectiveness.
- c. Leachate, stormwater, or other site wastewaters which are to be spray irrigated shall be treated to conform to any rules promulgated by the State for the land application of wastewaters in areas not commonly accessible to the public.

- d. Cooling tower blowdown shall not be discharged to surface waters.

## 2. 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 Water Quality Standards of Chapter 17-3.101, FAC, (Class I-B Groundwaters) at the boundary of the site.
- b. If the groundwater monitoring system in the vicinity of the aeration/cattail ponds indicate that groundwater quality beyond the boundary of the site has been deteriorated by substances leaching from these ponds, then these ponds shall be lined or other Departmentally approved methods employed to reduce further leaching sufficient to insure attainment of groundwater quality standards at the boundary of the site.

## 3. Groundwater Monitoring Program

- a. Sampling of the shallow aquifer groundwater quality shall be conducted in at least four wells in the site vicinity. One of these wells shall be up hydrologic slope from the landfill area to provide current background data; one shall be located in the immediate vicinity of the aeration/cattail ponds; and two shall be located down hydrologic slope from the landfill/spray irrigation areas. Specific location of these wells may be proposed by the applicant, but must be approved by the Department.
- 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 insure that groundwater samples can be obtained with the groundwater table elevation at its estimated lowest point and shall be protected from damage or 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. The wells shall be monitored on a quarterly basis for the following parameters:

Conductivity	Arsenic	Selenium
Nitrates	Barium	Silver
Iron	Cadmium	Chlorides
COD	Chromium	pH
Nickel	Lead	Copper
Aluminum	Mercury	Zinc
Total Coliform Bacteria		

- d. Reports shall be submitted in duplicate within 30 days of receipt of analysis results to the Department 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 relating 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.

2. Putrescible wastes shall receive daily cover. No cover shall be required for the landfilling of only ash or construction/demolition debris. Daily cover shall consist of a six inch layer of compacted earth placed at the end of each working day.

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. 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 DER Southwest District Office quarterly, commencing 120 days after the Resource Recovery becomes operational and is producing residues.

5. Unless approved by the Department with subsequent modification of conditions, this facility shall not accept materials currently defined as "Hazardous Wastes", i.e. pesticides, volatile or radioactive material, etc.

6. No putrescible wastes shall be placed below the maximum groundwater level unless permanent leachate controls are installed. Methodology for permanent leachate controls shall be submitted to the Department for review. Such methodology shall not be implemented until approved by the Department. In the absence of permanent leachate controls, demolition debris and other non-putrescible items (other than boiler residue) shall be utilized to separate the putrescible waste from the groundwater. Boiler residue may be placed below the maximum groundwater level without permanent leachate controls provided that the permittee demonstrates that the residue will not contribute to a violation of water quality criteria at the boundary of a zone of discharge extending 100 feet from the landfill perimeter. Fly ash shall not be placed below the maximum groundwater level without permanent leachate controls.

7. Separate cells and lifts shall be maintained for land-filling putrescible wastes.

8. All cells will be constructed to promote leachate drainage to a low end of the cell; all leachate formed at the low end of an active cell shall be pumped to the aeration pond for treatment.

9. A chemical analysis of the boiler residue shall be conducted within 30 days after commencement of operation, testing at the minimum for levels of Cadmium, Chromium, Zinc and Lead to determine the nature and potential toxicity or hazardousness of the materials created in the combustion process.

10. Results from the residue analysis shall immediately be sent to the Department and will be used to determine whether or not these materials constitute a "Hazardous Waste" as defined by Chapter 17-30, FAC; results of these analyses may also be used for correlation with groundwater monitoring information and in any subsequent modification of conditions.

11. If residue material are determined to be a "Hazardous Waste", then measures shall be taken to treat or dispose of the residues pursuant to rules promulgated by either Federal or State authorities.

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 unusual groundwater conditions which may be attributable to the landfiling of this residue, then a subsequent analysis may be required at that time.

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

F. Operational Safeguards

The overall design and layout of the facilities shall be such as to minimize hazards 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 Corporation Gandy Substation 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.



State of Florida



Commissioners:  
JOSEPH P. CRESSE  
GERALD L. (JERRY) GUNTER, Chairman  
SUSAN WAGNER LEISNER  
JOHN R. MARKS, III  
KATIE NICHOLS

Executive Director  
DAVID L. SWAFFORD  
(904) 488-7181

Public Service Commission

November 7, 1983

Received DER

NOV 9 1983

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator, Power Plant Siting  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blairstone Road  
Tallahassee, Florida 32301

P P S

Dear Mr. Oven:

The attached orders constitute the Commission's final reports, as required by Section 403.507(1)(b) of the Power Plant Siting Act, on the applications of Pinellas and Hillsborough Counties for power plant certification.

As the orders indicate, the matter was handled in the form of a Proposed Agency Action. No person requested a hearing within the required time; therefore, the Commission's finding that a need exists for the proposed plants has become final.

Sincerely yours,

Handwritten signature of David L. Swafford.  
DAVID L. SWAFFORD  
Executive Director

DLS/cd

CC: Commissioners  
Electric & Gas Department  
Legal Department  
Department of Community Affairs  
Hillsborough County  
Pinellas County

# Best Available Copy

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Pinellas County ) DOCKET 830417-EU  
for determination of need for a solid) ORDER NO. 12611  
waste-fired cogeneration power plant.) ISSUED: 10-14-83

The following Commissioners participated in the disposition of this matter:

GERALD L. GUNTER, Chairman  
JOSEPH P. CRESSE  
JOHN R. MARKS, III  
KATIE NICHOLS  
SUSAN LEISNER

## NOTICE OF PROPOSED AGENCY ACTION

### ORDER

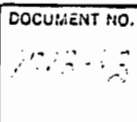
#### BY THE COMMISSION:

Under the Florida Electrical Power Plant Siting Act, Section 403.501, Florida Statutes, the Commission is charged with the responsibility of determining whether construction of a proposed electrical generation facility is necessary to meet the present or expected need for electricity in all or part of Florida. Under the Act, the Department of Environmental Regulation must determine whether the proposed plant will comply with all relevant environmental standards and whether the proposed site for the plant is suitable for that use. Weighing all of these determinations, the Governor and Cabinet, sitting as the Power Plant Siting Board, ultimately determine whether approval will be granted for construction of the proposed plant.

Certification under the Act must be obtained for the construction of any generating facility greater than 50 MW, or for the expansion of any existing electrical power plant. Pinellas County currently owns an existing solid waste-fired power plant containing a single 50.9-megawatt (gross) turbine generator and two incinerator/boilers located near Pinellas Park in Pinellas County, Florida, and has an existing Power Plant Site Certification for the facility. Pinellas County proposes to construct and operate an additional incinerator/boiler, and a single 29-megawatt (gross) turbine generator facility at the same site. The proposed incinerator/boiler will be similar to the two incinerator/boilers currently owned by the County and will have the capacity to burn up to 1,050 tons per day of 5000 BTU per pound solid waste. This is a small power production facility within the meaning of PURPA and Rules 25-17.80 through 25-17.87, Florida Administrative Code.

The steam generated by the proposed incinerator/boiler plant will be used to drive a single 29-megawatt (gross) turbine generator which will produce electricity that will be sold to Florida Power Corporation. The projected in-service date for the unit is July 1986, with construction scheduled to begin in the summer of 1984. The existing facility presently is selling an average of 38-40 MW a year to Florida Power Corporation. With increasing fuel supply and capacity expansion, the facility will ultimately have about 60 MW available for sale to Florida Power Corporation in mid-1990's. By a petition filed on August 29, 1983, Pinellas County seeks an affirmative determination of need for the 29 MW generating plant.

While the Power Plant Siting Act requires the Commission to determine whether a need exists for the proposed generating facility, the purpose of the Commission's need determination is



to protect electric utility ratepayers from unnecessary expenditures. The statute lists four criteria the Commission must consider in determining need:

- 1) the need for electrical system reliability and integrity;
- 2) the need for adequate electricity at a reasonable cost;
- 3) whether the proposed plant is the most cost effective alternative available; and
- 4) conservation measures taken or reasonably available that might mitigate the need for new plant (Sec. 403.519, F.S.)

Congress and the Florida Legislature have determined that cogeneration and small power production should be encouraged on the premise that they constitute alternate sources of power that either displace production of fossil fuel electricity or use fossil fuels more efficiently. Moreover, the proliferation of cogeneration and small power production facilities may obviate the need for construction of additional generating facilities by electric utilities. Therefore, in the present context, we find that the County's proposed small power production facility will increase electrical system reliability and integrity and will maintain the supply of adequate electricity at a reasonable cost while reducing our dependence on fossil fuel. When viewed as an alternative to construction of additional generating facilities by electric utilities, and considering the permissible level of payments to small power producers outlined in Rules 25-17.80 through 25-17.87, Fla. Admin. Code, the proposed facility is the most cost effective alternative available. Finally, construction of the plant is a conservation measure which we have encouraged precisely because it may mitigate the need for additional construction by electric utilities. Therefore, the relief sought in this petition, an affirmative determination of need, will be and the same is hereby granted. It is, therefore,

ORDERED by the Florida Public Service Commission that this Order constitute the final report required by Section 403.507(1)(b), Florida Statutes, the report concluding that a need exists, within the meaning of Section 403, Florida Statutes, for the construction of the 29 MW generating facility proposed by Pinellas County, Florida. It is further

ORDERED that a copy of this Order be furnished to the Department of Environmental Regulation, as required by Section 403.507(1)(b), Florida Statutes. It is further


ORDERED that any person adversely affected by the action proposed herein may file a petition for a formal proceeding, as provided in Rule 25-22.29, within 21 days of the date of this order, November 4, 1983, in the form provided by Rule 25-22.36(7)(a) and (f). It is further

ORDERED that in the absence of such a petition, this Order shall become effective and final as provided by Rule 25-22.29(6), as stated in a subsequent order.

By Order of the Florida Public Service Commission, this  
14th day of OCTOBER 1983.

( S E A L )

BED

  
STEVE TRIBBLE  
COMMISSION CLERK

# Best Available Copy

## BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Hillsborough County ) DOCKET 830419-EU  
for determination of need for a solid ) ORDER NO. 12610  
waste-fired cogeneration power plant. ) ISSUED: 10-14-83  
)

The following Commissioners participated in the disposition of this matter:

GERALD L. GUNTER, Chairman  
JOSEPH P. CRESSE  
JOHN R. MARKS, III  
KATIE NICHOLS  
SUSAN W. LEISNER

### NOTICE OF PROPOSED AGENCY ACTION

#### ORDER

#### BY THE COMMISSION:

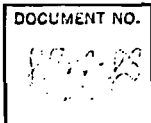
Under the Florida Electrical Power Plant Siting Act, Section 403.501, Florida Statutes, the Commission is charged with the responsibility of determining whether construction of a proposed electrical generation facility is necessary to meet the present or expected need for electricity in all or part of Florida. Under the Act, the Department of Environmental Regulation must determine whether the proposed plant will comply with all relevant environmental standards and whether the proposed site for the plant is suitable for that use. Weighing all of these determinations, the Governor and Cabinet, sitting as the Power Plant Siting Board, ultimately determine whether approval will be granted for construction of the proposed plant.

Certification under the Act must be obtained for the construction of any generating facility greater than 50 MW, and may be obtained for a smaller facility. Hillsborough County has elected to seek certification of its proposed 39 MW small power production facility, by a petition filed on August 30, 1983.

Hillsborough County proposes to construct and operate a solid waste-fired electrical generating facility using 1,200 tons of municipal solid waste per day as its primary fuel source. In anticipation of its expected needs, Hillsborough County seeks certification for an ultimate site electrical generating capacity of 39 megawatts (gross), using 1,600 tons per day of municipal solid waste fuel. This is a small power production facility within the meaning of PURPA and Rules 25-17.80 through 25-17.87, Fla. Admin. Code.

The proposed plant will ultimately produce 39-megawatts of power which will be sold to Tampa Electric Company. The projected in-service date for the unit is July, 1987, with construction scheduled to begin in the summer of 1984. In its first year of production, the plant will make available for sale to Tampa Electric, about 13 MW on an annual average basis. Generation will continue to increase as the supply of fuel increases and the ultimate capacity available for sale to Tampa Electric will reach about 30 MW on an annual average basis in the late 1990's.

While the Power Plant Siting Act requires the Commission to determine whether a need exists for the proposed generating facility, the purpose of the Commission's need determination is to protect electric utility ratepayers from unnecessary expenditures. The statute lists four criteria the Commission must consider in determining need:



- 1) the need for electrical system reliability and integrity;
- 2) the need for adequate electricity at a reasonable cost;
- 3) whether the proposed plant is the most cost effective alternative available; and
- 4) conservation measures taken or reasonably available that might mitigate the need for new plant (Sec. 403.519, F.S.)

Congress and the Florida Legislature have determined that cogeneration and small power production should be encouraged on the premise that they constitute alternate sources of power that either displace production of fossil fuel electricity or use fossil fuels more efficiently. Moreover, the proliferation of cogeneration and small power production facilities may obviate the need for construction of additional generating facilities by electric utilities. Therefore, in the present context, we find that the County's proposed small power production facility will increase electrical system reliability and integrity and will maintain the supply of adequate electricity at a reasonable cost while reducing our dependence on fossil fuel. When viewed as an alternative to construction of additional generating facilities by electric utilities, and considering the permissible level of payments to small power producers outlined in Rules 25-17.80 through 25-17.87, Florida Administrative Code, the proposed facility is the most cost effective alternative available. Finally, construction of the plant is a conservation measure which we have encouraged precisely because it may mitigate the need for additional construction by electric utilities. Therefore, the relief sought in this petition, an affirmative determination of need, will be and the same is hereby granted. It is, therefore,

ORDERED by the Florida Public Service Commission that this Order constitute the final report required by Section 403.507(1)(b), Florida Statutes, the report concluding that a need exists, within the meaning of Chapter 403, Florida Statutes, for the construction of the 39 MW generating facility proposed by Hillsborough County, Florida. It is further

ORDERED that a copy of this Order be furnished to the Department of Environmental Regulation, as required by Section 403.507(1)(b), Florida Statutes. It is further

ORDERED that any person adversely affected by the action proposed herein may file a petition for a formal proceeding, as provided in Rule 25-22.29, within 21 days of the date of this order, November 4, 1983, in the form provided by Rule 25-22.36(7)(a) and (f). It is further

ORDERED that in the absence of such a petition, this Order shall become effective and final as provided by Rule 25-22.29(6), as stated in a subsequent order.

By Order of the Florida Public Service Commission, this  
14th day of OCTOBER 1983.

( S E A L )

  
STEVE TRIBBLE  
COMMISSION CLERK

BED

Best Available Copy

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Pinellas County for )	DOCKET NO. 830417-EU
determination of need for a solid waste- )	ORDER NO. 12677
fired cogeneration power plant. )	ISSUED: 11-14-83

CONSUMMATING ORDER

BY THE COMMISSION:

By Order No. 12611, this Commission proposed to take certain action, subject to a Petition for Formal Proceeding as provided in Rule 25-22.29, Florida Administrative Code. No response has been filed to the order and it has become effective. It is, therefore,

ORDERED by the Florida Public Service Commission that this Order constitute the final report required by Section 403.507(1)(b), Florida Statutes, the report concluding that a need exists, within the meaning of Section 403, Florida Statutes, for the construction of the 29 MW generating facility proposed by Pinellas County, Florida. It is further

ORDERED that a copy of this Order be furnished to the Department of Environmental Regulation, as required by Section 403.507(1)(b), Florida Statutes. It is further

ORDERED that Order No. 12611 be and the same is hereby determined to be effective and final on November 4, 1983, as provided in Rule 25-22.29(6), Florida Administrative Code. It is further

ORDERED that this docket be closed.

By ORDER of the Florida Public Service Commission, this day 14th of November, 1983.



Steve Tribble  
COMMISSION CLERK

( S E A L )

BED

Received DER

NOV 23 1983

P P S

STATE OF FLORIDA  
DEPARTMENT OF  
COMMUNITY AFFAIRS  
DIVISION OF LOCAL RESOURCE MANAGEMENT

BOB GRAHAM  
Governor



JOHN M. DeGROVE  
Secretary

Received DER

NOV 17 1983

P P S

November 17, 1983

Mr. Hamilton Oven, Jr.  
Department of  
Environmental Regulation  
2600 Blairstone Road  
Tallahassee, Florida 32301

Dear Mr. Oven:

Attached is the Department of Community Affairs' report on Pinellas County's Resource Recovery Facility (Phase II) power plant site certification application for an additional 29 megawatt generating capacity. Pursuant to Section 403.507, Florida Statutes, the report assesses the compatibility of the proposed electric power plant expansion with the State Comprehensive Plan.

After reviewing the application against the stated goals, objectives and policies of the State Comprehensive Plan, we find that the proposed resource recovery facility expansion is compatible with the State Comprehensive Plan.

If you have any questions regarding this report, please contact Mr. Paul Darst at (904) 488-4925.

Sincerely,

A handwritten signature in cursive script, appearing to read "Geo. Griffith".

George W. Griffith  
Bureau Chief

GWG:jmh

Attachment

Power Plant Siting Report:  
PINELLAS COUNTY RESOURCE RECOVERY FACILITY EXPANSION  
(PHASE II) APPLICATION FOR SITE CERTIFICATION

Submitted to:

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

NOVEMBER 1983

Prepared by:

FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS  
BUREAU OF LAND AND WATER MANAGEMENT  
POWER PLANT SITING PROGRAM



## INTRODUCTION

Pursuant to sections 403.501-403.517 of the Florida Statutes, known as the Florida Electrical Power Plant Siting Act, the Florida Department of Community Affairs (DCA) is required to review a power plant site application in order to determine its compatibility with the State Comprehensive Plan (SCP) and to submit that review to the Florida Department of Environmental Regulation (DER). The SCP is authorized under the State Comprehensive Planning Act of 1972 which is intended to "provide long-range guidance of the orderly social, economic, and physical growth of the state" (section 23.0114, F.S.). To achieve this end, the SCP sets forth goals, objectives and policies. The task of the DCA is to determine whether or not the construction and operation of the proposed power plant would be compatible with these goals, objectives and policies. This report represents that determination and is the report specified in paragraph 403.507(1)(a), F.S.

## METHOD OF EVALUATION FOR COMPATIBILITY

Neither the Power Plant Siting Act nor the SCP contains any articulated process or methodology by means of which the DCA is to conduct its review of the site certification application; however, over the years the DCA has developed a process by which the predicted impacts of the power plant are compared directly to relevant goals, objectives and policies in the SCP. In the SCP, goals consist of broad statements of purpose, which are usually inappropriate for use as evaluative tools. An objective is defined in the SCP as "a specific accomplishment, or series of accomplishments, necessary to the satisfactory pursuit of a goal." Objectives are, therefore, more concrete than goals and can occasionally serve as evaluative criteria. Policies, however, constitute the most specific and tangible statements in the SCP. For this reason, policies are the most appropriate level at which to compare power plant site certification applications for consistency with the SCP.

The SCP contains literally hundreds of policies grouped under major element headings, such as Energy, Water, and Growth Management. Some of these elements are more relevant for review of site certification applications than others; nonetheless, the entire SCP was reviewed for policies and objectives relevant to this application. This comprehensive review is necessary because each proposed new power plant may have unique characteristics and impacts associated with it. Comparison of the expected impacts of the proposed power plant with the selected policies and objectives of the SCP enables the identification of specific consistencies and inconsistencies. Determination of consistency necessarily involves a subjective component; however, an effort was made to carry out this operation as fairly and as rigorously as possible.

BRIEF PROJECT DESCRIPTION AND HISTORY

Over four years ago, on July 20, 1979, the Governor and Cabinet of Florida, sitting as the Power Plant Siting Board, certified Phase I of the Pinellas County Resource Recovery Facility. Below is a brief chronology of subsequent events significant to the DCA consistency review:

- July 20, 1979.....Phase I power plant site application with Conditions of Certification approved by Power Plant Siting Board.
- July 26, 1983.....Phase II power plant site application received by DER.
- August 9, 1983.....Phase II application found incomplete by DER.
- September 6, 1983...Phase II revised application found complete by DER.
- October 14, 1983.....Positive Determination of Need for expansion of resource recovery facility (phase II) given by Florida Public Service Commission.
- October 25, 1983....Site visit by DCA power plant siting staff.

The Phase I facility combined solid waste disposal, resource recovery and electrical power generation in one plant. Its functions may be more precisely described as follows:

1. Disposal and reduction of raw, unprocessed municipal solid waste through mass-burn incineration.
2. Generation of 50 megawatts of electrical power from incineration of solid waste. Part of this power is used for plant operation, and the remainder is sold to Florida Power Corporation.
3. Recovery of ferrous and nonferrous metals.
4. Utilization of treated municipal waste water for plant cooling water.

This multipurpose facility has reportedly worked well and achieved the county's objectives for it. Now, however, less than four years later, the county proposes to add another boiler and ancillary equipment to the two boilers built during Phase I. This additional capacity is needed to keep pace with the county's burgeoning growth and consequent greatly increased production of solid waste. Accordingly, the county prepared another power plant site certification application (Phase II) and submitted it to the DER for certification review.

The Phase II expansion proposes the addition of a third boiler, electrostatic precipitator, turbine-generator, stack, cooling tower expansion and other associated equipment. Upon completion of the Phase II expansion, the plant will then comprise three boilers, three electrostatic precipitators, two turbine-generators and two stacks as the main visual structural components on the site. The site itself is surrounded by landfills, industrial and manufacturing operations and undeveloped land. The nearest residential development (The Lakes subdivision) is located southwest of the site within the city limits of Pinellas Park. This subdivision lies approximately 500 feet from the nearest landfill, which accepts nonputrescible wastes only.

#### CONSISTENCY/INCONSISTENCY WITH THE SCP

Comparison of the expected impacts of the proposed facility with the policies and objectives of the SCP yielded numerous points of consistency and inconsistency. The more significant points of consistency and inconsistency fall into eight discussion areas, as presented below. Each discussion area begins with a listing of the SCP policy, or related policies, with which the proposed facility would either be consistent or inconsistent.

##### 1. Alternative energy technologies and fuels

Energy Element Policy No. 2--Diversify Florida's energy sources by encouraging a safe and orderly transition from diminishing petroleum resources to alternative energy technologies as they become available.

Energy Element Policy No. 4--Begin the orderly transition from present non-renewable fuels to renewable energy sources and consumption patterns.

Utilities Element Policy No. 46--Encourage energy recovery from solid wastes, where feasible.

Utilities Element Policy No. 57--Encourage research and development of alternative methods for electrical power production.

All of these policies encourage alternative energy technologies and fuels. Municipal solid waste can be regarded as a renewable energy source since it consists primarily of paper, wood, food scraps, lawn trimmings, etc., which are direct or indirect products of photosynthesis. The proposed resource recovery facility expansion is clearly consistent with the above policies.

2. Resource conservation and recovery

Land Development Element Policy No. 18--Encourage resource conservation and, where efficient, the recovery and reuse of resources, particularly those that are limited and diminishing in supply.

Land Development Element Policy No. 23--Seek alternatives to conventional methods of solid waste incineration which use resources inefficiently and create air pollution.

Utilities Element Policy No. 17--Encourage energy and resource conservation and, where feasible, the recovery and reuse of resources, particularly those in limited supply.

These policies address the subject of resource conservation and recovery. Policies No. 18 and 17 above, which are almost identical, stress resource recovery and reuse. The proposed project recovers ferrous and nonferrous metals from municipal solid waste. Policy No. 23 is unclear as to what constitutes "conventional methods of solid waste incineration," but it is assumed in this report that this policy is specifically addressing incineration without resource recovery or energy production. The proposed facility appears to be consistent with the above policies of the SCP.

3. Reuse of wastewater

Land Development Element Policy No. 63--Encourage flexible wastewater treatment strategies that recognize regional or local conditions and requirements.

Utilities Element Policy No. 29--Encourage the development of innovative techniques to augment water supplies available for domestic, agricultural, and industrial uses.

Utilities Element Policy No. 38--Consider treated wastewater as a valuable resource and make every reasonable effort to implement land spreading, agricultural and industrial uses, and recycling uses of water for other than human consumption.

Water Element Policy No. 24--Recognize wastewater as a valuable resource and establish the goal of recycling and reuse of wastewater, tailwater, and stormwater consistent with energy-conservation objectives, existing development, and maintenance of the integrity of natural ecosystems to the extent practical.

These policies encourage innovative uses of wastewater. The proposed resource recovery facility expansion will use tertiary-treated wastewater from the nearby city of Largo for cooling purposes. The proposed facility is consistent with these policies.

#### 4. Utilization of existing power plants

Utilities Element Policy No. 55--Favor the provision of electrical power to the maximum extent feasible by using existing power plants with excess capacity rather than by developing new plants.

Electrical power production is a secondary objective of the proposed project. The addition of a third boiler will provide an approximate increase of 29 megawatts of electrical generating capacity. The proposed facility is technically not consistent with this policy. However, the following points should be noted: (1) this is not merely a new power plant, but a multipurpose facility that produces electrical power as a byproduct; (2) it represents an expansion of an existing power-generating facility, rather than a new facility; (3) the proposed facility has received a positive Determination of Need from the Florida Public Service Commission; and (4) construction of this facility may help delay the need for a new base-load electrical power plant.

#### 5. Aesthetics

Utilities Element Policy No. 8--Design utility installation and distribution facilities that are aesthetically pleasing as well as economically and technologically feasible.

Aesthetics can be a significant concern when disposing of large quantities of solid waste or generating electrical power. Landfills, especially those containing putrescible wastes, are unsightly, frequently produce nuisance odors, and often attract large numbers of scavenger animals, such as sea gulls, crows, vultures and rodents. As for power plants, their stacks and towers are visually intrusive.

This project attempts to reduce the volume of raw solid waste and the negative aesthetic impacts of the landfill. The end product (primarily ashes) of the resource recovery facility is

inert and nonputrescent. The electrical-power-generating components of the facility will still have negative aesthetic impacts; however, the net aesthetic impact should be positive and therefore consistent with this policy.

6. Flooding

Land Development Element Policy No. 134--Require flood-proofing for nonresidential development and public facilities located in 100-year floodplain areas.

The proposed facility is located in an identified floodprone area. The most recent Flood Insurance Rate Map for the unincorporated areas of Pinellas County indicates the site lies in a zone inundated by the 100-year flood event at a base flood elevation of 10 feet. Because the proposed facility structures will be constructed at an elevation of 12 feet, the project is consistent with this policy.

7. Land Use Compatibility

Health Element Objective No. L--Grossly incompatible land use mixtures, and their consequent environmental health hazards, should be precluded.

Housing and Community Development Element Policy No. 65--Encourage mixed-use development when such uses are compatible.

The above objective and policy address the subject of land use compatibility. As mentioned previously, there is a residential area (The Lakes subdivision) developing close to the southwest boundary of the proposed facility, near landfill areas. In fact, new residential construction in The Lakes is occurring approximately 500 feet from an active landfill. Residential areas and landfills are not usually considered compatible land uses. This is definitely not the kind of mixed-use development envisioned in policy No.65 above. But there are other facts to consider here: for one thing, the Phase I facility has been operating for over three years now; therefore, potential home buyers should be well aware of the presence of this facility nearby. For another thing, in 1979 the Power Plant Siting Board determined that the Phase I facility did conform to local land-use plans and zoning ordinances. It is also noted that this residential expansion is occurring in an area under the jurisdiction of the city of Pinellas Park. The applicant, Pinellas County, cannot control development in Pinellas Park, although the county has attempted to coordinate with the city in an effort to mitigate adverse impacts to residential areas within the city.

The plant site is otherwise surrounded by vacant land and industrial/manufacturing uses and, in fact, the overall character of the surrounding area is primarily industrial/manufacturing, which is a compatible land use type.

Because of the presence of residential development near land-fill areas of the resource recovery facility, the proposed facility expansion cannot be said to be totally consistent with the stated objective and policy; however, the aforementioned mitigating factors offset the inconsistency somewhat. It is further noted that Pinellas County is one of the most urbanized and densely populated counties in the state; therefore, potential land-fill and resource recovery sites are difficult to find as well as being expensive.

#### 8. Air Pollution

Health Element Objective E--The degradation of air caused by development should be minimized.

Land Development Element Policy No. 23--Seek alternatives to conventional methods of solid waste incineration which use resources inefficiently and create air pollution.

The utilization of a third boiler will create additional air pollution, although particulate material will be removed from boiler emissions by an additional electrostatic precipitator. The expected incremental increase in air pollution generated by the expanded facility is relatively minor. The proposed facility expansion is, however, still inconsistent with these policies.

#### Conclusion

In conclusion, we find that the proposed facility would be consistent with the following element policies:

Energy Nos. 2 and 4  
Land Development Nos. 18 and 63  
Utilities Nos. 8, 17, 29, 38, 46 and 57

The proposed facility would be inconsistent with the following element objectives and policies:

Health Objectives E, L  
Housing and Community Development No. 65  
Utilities No. 55

The facility expansion would be consistent with a portion of Land Development Element Policy No. 23 while being inconsistent with another portion of the same policy.

In making our overall judgment on compatibility, we place particular emphasis on these pertinent facts:

1. This is an expansion of an existing facility. Most of its impacts are already known and have been mitigated. According to the Phase II site certification application, no additional facility expansion (i.e., no more boilers) will occur at this site in the future.
2. In 1979 the DCA found Phase I of the Pinellas County Resource Recovery Facility to be consistent with the State Comprehensive Plan. Three years of successful operation of that facility have affirmed that earlier conclusion.
3. We do not find the incompatible land uses at the southwest boundary of the site (landfill and residential uses) to be consistent with the directives of the SCP. However, as explained in the discussion under Health Element Objective L, there are several mitigating circumstances that reduce the magnitude of this impact.

In our opinion the increased negative land use (and other) impacts generated by the proposed facility expansion are outweighed by the benefits the expansion would provide in--(1) reducing the amount of landfill area needed, (2) recovering metals, and (3) producing electrical power.

The Florida Department of Community Affairs therefore finds the proposed facility to be compatible with the State Comprehensive Plan.



January 25, 1984

Mr. William E. Williams  
Division of Administrative Hearings  
The Oakland Building  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery Facility  
PA 83-18, DOAH Case No. 83-2355

Dear Mr. Williams:

Attached please find a copy of the "Notice of Certification Hearing" for the Pinellas County Resource Recovery Facility as sent to the newspapers on January 24, 1984.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSOjr/sb

cc: All parties

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Notice has been furnished by U.S. Mail this 25th day of January, 1984 to the following named persons:

VAN B. COOK  
SPN 72241  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, FL 33516

JOHN BOTTCHEER, ESQUIRE  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

LARRY KEESEY, ESQUIRE  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, FL 32301

STEPHEN A. WALKER, ESQUIRE  
SWFWMD  
2379 Broad Street  
Brooksville, FL 33512-9712

BONNIE DAVIS, ESQUIRE  
Public Service Commission  
Fletcher Building  
101 East Gaines Street  
Tallahassee, FL 32301-8153

---

HAMILTON S. OVEN, JR., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301.

NOTICE OF CERTIFICATION HEARING ON AN APPLICATION TO CONSTRUCT  
AND OPERATE AN ELECTRICAL POWER PLANT ON A SITE TO BE LOCATED  
NEAR PINELLAS PARK, FLORIDA

1. Application number 83-18 for certification to authorize construction and operation of an addition to an electrical power plant near Pinellas Park, Florida, is now pending before the Department of Environmental Regulation, pursuant to the Florida Electrical Power Plant Siting Act, Part II, Chapter 403, F.S.

2. The resource recovery facility site is located in Pinellas County within the existing Pinellas County Resource Recovery Facility property 2 miles northeast of Pinellas, Park, south of 114th Avenue, north and west of 28th Street North. The proposed additional plant will consist of one 1050 ton per day solid waste-fired unit with a 29 MW turbine generator. The power plant will be owned by Pinellas County.

3. The Department of Environmental Regulation has evaluated the application for the proposed power plant. Certification of the plant would allow its construction and operation. The application and the Department's analysis of the impacts of the plant are available for public inspection at the following addresses:

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
Southwest District Office  
7601 Highway 301 North  
Tampa, Florida 33610

PINELLAS COUNTY  
Department of Solid Waste Management  
2800 110th Avenue North  
St. Petersburg, Florida 33702

HERNANDO COUNTY DEPARTMENT OF PLANNING AND ZONING  
156 East Jefferson  
Brooksville, Florida 33512

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT  
2379 Broad Street (South U.S. 41)  
Brooksville, Florida 33512

4. Pursuant to Section 403.508, Florida Statutes, the certification hearing will be held by the Division of Administrative Hearings on February 29, 1984, at 10:00 a.m., at the Pinellas County Courthouse, 5th Floor Assembly Room, 315 Court Street, Clearwater, Florida, in order to take written or oral testimony on the effects of the proposed electrical power plant or any other matter appropriate to the consideration of the site. Need for the facility has been predetermined by the Public Service Commission at a separate hearing. Written comments may be sent to William Williams (Hearing Officer) at Division of Administrative Hearings, 2009 Apalachee Parkway, Tallahassee, Florida, 32301, on or before February 21, 1984.

5. Pursuant to 403.508(4), F.S.: "(a) Parties to the proceeding shall include: the applicant; the Public Service Commission; the Division of State Planning; the water management district as defined in Chapter 373, in whose jurisdiction the proposed electrical power plant is to be located; and the Department. (b) Upon the filing with the Department of a notice of intent to be a party at least 15 days prior to the date set for the land use hearing, the following shall also be parties to the proceeding:

1. Any county or municipality in whose jurisdiction the proposed electrical power plant is to be located.

2. Any state agency not listed in paragraph (a) as to matters within its jurisdiction.

3. Any domestic non-profit corporation or association formed in whole or in part to promote conservation or natural beauty; to protect the environment, personal health, or other biological values; to preserve historical sites; to promote consumer interests; to represent labor, commercial or industrial groups; or to promote orderly development of the area in which the proposed electrical power plant is to be locate.

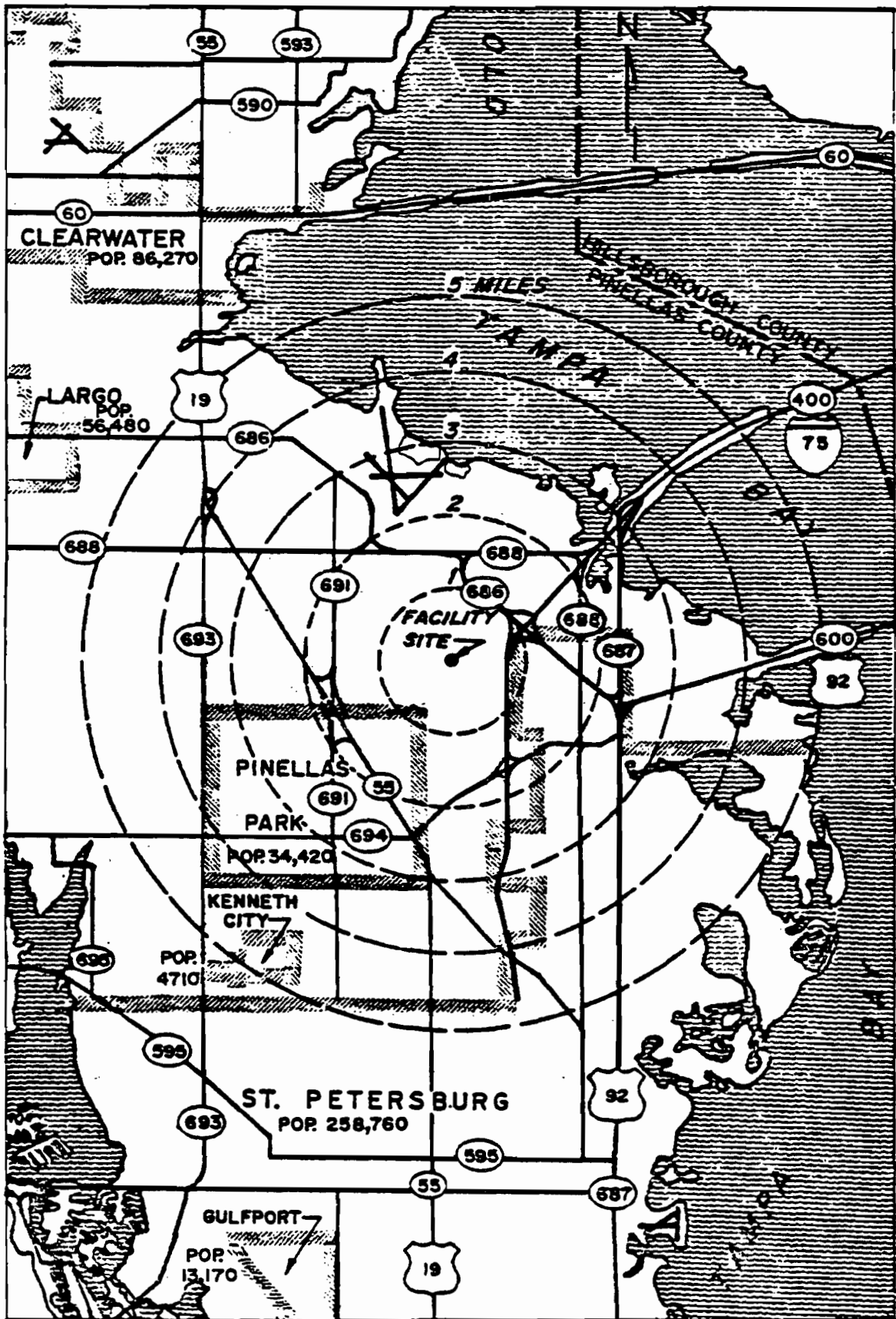
(c) Notwithstanding paragraph (4)(d), failure of an agency described in subparagraphs (4)(b)1 and (4)(b)2 to file a notice of intent to be a party within the time provided herein shall constitute a waiver of the right of the agency to participate as a party in the proceeding.

(d) Other parties may include any person, including those persons enumerated in paragraph (4)(b) who failed to timely file a notice of intent to be a party, whose substantial interests are affected and being determined by the proceeding and who timely file a motion to intervene pursuant to Chapter 120, F.S., and applicable rules. Intervention pursuant to this paragraph may be granted at the discretion of the designated hearing officer and upon such conditions as he may prescribe any time prior to 15 days before the commencement of the certification hearing.

(3) Any agency whose properties or works are being affected pursuant to s.403.509(2) shall be made a party upon the request of the department of the applicant.

6. Those wishing to intervene in these proceedings must be represented by an attorney or other person who can be determined to be qualified to appear in administrative proceedings pursuant to Chapter 120, F.S., or Chapter 17-1.21, FAC.

FIGURE 2.2.d.



STUDY AREA

January 25, 1984

Mrs. Liz Cloud  
Bureau of Administrative Code  
Department of State  
The Capitol  
Tallahassee, Florida 32301

Dear Mrs. Cloud:

I would appreciate your publication of the enclosed Notice of a Public Hearing and a Notice of Modification in the February 3, 1984, issue of the Florida Administrative Weekly.

If you have any questions, please let me know. I appreciate your assistance and cooperation.

Sincerely,

Geneva M. Hartsfield  
Administrative Assistant  
Office of the Chairman  
Environmental Regulation  
Commission

GMH/HSOjr/sb

Enclosures: Original and one copy of a Public Notice of Hearing  
Original and one copy of a Notice of Modification

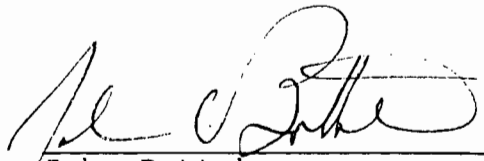


STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

IN RE: PINELLAS COUNTY RESOURCE )  
RECOVERY PROJECT ) CASE NO. 83-2355  
Application for Power )  
Plant Site Certification )  
\_\_\_\_\_ )

NOTICE OF PREHEARING CONFERENCE  
AND HEARING

Please take notice that this matter has been set for a prehearing conference at 1:00 p.m., January 27, 1984, Division of Administrative Hearings, The Oakland Building, 2009 Apalachee Parkway, Tallahassee, Florida 32301, and the certification hearing has been set for February 29, 1984, at 10:00 a.m. in the Pinellas County Courthouse. The detailed notice required by Chapter 17-17 will be published by the Department in the near future.

  
\_\_\_\_\_  
John Bottcher  
Attorney

2600 Blair Stone Road  
Tallahassee, Florida 32301

DEPARTMENT OF ENVIRONMENTAL REGULATION

**ROUTING AND TRANSMITTAL SLIP**

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

*Buck Oven - Room 523*

INITIAL

DATE

2.

INITIAL

DATE

3.

INITIAL

DATE

4.

INITIAL

DATE

REMARKS:

INFORMATION

REVIEW & RETURN

REVIEW & FILE

INITIAL & FORWARD

DISPOSITION

REVIEW & RESPOND

PREPARE RESPONSE

FOR MY SIGNATURE

FOR YOUR SIGNATURE

LET'S DISCUSS

SET UP MEETING

INVESTIGATE & REPT

INITIAL & FORWARD

DISTRIBUTE

CONCURRENCE

FOR PROCESSING

INITIAL & RETURN

FROM:

*John Bottcher*

DATE

*1-24-84*

PHONE

*8-9730*

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Notice of Prehearing Conference and Hearing has been furnished by U.S. Mail this 24<sup>th</sup> day of January, 1984 to the following named persons:

HAMILTON S. OVEN, JR., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

LARRY KEESEY, ESQUIRE  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, Florida 32301

STEPHEN A. WALKER, ESQUIRE  
SWFWMD  
2379 Broad Street  
Brooksville, Florida 33512-9712

BONNIE DAVIS, ESQUIRE  
Public Service Commission  
Fletcher Building  
101 East Gaines Street  
Tallahassee, Florida 32301-8153

**BEST AVAILABLE COPY**

January 18, 1984

Mr. Dan Williams, Assistant District Manager  
State Department of Environmental Regulation  
Southwest District Office  
7601 Highway 301 North  
Tampa, FL 33610-9544

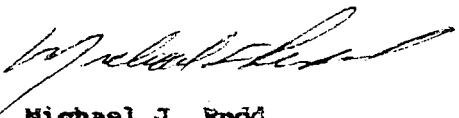
Re: Power Plant Siting Certification (PPSC) #PA 78-11

Dear Mr. Williams:

Enclosed herewith is the report for the fourth quarter of 1983 for the Pinellas County Solid Waste System. It is in accordance with Appendix "A", page of the PPSC.

The same footnotes attached to our last report apply. A copy of them is enclosed for your information.

Very truly yours,

  
Michael J. Rodd  
Solid Waste Operations Manager

MJR:WMP:ltl

Encls

cc: Buck Oven, DER  
Gene E. Jordan, Dir, PW&U  
W. W. Dasher, Dir, PW Opns  
W. Gray Dunlap, County Attorney

bcc: HDR

Received DER

JAN 23 1984

F P S

QUARTERLY REPORT

FOURTH QUARTER 1983

(All Figures Shown in Tons)

	<u>INTAKE</u>	<u>OCT 1983</u>	<u>NOV 1983</u>	<u>DEC 1983</u>
1.	To Plant	56,094.63	53,779.09	55,210.95
2.	To Landfill	11,048.02	8,785.86	4,004.43
3.	To Mini Station	179.86	244.86	307.15
4.	To Tire Splitter	188.59	144.68	116.67
5.	Wells Bros.	-0-	-0-	-0-
6.	Toytown	-0-	-0-	-0-
	<u>TOTAL</u>	67,511.10	62,954.49	59,639.20
 <u>REHANDLED MATERIALS</u>				
11.	Residue to Landfill	8,798.46	257.32	46.38
12.	Reject to Landfill	6.40	6.70	18.32
13.	Mini Station to Landfill	179.86	244.86	307.15
14.	Aggregate to Landfill	5,698.25	5,211.71	1,030.85
15.	Recovered Metals	3,609.09	4,174.79	2,055.16
	<u>TOTAL</u>	18,292.06	9,895.38	3,457.86
 Total Landfilled Materials:				
	Sum 2, 11, 12, 13, & 14	25,730.99	14,506.45	5,407.13

## Table Notes

1. All wastes deemed "processable", and arriving in self-unloading vehicles are deposited in the intake room of the Resource Recovery Plant.
2. Wastes arriving in vehicles requiring hand unloading, loads observed as containing unprocessable wastes, and wastes diverted from the plant for any reason are sent to the landfill inside the landfill there are three possible destinations: Class I for putrescible, Class III for brush/construction/trash wastes, and demolition for non-organic rubble. Based on operating volumes, there are occasions where destinations are consolidated wastes are treated as required for the more difficult content; e.g., brush is covered daily when mixed with putrescible.
3. Wastes arriving in small quantities are unloaded at the mini station, consolidated in large containers, and then moved to the plant or landfill.
4. The County operates an isolated and unrelated program to split, bale, and transport used tires for artificial reef construction. Tires enter the system through the single scalehouse point.
  
11. Gross residue materials (after combustion) is the raw stock for the plant's material recovery section. In addition, materials remaining after separation into streams having value (metals and large items still containing some metal, which can be sold), and streams having little value (can be given away), are removed at County cost and placed in the landfill. There is no additional treatment per se.
12. Reject materials originate in the intake room of the Plant and are removed prior to combustion. They do not contain putrescible wastes. Rejects are landfilled in either the Class III or the Class I landfill areas.
13. Materials deposited in the mini station are normally transferred to the landfill (Class I) but occasionally to the Plant if there is excess capacity available.
14. Aggregate materials are fine almost exclusively inorganic and considered suitable for road building purposes. These materials are stockpiled or used for haul road construction at the landfill. It is also being used for interim cover.



# BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 33516

## COMMISSIONERS

JOHN CHESNUT, JR., CHAIRMAN  
BRUCE TYNDALL, VICE-CHAIRMAN  
GABRIEL CAZARES  
CHARLES E. RAINEY  
BARBARA SHEEN TODD

January 18, 1984

W. GRAY DUNLAP  
COUNTY ATTORNEY

Received DER

JAN 23 1984

P P S

Mr. William E. Williams  
Division of Administrative Hearings  
2009 Apalachee Parkway  
Tallahassee, FL 32301

Dear Mr. Williams:

Enclosed for filing please find an original and one copy of Pinellas County's Motion to expedite the final certification hearing and Notice of Appearance required by Chapter 403, Part II, Florida Statutes.

By way of background, Pinellas County applied in October 1978 for certification of a steam electric generating, resource recovery facility at a site about one mile northeast of the town of Pinellas Park on the County's existing Bridgeway Acres Phase I landfill tract. The site was certified by the Governor and Cabinet on July 20, 1979. The proposed project will be a third resource recovery facility boiler which could use up to 1050 tons per day of refuse as fuel. The proposed boiler expansion will increase the total solid waste processing capacity of the plant to 3150 tons per day. The steam from the new boiler will be sent to a turbine generator increasing the gross capacity of the plant by 29 MW (gross) from 50.6 MW to 79 MW (gross). The previously certified site will not be expanded by this proposed project.

As indicated in my Motion, we are requesting a pre-hearing conference during the week of January 30th at such time and place in Tallahassee as is convenient to you. The County can attend such a conference upon 48 hours advance notice. I am currently in the process of preparing proposed stipulations for submittal to and consideration by DER's attorney, John Bottcher. Additionally, we are requesting a certification hearing during the week of February 27th at such time and place as is convenient to you. I can make facilities available for the said hearing here in Clearwater at the following address:

Pinellas County Courthouse  
5th Floor Assembly Room  
315 Court Street  
Clearwater, Florida

I anticipate the hearing would take no longer than one day.

I have contacted counsel for DER, Department of Community Affairs, Southwest Florida Water Management District, and the Public Service Commission regarding this Motion and proposed pre-hearing and hearing dates and have not been advised by any of them that these matters are objectionable.

Counsel for DER advised me that the required public notices can be prepared for publication within a few days of their being notified of a firm hearing date and location.

Thank you for your consideration of this Motion. If you have any questions or desire additional information, please contact me.

Respectfully submitted:



VAN B. COOK  
Assistant County Attorney

VBC:mhc

enclosures

1474q

cc: Hamilton S. Oven, Jr., P.E., Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

Larry Keeseey, Esquire  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, FL 32301



Stephen A. Walker, Esquire  
Southwest Florida Water Management District  
2379 Broad Street  
Brooksville, FL 33512-9712

Bonnie Davis, Esquire  
Public Service Commission  
Fletcher Building  
101 East Gaines Street  
Tallahassee, FL 32301-8153

John Bottcher, Esq.  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

In Re: PINELLAS COUNTY RESOURCE  
RECOVERY PROJECT,  
Application for Power CASE NO. 83-2355  
Plant Site Certification /

NOTICE OF APPEARANCE AND REQUEST  
FOR NOTICES, PLEADINGS AND ORDERS

The Pinellas County Attorney's Office hereby files its appearance as attorneys of record for Pinellas County, Florida, and respectfully requests that copies of all notices, pleadings, papers and orders to which Pinellas County, Florida is entitled, be furnished to the undersigned counsel.

DATED this 18<sup>th</sup> day of January, 1984.

*Van B. Cook*

VAN B. COOK  
SPN 72241  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, FL 33516  
(813) 462-3354  
Attorney for Petitioner

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Notice has been furnished by U.S. Mail this 19<sup>th</sup> day of January, 1984 to the following named persons:

JOHN BOTTCHER, ESQUIRE  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

HAMILTON S. OVEN, JR., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

LARRY KEESEY, ESQUIRE  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, FL 32301

STEPHEN A. WALKER, ESQUIRE  
SWFWMD  
2379 Broad Street  
Brooksville, FL 33512-9712

BONNIE DAVIS, ESQUIRE  
Public Service Commission  
Fletcher Building  
101 East Gaines Street  
Tallahassee, FL 32301-8153

Received DER

JAN 23 1984

P.P.S

STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

In Re: PINELLAS COUNTY RESOURCE  
RECOVERY PROJECT,  
Application for Power  
Plant Site Certification /

CASE NO. 83-2355

MOTION TO EXPEDITE

COMES NOW the Petitioner, PINELLAS COUNTY, FLORIDA, and requests an expedited final hearing as required by Chapter 403, Florida Statutes, and applicable rules promulgated thereunder pertaining to Petitioner's application for power plant site certification, and as grounds therefor would state:

1. Petitioner submitted a revised application for power plant site certification pertaining to the expansion of Petitioner's Resource Recovery Project on September 6, 1983;

2. The State Department of Environmental Regulation issued a statement of completeness on September 19, 1983;

3. The Florida Public Service Commission has, by Order No. 12677, completed the final report required by Section 403.507(1)(b), Florida Statutes, concluding that a need exists for the construction of a 29 MW generating facility proposed by Petitioner, and a copy of same was furnished to the Department of Environmental Regulation on November 14, 1983;

4. Petitioner has previously negotiated and obtained a firm contract price of \$53,500,000.00 for construction of the expansion facilities which are the subject of this proceeding pursuant to a construction contract executed in December 1983 which requires Petitioner to provide a Commencement Date to the contractor no later than March 31, 1984 authorizing construction to proceed. The Commencement Date cannot, by contract, occur prior to Petitioner's obtaining the subject Power Plant Site Certification required by Chapter 403, Florida Statutes. In the event Petitioner cannot provide the Commencement Date by March 31, 1984, Petitioner will be subject to renegotiation of the contract price, pursuant to the construction contract, at a higher price, to the detriment of the Petitioner and the citizens of Pinellas County, Florida;

5. The Petitioner and the Department of Environmental Regulation are in agreement that no land use and zoning hearing appears to be required, but are willing to address such issues at the requested final hearing upon the request of any party, intervenor, or the hearing officer;

6. The Department of Environmental Regulation has completed a draft of the written analysis required by Section 403.504(8), Florida Statutes;

7. Petitioner is unaware of any person or entity not required to be a party to such a proceeding who is adversely affected by said petition or who has expressed any objection or opposition to said petition;

8. The Petitioner anticipates that no more than one day is required for the conduct of the required certification hearing and is prepared to present its proposal 30 days from publication of the required notices;

9. Petitioner in good faith believes that there are no serious differences or disputes among the required parties to this proceeding and further has a good faith belief that all required parties to the proceeding have no objection to expedite said hearing;

10. Petitioner is prepared to participate in any pre-hearing conferences upon one week notice of same;

11. Petitioner asserts a good faith belief that expediting this hearing will be prejudicial to no one.

WHEREFORE, Petitioner respectfully prays:

1) that a pre-hearing conference be scheduled as soon as possible, preferably during the week of January 30, 1984 in Tallahassee, Florida;

2) that a certification hearing be scheduled for the week of February 27, 1984 at a location determined by the hearing officer;

3) that the Department of Environmental Regulation be directed to publish a notice of certification hearing as required by law, including applicable provisions of the notice requirements for a land use and zoning hearing providing that

land use and zoning issues may be included in the certification hearing upon request of any party or intervenor, on or before January 27, 1984.

Respectfully submitted,

*Van B. Cook*

VAN B. COOK  
SPN 72241  
Chief Assistant County Attorney  
315 Court Street  
Clearwater, Florida 33516  
(813) 462-3354  
Attorney for Petitioner

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Motion to Expedite was furnished by U.S. Mail this 19<sup>th</sup> day of January, 1984 to the following named persons:

JOHN BOTTCHE, ESQUIRE  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

HAMILTON S. OVEN, JR., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

LARRY KEESEY, ESQUIRE  
Department of Community Affairs  
2571 Executive Center Circle East  
Tallahassee, FL 32301

STEPHEN A. WALKER, ESQUIRE  
SWFWMD  
2379 Broad Street  
Brooksville, FL 33512-9712

BONNIE DAVIS, ESQUIRE  
Public Service Commission  
Fletcher Building  
101 East Gaines Street  
Tallahassee, FL 32301-8153

1400p/0023p



BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT
2800 110TH AVENUE NORTH
ST. PETERSBURG, FLORIDA 33702
PHONE (813) 825-1565



P.O. BOX 21623
ST. PETERSBURG, FLORIDA 33742-1623

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Barbara Sheen Todd

January 13, 1984

Mr. Hamilton S. Oven, Jr., P.E.
Administrator
Power Plant Siting Section
State of Florida
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Received DER

JAN 18 1984

PPS

Dear Mr. Oven:

Currently, treatment of the tertiary water makeup to the cooling towers at the Pinellas County Resource Recovery Plant consists of disinfection by chlorine dioxide to maintain a free chlorine residual of 1.0 ppm. However, due to several operational factors, it is now proposed that an alternative means of disinfection be employed; this in conjunction with Section XIV.C.3 of the Conditions of Certification for the Facility.

Enclosed with this letter is a report on alternative disinfection prepared by the County's contractor and reviewed by our staff, as well as Dr. Flora Mae Wellings, whose comments are also attached. We ask that your staff review this proposal as soon as possible.

If you require additional information, please do not hesitate to call.

Sincerely,

[Handwritten signature]

D. F. Acenbrack, Director
Solid Waste Management

ACE:ltl

Enclosures

cc: Dan Williams, DER Tampa
Gene E. Jordan, Dir, PW&U
W. W. Dasher, Dir, PW Opns
W. Gray Dunlap, County Attorney

Handwritten: 952-7270

Handwritten: 570-3354

Received DER

JAN 18 1984

PPS

PROPOSED

COOLING TOWER MAKEUP TREATMENT PLAN  
FOR TERTIARY TREATED WASTEWATER AT THE  
PINELLAS COUNTY RESOURCE RECOVERY FACILITY

Submitted To: Department of  
Environmental Regulation,  
State of Florida

Submitted By: Pinellas County Department  
of Solid Waste Management and  
Signal RESCO, Inc.  
(formerly UOP, Inc.)

Prepared By: RUST International Corporation

Date: September 21, 1983

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## EXECUTIVE SUMMARY

The Conditions of Certification for the Pinellas County Resource Recovery Facility requires a minimum level of secondary treatment for the municipal effluent makeup to the cooling tower and an on-site treatment level of chlorination to assure bacterial and viral destruction. The facility is currently using effluent from the City of St. Petersburg's Northeast Wastewater Treatment Plant as its primary source of makeup but will, in the near future, switch to effluent from the Largo Wastewater Treatment Plant. The Northeast Wastewater Treatment Plant's effluent will then be used as a backup source.

Section XIV, paragraph C.3. of the Conditions of Certification provides for the use of a lesser amount of chlorination or alternate treatment if it can be demonstrated to the Department that the number of viruses entering the cooling tower can be reduced to an undetectable level. During design of the facility, permission was requested for cost and process considerations, to use chlorine dioxide in lieu of chlorine for the on-site treatment. After a favorable review by the Department the system was changed, as requested. Under actual operating conditions the chlorine dioxide feed system has proven to be uneconomical and incapable of being automatically controlled.

In the ensuing investigation into the design and operation of the chlorine dioxide feed system several facts came to light.

1. The municipal effluent currently being used from the St. Petersburg Treatment Plant is being treated to a "tertiary" level and chlorinated to ensure a "virus and bacteria free" water in the distribution system.
2. The effluent from the Largo facility will be similarly treated for the same ultimate usage.

3. Current monitoring programs have shown that the tertiary water in the distribution system is free of viruses.

We believe that the on-site treatment requirements of the Conditions of Certification can be met by supplemental chlorination, with chlorine, of the "tertiary" water makeup to the cooling tower to attain a 1.0 mg/l total residual chlorine. It is our opinion that a level of breakpoint chlorination to achieve a "free chlorine residual" is not required.

The proposed treatment plan using chlorine will provide 1.0 mg/l total residual chlorine in the makeup water. The plan provides the required reliability by using proven technology for continuous treatment. It also includes the continuation of an ongoing monitoring program to ensure that no viruses enter the cooling tower.

COOLING TOWER MAKEUP TREATMENT PLAN

I. BACKGROUND

The following is presented as background information and includes criteria used in developing the proposed treatment plan.

A. SITING PERMIT EXCERPT

Section XIV of the Conditions of Certification for the existing Pinellas County Resource Recovery Facility states the following:

C. Cooling Tower

1. Makeup Water Constituency

The Resource Recovery Facility shall utilize only treated sewage effluent, or stormwater runoff from the stormwater holding pond, as cooling tower makeup water. The effluent shall have received prior to use in the tower, as a minimum, secondary treatment, as well as treatment described in Condition XIV.C.2 below. Use of waters other than treated sewage effluent or site stormwater, i.e., higher quality potable waters, or lower quality less-than-secondarily treated sewage effluent, will require a modification of conditions agreed to by the Southwest Florida Water Management District and the Department, and must be approved by the Governor and Cabinet.

2. Chlorination

~~Free~~ chlorine levels in the cooling tower makeup water shall be continuously monitored, prior to insertion in the cooling towers. Sewage effluent used as makeup shall be treated if necessary to maintain a 1.0 mg/liter ~~free~~<sup>total</sup> chlorine residual after fifteen minutes contact time [emphasis added]. Chlorination should occur at an effluent turbidity of 5 Nephelometric Turbidity Units or less.

3. Special Studies

Upon satisfactory demonstration to the Department that the number of viruses entering the towers in the effluent makeup can be reduced to an undetectable level with the use of a lesser amount of chlorination or alternate treatment, the above requirement may be altered. This demonstration may occur through performance of special studies approved by the Department. Alteration of the chlorination requirements must still insure adequate treatment for the control of bacterial growth in the cooling towers.

B. DEPARTMENT OF ENVIRONMENTAL REGULATION WRITTEN RESPONSE DATED APRIL 24, 1979 (See Appendix A)

The review of the application by the Florida Department of Environmental Regulation (DER) Staff discussed the proposed treatment. They were in agreement that the effluent from the St. Petersburg or Largo Wastewater Treatment Plants (WWTP), with additional chlorination prior to entering the cooling tower as makeup, "... should not significantly increase public exposure to

pathogenic bacteria or viruses." They referred to an article in this review that indicated a potential for using chlorine dioxide as an alternate to chlorination for the cooling tower makeup treatment.

The Special Studies section of the permit allows for the use of alternative methods of bacteria and virus destruction as a positive means of introducing the best available control technology (BACT) into a treatment scheme.

C. THE USE OF CHLORINE DIOXIDE AS A SUBSTITUTE FOR CHLORINE

After discussions with Water Services Division of UOP Inc., local WWTP personnel, and a comparison of the on-site treatment processes involved in the application of chlorine to the cooling tower makeup, it was resolved by UOP and technically agreed with by Henningson, Durham, and Richardson (HDR) that chlorine dioxide could be used in lieu of chlorine. Mr. D. F. Acenbrack, Director of the Department of Solid Waste Management, wrote a letter to Mr. Hamilton Oven, Administrator of Power Plant Siting for DER, (Appendix "B") requesting a change from the use of chlorine to chlorine dioxide for treatment of the cooling tower makeup. Mr. Oven recommended that a permit change should not be made, (Appendix "C") but that the use of chlorine dioxide would be allowed if the installation complied with the condition of achievement of the 1.0 mg/l free chlorine residual level.

Based on the decision that chlorine dioxide could be used in lieu of chlorine, a chlorine dioxide system was installed. The system was supplied by Water Services Division and is designed to

supply a maximum of 6.4 pounds per hour of chlorine dioxide ( $\text{ClO}_2$ ) to the cooling tower makeup line. This would yield an application rate of about 6.4 mg/l to a maximum flow of 2000 gallons per minute (gpm). The chlorine dioxide solution is injected approximately 250 feet upstream of the cooling water basin level control valve providing approximately one minute of retention time at the normal makeup rate of 900-1000 gpm. The chlorine dioxide addition was to be controlled by an oxidation/reduction potential (ORP) measurement which is sampled immediately before the level control valve.

The original economic considerations for the use of chlorine dioxide in lieu of chlorine have proven to be inaccurate. At this point RUST International Corporation, successor to Procon Inc., was asked to evaluate the existing chlorine dioxide feed system.

D. EVALUATION OF EXISTING CHLORINE DIOXIDE FEED SYSTEM

The chlorine dioxide feed system was initially evaluated on a mechanical and application control basis. The process variables include makeup flowrate, pressure at injection point, and chlorine dioxide demand. The original design basis of the system was to feed a sufficient amount of chlorine dioxide solution to maintain a  $\text{ClO}_2$  residual of 1.0 mg/l, after a minimum 45 second reaction time, in a design 1200 gpm makeup flowrate. Problems were encountered due to a higher than expected pressure at the point of injection and the failure of the ORP probe to effectively detect the level of  $\text{ClO}_2$  residual for control purposes.

Flowrate to the tower will also fluctuate with the cooling water system evaporation and blowdown changes.

Several schemes were developed to control the chlorine dioxide injection in response to the changes in the process variables. Further investigations into the control technology for continuously monitoring chlorine dioxide residuals in wastewater revealed that no proven instrumentation is currently available for this service. The lack of adequate automatic instrumentation has resulted in a manually controlled addition program. To maintain a 1.0 mg/l  $\text{ClO}_2$  residual with a manual system requires a high  $\text{ClO}_2$  feed rate to allow for fluctuation in system variables (flow, pressure, etc.). This substantially increases treatment costs for the  $\text{ClO}_2$  feed system.

In the process of determining the new design basis required for these treatment schemes, the plant engineers and Water Services initiated additional testing of the wastewater effluent supply to the plant. In examining the results of these and other WWTP wastewater test data, it was discovered that there was a discrepancy in the way the chlorine residual was reported. This discrepancy has caused us to look more deeply into the background of the original purpose of the on-site treatment of the wastewater effluent makeup to the cooling tower.

E. NORTHEAST ST. PETERSBURG WASTEWATER TREATMENT PLANT

The Northeast St. Petersburg Wastewater Treatment Plant (NEWWTP) provides tertiary treated wastewater for distribution to a reclaimed water system in Pinellas County. The plant is an

activated sludge plant with multimedia filtration and chlorination provided. The effluent from the multimedia filters is chlorinated (7-8 mg/l  $Cl_2$ ) to maintain a combined chlorine residual of approximately 1.0 mg/l at the outlet from the chlorine contact chamber. The current average daily flow of approximately 10 MGD provides an average contact time in the chlorine contact chamber in excess of 1 hour. The minimum design contact time is 26 minutes at a peak flow of 32 MGD. Tertiary treated wastewater from the City of St. Petersburg's reclaimed water distribution system, to which the NEWWTP discharges, is currently used as the primary source of cooling tower makeup water at the Pinellas County Resource Recovery Facility. In the near future, the wastewater from this system will only be used as an alternate to the Largo Wastewater Treatment Plant's tertiary wastewater.

F. LARGO WASTEWATER TREATMENT PLANT

The Largo Wastewater Treatment Plant is currently undergoing an upgrade which will provide a tertiary treated wastewater low in nutrients and suspended solids. The plant will be an activated sludge plant with nitrification, denitrification, phosphate reduction, filtration, and chlorination provided.

The plant as currently operating provides wastewater for distribution to an irrigation system for two golf courses (Airco and Feather Sound). The plant adds 8-9 mg/l of chlorine to the secondary effluent to maintain a combined chlorine residual of 1.0-1.5 mg/l at the end of the irrigation distribution system at Feather Sound (located approximately 3 miles from the plant's



discharge point). The ultimate discharge point for the plant is Tampa Bay. In the current plant, the distribution system serves as the chlorine contact chamber, whereas, in the upgraded facility a chlorine contact chamber will provide a minimum of 15 minutes contact time, at peak daily flow, prior to discharge to the distribution system.

When the upgraded plant is operational its effluent will be used as the primary source of cooling tower makeup water at the Pinellas County Resource Recovery Facility. It is anticipated that this source of water will be low in ammonia and will contain a total residual chlorine level of 1.0 mg/l.

G. CURRENT CHLORINATION PRACTICES IN MUNICIPAL WASTEWATER TREATMENT PLANTS

Chlorine is a strong oxidizer and is often dissipated in side reactions with a variety of chemical constituents contained in wastewaters. Due to the presence of oxidizable and chlorine absorbing constituents, residual chlorine in conventional secondary wastewater treatment plant effluents exists almost exclusively as a combined residual.

Ammonia is of primary concern in sanitary wastewaters where a free chlorine residual is required. Establishment of a free chlorine residual involves breakpoint chlorination and is rarely practiced in wastewater treatment. Wastewater disinfection using breakpoint chlorination is generally uneconomical since the amount of chlorine required to establish the breakpoint requires a chlorine to ammonia ratio approaching 10 to 1 (by weight).

For example, data from the Northeast St. Petersburg Wastewater Treatment Plant reveals high ammonia levels (10-15 mg/l) which indicates that a chlorine dosage as high as 100-150 mg/l may be required to reach the breakpoint. Current practice at the plant however is not to go through breakpoint chlorination but only to establish a combined residual in the plant's effluent.

#### H. VIRUSES AND BACTERIA

Virus monitoring programs are on-going to detect the presence of the viruses in the effluent of the St. Petersburg wastewater treatment plants. A voluntary on-site virus monitoring program for the Pinellas County Resource Recovery Facility is underway and the samples to date have shown no virus demonstrated. The virus monitoring programs are being implemented by the Epidemiology Research Center of the Department of Health and Rehabilitative Services (HRS) of the State of Florida. The Director, Dr. F. M. Wellings, has written and published several articles concerning the use of the St. Petersburg wastewater treatment plant effluent for spray irrigation.

In order to prevent the entrance of viruses and bacteria into the treated wastewater effluent distribution system both solids removal and disinfection with chlorine are used at the wastewater treatment plants as described in sections I.E and I.F.

While there is always a possibility of demonstrating virus in the WWTP effluent due to an upset in the plant, we do have the

added chlorine contact time provided by the volume of the distribution system itself. Since there is no absolute correlation between residual chlorine levels and virus destruction due to the possibility of the virus being encapsulated in suspended solids, we must depend on the WWTP to remove the solids and chlorinate prior to distribution.

Once the wastewater enters the cooling tower basin as makeup, it is in an atmosphere that, without treatment, promotes bacterial and other microbial growth. Oxidizing biocides are used on both a continual and a shock basis for the destruction of these growths for process and health reasons.

## II. PROPOSED TREATMENT PLAN

From a review of the background presented and an analysis of the chemical and biological processes involved, it was concluded that an alternate treatment plan should be proposed as provided for in the guidelines outlined in the Special Studies section of the Conditions of Certification.

The plan being proposed for the supplementary treatment of the wastewater effluent makeup to the cooling tower would eliminate the use of chlorine dioxide and replace it with chlorine.

Specifically, we propose to:

- a. Provide a continuous total residual chlorine monitor prior to treatment.
- b. Measure the flowrate of the cooling tower makeup and provide a flow proportional signal to the chlorination

system. This will provide a primary basis for adjustment of the chlorine feedrate.

c. Provide a continuous total residual chlorine monitor sampling from the cooling tower makeup inlet after treatment. This monitor will provide a trim control signal to the chlorinator. This will serve to supplement the primary flow proportioning signal and provide for "fine tuning" the treatment system to ensure that 1.0 mg/l of total residual chlorine is maintained.

d. Provide a chlorination system that will be designed to add a sufficient amount of chlorine to the cooling tower makeup line to assure a 1.0 mg/l total residual chlorine concentration.

e. Continue the ongoing program of virus monitoring before and after on-site treatment to provide both an assurance of treatment adequacy and to create a data base to use in future applications of any treatment special studies.

f. Back up the results of the continuous monitors with regular grab samples and lab tests.

g. Continue the use of oxidizing biocides, on a "shock treatment" basis, in the cooling water system as required for microorganism control.

### III. RATIONALE FOR THE TREATMENT PLAN

To rationalize the basis for the treatment plan several underlying factors should be considered:

- a. The wastewater effluent supplied from the distribution system should already be virus and bacteria free and contain at least a trace of residual chlorine.
- b. Any additional on-site treatment at the resource recovery facility of the cooling tower makeup water should be considered as "supplementary" and not required to be an equivalent treatment to that afforded at the wastewater treatment plant prior to entering the distribution system.
- c. Virus monitoring programs are on-going to detect the presence of viruses in the effluent of the St. Petersburg wastewater treatment plants. An on-site virus monitoring program for the Pinellas County Resource Recovery Facility is underway and the samples to-date have shown no virus demonstrated.
- d. Chlorine is used in municipal wastewater treatment plants for viral and bacteriological destruction and proven means are available for the automation and control.
- e. The chlorine dioxide feed system now in use at the resource recovery facility has proven to be uneconomical and is not capable of being automatically controlled.

APPENDICES

- A. Florida Department of Environmental Regulation Staff  
Comments - 5 pages
- B. Letter from Mr. D. F. Acenbrack to Mr. Hamilton Oven - 1  
page
- C. Letter from Mr. Hamilton S. Oven, Jr. to Mr. D. F. Acenbrack  
- 1 page

The Florida Department of Environmental Regulation announces a public hearing to which the public is invited.

DATE AND TIME: February 29, 1984, at 10:00 a.m.

PLACE: Pinellas County Courthouse

5th Floor Assembly Room

315 Court Street

Clearwater, Florida

PURPOSE: To conduct a hearing relative to the effects of Pinellas County's proposed site for a 29 megawatt Resource Recovery power plant as required by the Florida Electrical Power Plant Siting Act, Section 403.508, Florida Statutes. Mr. William Williams, Hearing Officer, will conduct the hearing. Anyone wishing to become a party to the proceeding should contact Mr. Williams at the Division of Administrative Hearings, the Oakland Building, 2009 Apalachee Parkway, Tallahassee, Florida, 32301.

Best Available Copy



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

JAN 13 1984

REF: 4AW-AM

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

RE: Pinellas County Resource Recovery Facility

Dear Mr. Fancy:

This is in response to your letter dated December 6, 1983, regarding the issuance of a Prevention of Significant Deterioration (PSD) construction permit for the above referenced facility. We agree with your position that the Florida Department of Environmental Regulation should take the lead role in issuing the PSD permit for the proposed construction. We will review the power plant siting application concurrently as part of the dual review policy for energy facilities and submit any comments for your consideration in issuing the PSD permit. Please notify us and submit a preliminary determination and draft permit when they are issued.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "James T. Wilburn".

James T. Wilburn, Chief  
Air Management Branch  
Air and Waste Management Division

DER

JAN 17 1984

BAGM



Received DER

JAN 11 1984

PPS

TO: Hamilton S. Oven, Jr.  
THROUGH: Dan Williams  
FROM: Jim Estler  
DATE: January 11, 1984  
SUBJECT: Pinellas County Resource Recovery  
Project PA 83-18

The District received a response from BAQM on the BACT determination on January 3, 1984. Based on their response the following are our comments on the conditions of certification for Pinellas County Resource Recovery:

Air

1. Item XIV.A.1.a.(8): Subsection 17-2.600(5)(a)1., F.A.C. is quoted as the applicable regulation regarding exceedences of the 10% opacity limitation. This subsection deals with fossil fuel fired steam generators and by definition is not appropriate.
2. The maximum steam production of the unit should be specified. Compliance testing should be accomplished at +10% of the maximum steam production capacity.
3. Item XIV.A.1.c, testing for carbon monoxide and lead should be added to the list.
4. Item XIV.A.2. Design specifications and drawings on the ESP should be submitted to the Southwest District Office prior to the beginning of construction of Phase II.
5. Item XIV.A.3. Add ...the boiler and annually from the date of testing, thereafter....
6. Item XIV.A.4.a. Add ... shall be submitted within forty-five days of testing to the DER ....

Solid/Hazardous Waste

1. Item XIV.E.6. States that "boiler residue may be placed below the maximum groundwater level without permanent leachate controls unless the residue is determined to be Hazardous Waste". This statement does not conform with the Department position on the use of Fly Ash Material, including aggregate from resource recovery facilities outlined in Ray Moreau's memo of December 19, 1983 to the

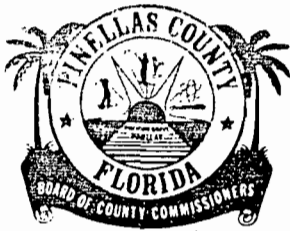
MEMORANDUM

Hamilton S. Oven, Jr.

Re: Pinellas County Resource Recovery  
Project PA 83-18

District and Subdistrict Managers. The conditions of this certification should be adjusted to incorporate the agency position.

JWE/scm



# BOARD OF COUNTY COMMISSIONERS

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DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565

P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623



December 28, 1983

Received DER

Mr. Doug Bramlett  
Environmental Supervisor  
Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, FL 33610-9544

JAN 3 1984

PPS

Re: Non-Compliance Notification Per Pinellas County Power Plant Siting Certification (PPSC)

Dear Mr. Bramlett:

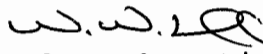
The following information is submitted in compliance with paragraph 11, Conditions of Certification, covering the Pinellas County Power Plant Siting Certification (Case No. 78-11).

On Monday afternoon, December 26, during either planned Florida Power Corporation outages or "brown-outs," the switch on the lift station was tripped and failed to re-set. This allowed blow-down waters to escape through a manhole into a green area with no water escaping to control ditches.

This situation was corrected on Tuesday morning, and to insure against any further malfunctions, a contractor is pre-installing a diesel-powered emergency pump which will eliminate power failures.

Upon completion of this installation, your office will be notified.

Very truly yours,

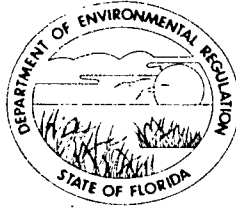
  
W. W. Dasher, Director  
Public Works Operations

WWD:ltl

cc: Dan Williams, Asst Dist Dir  
✓ Buck Oven, DER, Tallahassee  
Gene E. Jordan, Dir, PW&U  
W. Gray Dunlap, County Attorney

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

December 6, 1983

Mr. James Wilburn, Chief  
Air Management Branch  
USEPA, Region IV  
345 Courtland Street, N.E.  
Atlanta, Georgia 30365

Dear Mr. Wilburn:

Enclosed is a copy of the Pinellas County power plant siting application received by the department on September 6, 1983. This application is a revised version of an earlier submittal that was received in August. The project consists of the construction of a third boiler at the existing resource recovery facility. The increased emissions resulting from this project make it subject to the federal PSD regulations.

According to the November 22, 1983, Federal Register the State of Florida will assume full delegation of PSD review and approval as of December 22, 1983. At this time projects such as the above will be subject to the extensive power plant siting certification requirements only. These requirements include meeting all of the PSD regulations contained in the State rules. Until December 22, these projects are also required to obtain a federal PSD permit.

In view of the fact that Florida will receive full delegation in two weeks and that this application is in the beginning of the review process, we feel that a federal PSD permit, approved by your office, is not necessary in this particular case. The permit would only be a duplicative review of already mandated requirements and, in any case, will not be required after December 22.

Mr. James Wilburn, Chief  
Page Two  
December 6, 1983

Please inform us as to how you would like us to proceed in this case. If you need any clarification or have any questions please let us know.

Sincerely,



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

CHF/TR/s  
enclosure

I. Impacts on Air Quality and Water Quality

1. Air Quality

a. Rule Applicability

The proposed site of the Pinellas County Resource Recovery Facility (RRF) is located in an area designated as nonattainment for ozone under 40 CFR 81.310 and Rule 17-2.410, Florida Administrative Code, and attainment under 40 CFR 81.310 and Rule 17-2.420, for all other criteria pollutants.

The maximum emissions for the proposed resource recovery facility and significant emission rates (40 CFR 52.21(b)(23) and Rule 17-2.500-2), in tons per year, are as follows:

<u>Pollutant</u>	<u>Maximum Emission</u>	<u>Significant Emission Rate</u>
Particulate Matter (PM)	109	25
Sulfur Dioxide (SO <sub>2</sub> )	364	40
Nitrogen Oxides (NO <sub>x</sub> )	577	40
Carbon Monoxide (CO)	288	100
Hydrocarbons (HC)	58(1)	40(VOC)
Lead (Pb)	5.7	0.6
Mercury (Hg)	2.1	0.1
Beryllium (Be)	0.00025	0.004
Fluorides	19	3
Chlorides	764(2)	1 (Vinyl Chloride)

(1) non-methane HC emissions (VOC) will be less than 40 tons per year

(2) vinyl chloride emissions will be less than 1 ton per year

The proposed facility has the potential to emit more than 100 tons per year of one or more regulated pollutants and is, therefore, subject to review for prevention of significant deterioration (PSD) under 40 CFR 52.21 and Rule 17-2.500(5)(c). PSD review consists of a determination of best available control technology (BACT) and an air quality impact analysis for each attainment and noncriteria pollutant that would be emitted in a significant amount. For the proposed facility, PSD review is required for seven pollutants: PM, SO<sub>2</sub>, NO<sub>x</sub>, CO, lead, mercury, and fluorides.

The proposed facility is not subject to nonattainment review for volatile organic compounds (VOC) because it is a minor source of this pollutant and the proposed increase will be less than 100 tons per year.

b. Control Technology Review

Based on an analysis of the economic, environmental, and energy impacts of the proposed project - the construction of a third Martin combustion unit, the Department has made a preliminary BACT determination for the boiler. The emission limits from the BACT determination are as follows:

<u>Pollutant</u>	<u>Emission Limit</u>
Particulate Matter	0.03 gr/dscf, corrected to 12 percent CO <sub>2</sub>
Sulfur Dioxide	83 pounds per hour, maximum 3-hour average
Nitrogen Oxides	132 pounds per hour
Carbon Monoxide	66 pounds per hour
Lead	1.3 pounds per hour
Mercury	3200 grams per day*
Visible Emissions	10% opacity

\* When more than 2,205 lb/day of municipal sewage sludge (dry basis) is fired, compliance with the mercury emission limit shall be demonstrated in accordance with 40 CFR 61, Method 101 Appendix B.

Compliance with the limitations for particulates, sulfur dioxide, visible emissions, and nitrogen oxides should be demonstrated in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 5, 6, 9 and EPA Method 9 (40 CFR 60, Appendix A), respectively.

A continuous monitoring system to measure the opacity of emissions shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710, Continuous Monitoring Requirements. The system must be installed and operational prior to compliance testing.

(1) BACT for Particulate Matter

The proposed mass burn combustion unit will have a charging rate of more than 50 tons per day, and is therefore, subject to the provisions of 40 CFR 60.50, Subpart E, New Source Performance Standards (NSPS). The NSPS for particulate matter emissions is a rate not to exceed 0.08 gr/dscf corrected to 12 percent CO<sub>2</sub>. An electrostatic precipitator (ESP) will be installed to control particulate emissions. The two existing mass burn units have a permitted particulate emission limit not to exceed 0.08 gr/dscf (NSPS).

For the third unit, the applicant has proposed better control on particulate emissions than the 0.08 gr/dscf required by NSPS. The control equipment is an ESP capable of achieving the 0.03 gr/dscf particulate emission limit proposed by the County and accepted by the Department as BACT. The baghouse is another control device capable of achieving the particulate emission limit determined as BACT, but was not recommended for two reasons: (1) the existing combustion units use ESPs, therefore, using an ESP will reduce the spare parts inventory; and (2) maintenance and operating personnel have experience with ESP control devices.

#### (2) BACT for Sulfur Dioxide

The Department has determined the limit for SO<sub>2</sub> emissions to be 83 pounds per hour. The amount of SO<sub>2</sub> generated when burning municipal type waste is less than the SO<sub>2</sub> emissions from the burning of distillate fuel oil containing 0.5 percent sulfur. The use of low sulfur fuel oil is considered one method of controlling SO<sub>2</sub> emissions, therefore, the installation of a flue gas desulfurization system is not warranted.

#### (3) BACT on Nitrogen Oxides

In the application, the applicant recommends that BACT is the use of proper boiler design and operating procedures. The proposed NO<sub>x</sub> emission rate is 132 pounds per hour as indicated in the air quality analysis. Annual emissions of NO<sub>x</sub> will be 577 tons. This level of control is judged to represent BACT.

During combustion of municipal solid waste, NO<sub>x</sub> is formed in high temperature zones in and around the furnace flame by oxidation of atmospheric nitrogen and nitrogen in the waste. The two primary variables that affect the formation of NO<sub>x</sub> are the temperature and the concentration of oxygen. Techniques such as the method of fuel firing, the distribution of combustion air between overfire and underfire air, exhaust gas recirculation and decreased heat release rates have been used to reduce NO<sub>x</sub> emissions. A few add-on control techniques such as the catalytic reduction with ammonia process and the thermal de-NO<sub>x</sub> are still experimental. None of these techniques are considered to be demonstrated technology for the proposed project.

#### (4) BACT on Carbon Monoxide

Carbon monoxide is a product of incomplete combustion by insufficient air supply. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The Department agrees with the applicant that BACT is the use of state-of-the-art boiler controls to insure sufficient underfire and overfire air so that the



emissions of products of incomplete combustion are minimized. The proposed CO emission rate is 66 pounds per hour. This level of control is judged to represent BACT.

(5) BACT on Lead

Lead emissions from the boiler occur because this element is present in varying amounts in the solid waste. The inlet temperature of the ESP is estimated at 425-475 °F. At these temperatures the lead emissions should not be in a vaporous state, and will be removed by the ESP as particulate.

(6) BACT on Mercury

The mercury emission limit is the National Emission Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The proposed source would be subject to the provisions of NSPS, 40 CFR 60.150, Sewage Treatment Plants, if more than 2,205 pounds per day (dry basis) municipal sewage sludge is charged. The Department has determined the emission limit for mercury to be 3,200 grams per day applicable only when more than 2,205 pounds per day municipal sewage sludge (dry basis) is charged into the mass burn combustion unit.

(7) BACT on PVC and Hydrogen Fluoride

The combustion of plastics can result in the emission of acid gases, such as hydrogen chloride and hydrogen fluoride. Burning polyvinyl chloride (PVC), of all the polymers, has been implicated as causing the most serious disposal problem due to the release of HCl gas. This problem has long been realized resulting in other polymers being used in packaging. Burning polypropylene and polystyrene, for example, produce carbon monoxide and the monomer styrene.

Both HCl and HF are hydrogen halides and are soluble in water. A water scrubbing system will remove approximately 75% of the HF gases. The Department does not believe the air quality impact due to HF emissions justifies the cost of installing a wet scrubber system.

(8) BACT on Visible Emissions

The visible emissions limit of 10% opacity is based on operating data from the two existing units.

c. Air Quality Impacts

As noted in section I. 1. a., the proposed source at the Pinellas County RRF will result in significant emissions of the criteria pollutants PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and lead, and of the non-criteria pollutants mercury and fluorides.

The air quality impact analysis required for these pollutants includes:

- ° An analysis of existing air quality;
- ° A PSD increment analysis (for PM and SO<sub>2</sub> only);
- ° An Ambient Air Quality Standards (AAQS) analysis;
- ° An analysis of impacts on soils, vegetation, visibility, acid rain, and growth-related air quality impacts; and;
- ° A "good engineering practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses depend on air quality modeling carried out in accordance with EPA guidelines.

Based on these required analyses, the department has reasonable assurance that the proposed source at the Pinellas County RRF, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A discussion of the modeling methodology and required analyses follows:

#### (1) Modeling Methodology

Two EPA-approved dispersion models, the Single Source CRSTER model and the Industrial Source Complex Short-term (ISCST) model, were used in the air quality impact analysis. Both of these models relate ground-level concentrations at some distance to pollutant emissions of some inert gas or small particles from a point source by imposing a Gaussian solution to the steady-state mass conservation equation. The CRSTER model, which is confined by the collocation of all point sources, was used to identify the critical years of meteorology. The ISCST model, which allows for separation of sources and several other features, such as the inclusion of downwash, was used to refine the analysis.

The surface and upper air meteorological data used in these models were National Weather Service data collected at Tampa, Florida, during the period 1970-1974. Since five years of data were used, the highest, second-high short-term predicted concentrations may be used to compare with the appropriate ambient standard or PSD increment.

The stack parameters and emission rates used in evaluating the ambient impacts are contained in Table I-1 and Table I-2, respectively. Only for the pollutants SO<sub>2</sub> and PM were all the sources evaluated. Total ambient air quality impacts were based on the modeled impacts plus the monitored "background" concentrations.

## (2) Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review. In general, one year of quality assured data using an EPA-reference, or the equivalent, monitor must be submitted. Sometimes less than one year of data, but no less than four months, may be accepted when department approval is given. An exemption to this requirement can be obtained if the maximum air quality impact, as determined through modeling, is less than a pollutant-specific de minimus concentration. In addition, if current monitoring data already exist and these data are representative of the proposed source area, then at the discretion of the department these data may be used.

The predicted maximum air quality impacts of the proposed project (Unit 3) for each of the seven pollutants subject to review are given in Table I-3 along with the monitoring de minimus levels. From this table it is seen that PM, NO<sub>x</sub>, CO, and Hg have maximum air impacts less than the de minimus level; therefore no preconstruction monitoring is required. Sufficient data in the area of the source already exist for SO<sub>2</sub> and Pb to define existing air quality for these pollutants. The department did not require additional monitoring for these pollutants. Although fluorides are subject to monitoring requirements, no EPA-approved method currently exists to measure ambient concentration of this pollutant.

Table I-4 shows the monitored ambient air quality levels for the most recent complete year (1982) for all the criteria pollutants, including the required data for SO<sub>2</sub> and Pb. These data were collected from existing monitors in Pinellas County.

## (3) PSD Increment Analysis

The Pinellas County RRF is located in an area where the Class II PSD increments apply. The facility is also located approximately 75 kilometers from the Class I Chassahowitzka National Wilderness Area. As such as analysis of the impact on this area must be performed.

A PSD increment analysis is required for the pollutants SO<sub>2</sub> and PM only. The PSD increments represent the amount that new sources in the area may increase ambient ground-level concentrations of these pollutants for various time averages. At no time, however, can the increased loading of these pollutants into the atmosphere from these new sources cause or contribute to a violation of the ambient air quality standards.

For the Pinellas County RRF the proposed Unit 3 along with the previously built Units 1 and 2 all consume PSD increment. In addition, several other new sources in the area have been identified which may interact with the Pinellas County RRF in

consuming the allowed PSD increments. These sources are the McKay Bay RRF and the TECO Big Bend power plant.

Atmospheric dispersion modeling was performed, as discussed previously, taking into account only those new sources which consume PSD increment. The results of this modeling are summarized in Table I-5.

The impact of these sources on the nearest Class I area was not explicitly modeled. The models used in this air quality analysis are not appropriate for predicting ground-level concentrations beyond 50 kilometers. However, the impact on the Class I area may be extrapolated from the modeling results showing the proposed Unit 3 impact on the two distant nonattainment areas. An SO<sub>2</sub> nonattainment area is located near Tarpon Springs approximated 23.5 kilometers from the Pinellas County RRF. The impacts of Unit 3 alone on this area are 2.2 ug/m<sup>3</sup>, 3-hour average; 0.3 ug/m<sup>3</sup>, 24-hour average; and 0.02 ug/m<sup>3</sup>, annual average. These values are less than significant for impacts on nonattainment areas and would be much less at the distance of the Class I area. A PM nonattainment area is located in Tampa, 14.4 kilometers from the RRF. Here, the impacts of Unit 3 alone are 0.01 ug/m<sup>3</sup>, 24-hour average and 0.006 ug/m<sup>3</sup>, annual average. Again, these impacts are less than significant for nonattainment areas and the concentrations would be much less at the distance of the Class I area. Table I-5 indicates the results of all the PSD increment modeling.

#### (4) AAQS Analysis

Given existing air quality in the area of the Pinellas County RRF, the proposed Unit 3 emissions are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are contained in Table I-6.

Of the pollutants subject to PSD review only the criteria pollutants SO<sub>2</sub>, PM, CO, NO<sub>2</sub>, and Pb have an AAQS to compare with. All sources listed in Table I-1 were modeled to determine the maximum ground-level impacts for SO<sub>2</sub> and PM. For CO, NO<sub>2</sub>, and Pb only the three units at the Pinellas County RRF were modeled to determine the maximum ground-level concentrations resulting from this facility.

The total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentrations. This "background" concentration takes into account all sources of the particular pollutant in question that were not explicitly modeled. A conservative estimate of these "background" concentrations is given by the second highest monitored concentration as listed in Table I-4. This is a conservative estimate because sources used in the modeling may have contributed to the monitored value and this would be contributing doubly to the total impact.

(5) Analysis of Impacts on Soils, Vegetation, Visibility, and Acid Rain and Growth-Related Air Quality Impacts

(a) Impact on Soils and Vegetation

The maximum ground-level concentrations predicted to occur as a result of emissions from the proposed project in conjunction with all other sources, including a background concentration, will be below all applicable AAQS including the secondary standards designed to protect public welfare-related values. No soils or species of vegetation highly sensitive to these emissions in the concentrations predicted are known to occur in the site vicinity, or in the Chassowitzka Class I area.

(b) Impact on Visibility

A level I visibility screening analysis was performed to determine if any impact may occur in the Class I area. The analysis showed that there was no potential for an adverse impact on visibility in this area.

(c) Acid Rain Impact

The increased emissions of SO<sub>2</sub> and NO<sub>x</sub>, precursors to possible acid formation and subsequent acidic rain, from the proposed Unit 3 project are relatively small. In comparison with the emissions of these pollutants from nearby power plants the increased loading due to the proposed project is inconsequential. Thus, no adverse impact on the acidity of rainfall is expected as a result of this project.

(d) Growth-Related Air Quality Impacts

The construction of the proposed Unit 3 will require between 200 and 300 persons. Nearly all will be from the local area. The project is not expected to stimulate any additional growth or shift the nature of projected growth to the extent that an air quality impact will result.

(e) GEP Stack Height Determination

Good engineering practice (GEP) stack height means the greater of: (1) 65 meters; or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. For the proposed project the building height is 35.4 meters and the building width is 35.0 meters. Thus definition (2) above leads to a GEP stack height of 87.9 meters.

Due to the proximity of the facility to an airport, the stack height cannot be built to the GEP height. The applicant has addressed the possible increased ground-level concentrations (as a result of aerodynamic effects of the nearby building) by including a downwash mechanism in the modeling.

TABLE I-1  
 PINELLAS COUNTY RESOURCE RECOVERY PROJECT  
 SOURCE PARAMETERS USED IN MODELING

Source	UTM-E (km)	UTM-N (km)	Stack Height (m)	Exit Temperature (K)	Exit Velocity (m/s)	Stack Diamete (m)
RRF Unit 3	335.2	3084.1	49.1	505	26.8	2.37
RRF Units 1-2	335.2	3084.1	49.1	505	26.8	2.37
McKay Bay RRF	360.0	3091.9	45.7	500	21.3	1.91
TECO Big Bend	361.9	3075.0	149.4	426	15.6	7.00
FPC Bartow	342.4	3082.7	91.4	408	44.0	3.35
FPC Higgins	336.5	3098.5	53.0	422	10.4	3.81
Anclote Unit 1	324.9	3119.0	152.1	416	50.0	3.66
Anclote Unit 2	324.9	3119.0	152.1	416	28.3	3.66
Hooker Pt. Units 1,2	360.0	3087.5	61.0	427	8.1	4.30
Hooker Pt. Units 3,5	360.0	3087.5	93.3	400	26.9	3.20
Hooker Pt. Unit 4	360.0	3087.5	93.3	438	42.4	2.90
Hooker Pt. Unit 6	360.0	3087.5	93.3	417	23.4	5.40
TECO Gannon Units 1-5	385.0	3091.0	85.3	403	9.2	3.43
TECO Gannon Unit 6	385.0	3091.0	85.3	403	18.0	2.87

Area Source	UTM-E (km)	UTM-N (km)	Release Height (m)	Area Width (m)
Golden Triangle	330.0	3085.0	12.45	100



TABLE I-3

MAXIMUM AIR QUALITY IMPACTS (UNIT 3 ONLY)  
FOR COMPARISON TO DEMINIMUS AMBIENT LEVELS

<u>Pollutant</u>	<u>Maximum Modeled Concentration (ug/m<sup>3</sup>)</u>	<u>Deminimus Ambient Impact Level (mg/m<sup>3</sup>)</u>
SO <sub>2</sub> (24-hour)	15.6	13
PM (24-hour)	4.1	10
NO <sub>2</sub> (Annual)	0.9	14
CO (8-hour)	8.6	575
Pb (24-hour)	0.25	0.1
Hg (24-hour)	0.082	0.25
Fluorides (24-hour)	0.82	0.25



TABLE I-4

PINELLAS COUNTY 1982 MONITORING DATA IN THE VICINITY OF  
THE PINELLAS COUNTY RESOURCE RECOVERY FACILITY

<u>Pollutant</u>	<u>Site</u>	<u>Averaging Time</u>	<u>Maximum Concentration(ug/m<sup>3</sup>)</u>	<u>2nd Maximum Concentration(ug/m<sup>3</sup>)</u>
SO <sub>2</sub>	3980 023	3-hour	642	485
		24-hour	205	112
		Annual	24	-
PM	3980 023	24-hour	67	64
		Annual	33	-
NO <sub>2</sub>	3980 018	Annual	27	-
CO	3980 018	1-hour	14000	11000
		8-hour	7000	6000
Pb	3980 024	Quarterly	0.8	0.7

TABLE I-5  
 COMPARISON OF NEW SOURCE IMPACTS  
 WITH PSD INCREMENTS

Pollutant and Time Average	PSD Class II Increment( $\mu\text{g}/\text{m}^3$ )	Predicted Concentration( $\mu\text{g}/\text{m}^3$ )	Increment Consumed(%)	PSD Class I Increment( $\mu\text{g}/\text{m}^3$ )	Predicted Concentration( $\mu\text{g}/\text{m}^3$ )
SO <sub>2</sub>					
3-hour	512	246	48	25	<<25
24-hour	91	81	89	5	<<5
Annual	20	5	25	2	<<2
PM					
24-hour	37	6	16	10	<<10
Annual	19	0.4	<0.1	5	<<5

TABLE I-6  
COMPARISON OF TOTAL IMPACTS WITH  
AMBIENT AIR QUALITY STANDARDS

Pollutant and Time Average	Maximum Impact Unit 3 (ug/m <sup>3</sup> )	Maximum Impact All Sources (ug/m <sup>3</sup> )	Existing Background (ug/m <sup>3</sup> )	Maximum Total Impact (ug/m <sup>3</sup> )	Florida AAQS (ug/m <sup>3</sup> )
SO <sub>2</sub>					
3-hour	24	269	485	754	1300
24-hour	16	96	112	208	260
Annual	0.6	14	24	38	60
PM					
24-hour	4	6	64	70	150
Annual	0.2	0.7	33	34	60
NO <sub>2</sub>					
Annual	1	3	27	30	100
CO					
1-hour	13	39	11000	11039	40000
8-hour	9	27	6000	6027	10000
Pb					
Quarterly	0.3	0.7	0.8	1.5	1.5

INTEROFFICE MEMORANDUM

For Routing To District Offices  
And/Or To Other Than The Addressee

To: Buck Owen Locn.: \_\_\_\_\_  
To: \_\_\_\_\_ Locn.: \_\_\_\_\_  
To: \_\_\_\_\_ Locn.: \_\_\_\_\_  
From: \_\_\_\_\_ Date: \_\_\_\_\_

Reply Optional [ ] Reply Required [ ] Info. Only [ ]  
Date Due: \_\_\_\_\_ Date Due: \_\_\_\_\_

552-7270

TO: Jim Estler  
THRU: Clair Fandy *CF*  
FROM: Ed Palagyi *EP*  
DATE: December 28, 1983  
SUBJ: BACT - Pinellas County Resource Recovery Unit 3

**RECEIVED**  
DEC 29 1983  
DIV. ENVIRONMENTAL PERMITTING

Enclosed is a copy of the BACT determination for the third mass burn unit proposed to be installed at the Pinellas County Resource Recovery Facility. Your comments of October 25, 1983, that you made reference to in your memorandum of December 6, 1983, were received four weeks after the deadline date. Due to the workload at BAQM, we cannot always consider comments submitted after our established deadlines. In this case, however, the applicant had revised the original application and omitted several supplements, therefore, the late response was unavoidable.

Comments obtained from you and the Pinellas County local program were taken into consideration in the attached final BACT determination. I will explain what comments from both offices were considered and why or why not.

Your memorandum of October 25, 1983, will be discussed first and in the same order as presented.

1. The proposed emissions that were used in the air modeling exercises were considered as BACT limits. Air pollutants from the burning of municipal waste will vary from one geographical area to another as well as during the different seasons of a year. The emissions that indicate, by modeling, to have no significant impact to the ambient air were considered as BACT limits. Actual emissions from the Pinellas County existing units and other similar sized mass burn units were also taken into consideration.
2. The BACT clearinghouse information that you received was to show what pollutants had been considered by other states for a MW incinerator. I did not intend for you to evaluate the rationale behind these determinations. My intent was not very clear and I will try to be more specific in the future.

3. The final BACT determination has actual rate limits for the pollutants NOx and CO. Stack testing would be the test method used to show compliance.
4. Hydrocarbons are not a regulated air pollutant and were not considered in this BACT determination. Incineration is a method of control for VOC emissions. The clearinghouse information, referred to earlier, lists VOC emissions for three of the seven facilities. In each case the annual emissions are less than 40 TPY and by our rules would not be considered in a BACT determination. (Significant emission VOC rate is 40 TPY, table 500-2 in 17-2.) Chlorides and acid gases are discussed in the final BACT determination.

The Pinellas County, Division of Air Quality submitted seven comments concerning the third mass burn unit. Each comment will be reviewed in the same order as presented in their letter of October 31, 1983.

1. This is a statement supporting the proposed 0.03 gr/dscf particulate emission limit.
2. This is a statement supporting the 83 lb/hr SO<sub>2</sub> emission limit as being reasonable and the recommendation for a stack test to determine compliance. A stack test will be required.
3. This statement discusses NOx and CO emissions. This input was considered in preparing the BACT rationale section of the determination. The recommendation was 0.6 lb NOx/million Btu heat input. An energy basis standard was not used due to the difficulty of obtaining a reliable HHV.
4. This statement agrees with the proposed control of Hg, Be, and Pb.
5. Chlorides are discussed in the final BACT determination.
6. This is a statement concerning fluoride emissions which are discussed in the final BACT.
7. This is a statement concerning hydrocarbon and VOC emissions. These two pollutants were not significant in this BACT determination.

Memorandum  
Page Three  
December 28, 1983

In light of the above you can see that input from district and local programs are very important in preparation of a BACT determination, and are considered. Both you and Mr. Stowers are listed as review group members indicating that both of you submitted recommendations to be considered in the determination.

Please understand that many times a preliminary draft of a BACT determination is sent out with the clock running, and as you know day 45 approaches quickly, thus the importance of a comment deadline.

The enclosed BACT determination is for the Power Plant Siting certification, the draft of which is being reviewed. Please call me if you find the determination to be in need of additional information. There is still time to make changes.

EP/s

cc: Marshall Mott-Smith

**FICK**

Jacob Stowers III, Pinellas County

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Hamilton S. Owen, Jr.  
FROM: Dan Williams *DW*  
DATE: December 27, 1983  
SUBJECT: Pinellas County Resource Recovery  
Project PA 83-18

In response to your memo of December 12, 1983, the following are the District's comments on Conditions of Certification:

I. Solid Waste Section: Last page of the Conditions of Certification XV "Status of Existing Permits" Paragraph A and B. Would it not be a better idea to state that Permit S052-6612 is already null and void because the resource recovery facility is already in operation?

II. Air Section: Our concerns voiced in our memo of December 6, 1983 and October 25, 1983, to the BAQM and PCDEM letter to BAQM dated October 31, 1983, have not been addressed (see attached). Comments will not be provided until these concerns are adequately resolved.

Please let me know if we can be of any assistance.

JWE/scm

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

# INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
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To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Ed Palagyi

THROUGH: Bill Thomas *[Signature]* and Dan Williams

FROM: Jim Estler *[Signature]*

DATE: December 6, 1983

SUBJECT: Your Memo of November 16, 1983 Regarding The  
BACT Determination For the Pinellas County  
Resource Recovery Project

The "final draft" BACT does not address most of the issues raised by, nor does it incorporate most of the recommendations made by this office in our memo of October 25, 1983, or by the Pinellas County Department of Environmental Management in their letter of October 31, 1983. After having spent considerable time reviewing the application, it seems reasonable to request that BAQM provide a written explanation of why the comments of both offices were not considered. This explanation should be included as part of the BACT Determination Rationale.

Please endeavor to understand that we are not trying to be picky, however, we are the ones that have to live with and enforce the terms and conditions of the certification ultimately issued.

JWE/scm

cc: Marshall Mott-Smith



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: <u>Buck Owen</u>	Loctn.: <u>Permitting</u>	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: <u>Don Kell</u>	Date: <u>12/22/83</u>	
Reply Optional <input type="checkbox"/>	Reply Required <input type="checkbox"/>	Info. Only <input type="checkbox"/>
Date Due: _____	Date Due: _____	

TO: Buck Owen, Professional Engineer  
Permitting

THROUGH: Rodney DeHan, Administrator *RDH*  
Groundwater Section

FROM: Don Kell, Engineer *DK*  
Groundwater Section

DATE: December 22, 1983

SUBJECT: Pinellas County Resource Recovery Project

We have no adverse comment regarding the Staff Report.

We agree with the language of the Conditions of Certification. Under the circumstances, this appears to be the best way to handle certification of the project.

When a firm plan is advanced for the Permanent Leachate Control System named, we would like to review that plan, as you have already suggested we do.

DK/cs

December 14, 1983

Mr. W. W. Dasher, Director  
Public Works Operations  
Dept. of Solid Waste Management  
Post Office Box 21623  
St. Petersburg, Florida 33742-1623

Dear Mr. Dasher:

In a preliminary review of your letter of December 9, 1983, concerning the hydrogeologic survey of the Resource Recovery Facility and adjacent lands, it would appear that no permits would be required for investigations on the certified RRF property. "Natural depressions" on adjacent properties may include jurisdictional wetlands where filling would require permits pursuant to Chapter 17-4, FAC.

It is suggested that Ardaman Associates contact the department's Southwest District Office in Tampa. Personnel from the district office can ascertain whether permits will be required for filling or drilling activities.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: Bill Hennessey  
Gary Stephens

**TO: Power Plant Siting Review Committee**  
**FROM: Hamilton S. Oven, Jr.**  
**DATE: December 12, 1983**  
**SUBJECT: Pinellas County Resource Recovery Project**  
**PA 83-18**

Please review the attached report on the Pinellas RRF expansion and review and comment on the Conditions of Certification. Please comment by December 23, 1983.

Received DER

DEC 16 1983

P.P.S

December 12, 1983  
St. Petersburg, FL 33702

Mr. W. K. Hennessey  
Southwest District Manager  
Department of Environmental Regulation  
7601 Highway 301 North  
Tampa, FL 33610

Re: Stormwater Management


Dear Mr. Hennessey:

Upon receipt of the water quality data submitted to the Department on October 27, 1983, the County directed its analytical consultant to take additional samples at various locations at the site. Enclosed are copies of the sample results and locator map. The purpose of this regimen was to attempt to identify a source(s) of the non-compliance parameters. The County and its consultants are currently evaluating these attached results. The selenium and cadmium analyses were inadvertently completed, using a detection limit which was too high; these parameters will be re-analyzed.

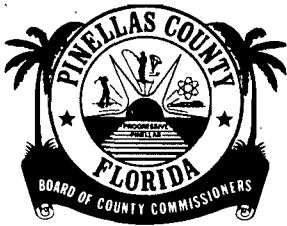
In the meantime, please be advised that no stormwater has been discharged from the site since the holding pond was pumped down, as described in my letter to the Department dated November 15, 1983. Today, the lake level is 6.65 feet, msl, which provided a 1.24 freeboard at the spillway to 28 Street.

As additional information is available, I will advise your office.

Very truly yours,

  
W. W. Dasher, Director  
Public Works Operations

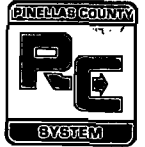
WWD:ltj  
cc: Hamilton S. Owen w/att  
Jim Andrews, HDR  
bcc: W. Gray Dunlap, County Attorney  
Gene E. Jordan, Dir, PS&U



BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565

P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623



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BRUCE TYNDALL

December 9, 1983

Mr. Hamilton S. Oven, Jr.  
Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301-8241

Re: Solid Waste Resource Recovery--Pinellas County

Dear Mr. Oven:

As you have been advised, Pinellas County has undertaken a hydrogeologic survey at the Resource Recovery Facility and adjacent lands as part of the feasibility determination for the proposed slurry wall. In the Scope of Work for Ardaman Associates, drilling will be conducted in "three typical natural depressions" (see Task 6, Appendix VIII, Third boiler PPSA). The drilling operations will require the placement of fill material in these depressions to serve as drilling platforms.

The exact locations of each depression to be affected in this manner are not known at this time. Conceivably, they could be within the existing certified site, and/or in the adjacent "non-PPSC" lands (e.g. sod farm). Aside from the standard drilling permits which will be obtained, it is requested that the Department review this project and advise the County as to relevant State of Florida regulations and permits which will be required.

Very truly yours,

W. W. Dasher, Director  
Public Works Operations

WWD:pa

cc: W. K. Hennessey, Manager S/W Distr. DER  
Gene E. Jordan, Dir., PW & U  
W. Gray Dunlap, County Attorney  
HDR

Received DER

DEC 14 1983

RPS

ination should occur at an effluent turbidity of 5 Nephelometric Turbidity Units or less.

### 3. Special Studies

Upon satisfactory demonstration to the Department that the number of viruses entering the towers in the effluent makeup from the upgraded Largo Plant can be reduced to an undetectable level with the use of a lesser amount of chlorination, the above requirement may be altered to 1.0 mg/l total chlorine residual after a fifteen minute contact time. This demonstration may occur through performance of special studies approved by the Department.

### D. Water Discharges

#### 1. Surface Water

- a. Any discharges from the site stormwater/leachate treatment system via the emergency overflow structure which result from any 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 State Water Quality Standards, Chapter 17-3, FAC.
- b. Sampling of water quality in the aeration pond, the cattail ponds, and an analysis of the tissues of the cattails utilized as part of the leachate/stormwater treatment system shall be conducted prior to pumping of leachate or stormwater through this system to verify background levels and concentrations of any metals, especially heavy metals, already present in the ponds or the vegetation. Within three months after commencement of stormwater/leachate pumping through this system, and quarterly thereafter, the pond waters and cattail tissues, as well as root detritus or other sediments on the bottom of the ponds shall again be sampled to determine the degree and effectiveness of heavy metal uptake treatment in this system, and for correlation with groundwater monitoring data. If analyses indicate that toxic levels of materials are present in the cattail tissues, root detritus, or other pond precipitates, then these materials shall be incinerated or otherwise removed from contact with the natural environment and groundwaters. Results of analyses conducted shall be sent to the Department for review of system effectiveness.
- c. Leachate, stormwater, or other site wastewaters which are to be spray irrigated shall be treated to conform to any rules promulgated by the State for the land application of wastewaters in areas not commonly accessible to the public.

- d. The permittee shall install and operate two continuous SO<sub>2</sub> monitors and one continuous wind direction and velocity monitor in the immediate vicinity of the site. The monitors shall be specifically located as designated by the DER and shall conform to 40 CFR 53. Monitoring shall begin upon commencement of operation.

#### 4. Reporting

- a. Two copies of the results of the stack tests shall be submitted within forty-five days of testing to the DER Southwest Florida District Office.
- b. Stack monitoring shall be reported to the DER Southwest District Office on a quarterly basis in accordance with Section 17-2.710, FAC, and 40 CFR, Part 60, Section 60.7.
- c. SO<sub>2</sub> monitoring shall be reported to the DER Southwest Florida District Office on a monthly basis.

### B. Fuel

The Resource Recovery Facility shall utilize refuse such as garbage and trash (as defined in Chapter 17-7, FAC) as its fuel. Use of alternate fuels would necessitate modification of these Conditions of Certification.

### C. Cooling Tower

#### 1. Makeup Water Constituency

The Resource Recovery Facility shall utilize only treated sewage effluent or stormwater runoff from the stormwater holding pond as cooling tower makeup water. The effluent shall have received prior to use in the tower, as a minimum, secondary treatment, as well as treatment described in Condition XIV.C.2. below. Use of waters other than treated sewage effluent or site stormwater, i.e., higher quality potable waters or lower quality less-than-secondarily treated sewage effluent, will require a modification of conditions agreed to by the Southwest Florida Water Management District and the Department and must be approved by the Governor and Cabinet.

#### 2. Chlorination

Chlorine levels in the cooling tower makeup water shall continuously be monitored, prior to insertion in the cooling towers. Sewage effluent from the Northeast St. Petersburg wastewater treatment plant used as makeup shall be treated if necessary to maintain a 1.0 mg/liter total chlorine residual after fifteen minutes contact time. Makeup water from the Large Wastewater Treatment Plant shall be treated to maintain a 1.0 mg/liter free chlorine residual after fifteen minutes contact time. Chlor-

ination should occur at an effluent turbidity of 5 Nephelometric Turbidity Units or less.

### 3. Special Studies :

Upon satisfactory demonstration to the Department that the number of viruses entering the towers in the effluent makeup from the upgraded Largo Plant can be reduced to an undetectable level with the use of a lesser amount of chlorination, the above requirement may be altered to 1.0 mg/l total chlorine residual after a fifteen minute contact time. This demonstration may occur through performance of special studies approved by the Department.

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- c. Leachate, stormwater, or other site wastewaters which are to be spray irrigated shall be treated to conform to any rules promulgated by the State for the land application of wastewaters in areas not commonly accessible to the public.





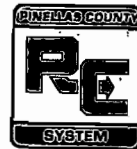
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ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565

P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623



December 7, 1983

Received DER

DEC 9 1983

P.P.S

Mr. Hamilton S. Oven, Jr.  
Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301-8241

Re: Acceptance Test Report—Pinellas County Plant

Dear Mr. Oven:

The enclosed Acceptance Test Report covering the Environmental Regulations Test at the Refuse to Energy Plant under the PPSC No. PA78-11 is submitted for your information and file. This should complete all documentation called for as a result of the Plant's acceptance testing program.

Yours very truly,

D. F. Acenbrack, Director  
Solid Waste Management

ACE:pa

Encl:

cc: W. Gray Dunlap, County Attorney  
Gene E. Jordan, Dir., PW & U  
W. W. Dasher, Dir., PW Opns.  
W. K. Hennessey, Manager, DER S/W Dist.

**ENVIRONMENTAL SCIENCE  
AND ENGINEERING, INC.**

November 21, 1983

ESE No. 83 405 400

Mr. William Dasher  
Director Public Works Operations  
Pinellas County Solid Waste Department  
2800 110th Avenue North  
St. Petersburg, FL 33702

Dear Mr. Dasher:

Enclosed are the results of the seven grab samples collected by Jim Andrews on October 27, 1983.

The samples can be described as follows:

<u>Sample #</u>	<u>ESE #</u>	<u>Identification</u>
1	298700	110th St. Ditch @ Plant Ditch Outfall
2	298701	110th St. Ditch @ West Ditch Outfall
3	298702	110th St. Ditch @ Southward Bend
4	298703	28th St. Spillway
5	298704	28th St. Ditch 40 ft. Downstream of Spillway
6	298705	Drainage Ditch Behind Hdr Trailer
7	298706	Drainage Ditch South of Haul Road Culvert

Un-ionized ammonia (Storet #619) was calculated utilizing laboratory pH values and an estimated water temperature at 22°C, since no field measurements were available.

Please call me if you have any questions.

Sincerely,

*Karen L Hatfield*

Karen L. Hatfield  
Project Manager

KLH:ceg

cc: Jim Andrews w/encl  
HDR  
P.O. Box 12744  
Pensacola, FL 32575

**RECEIVED**

NOV 28 1983

# 60163  
PINELLAS COUNTY  
SOLID WASTE DEPT.

ENVIRONMENTAL SCIENCE &amp; ENGINEERING

11/22/83

STATUS: FINAL

QC

PROJECT NUMBER 83405400  
 FIELD GROUP: PIN3  
 PARAMETERS: ALL      SAMPLES: ALL

PROJECT NAME PINELLAS CO  
 PROJECT MANAGER: KAREN HATFIELD  
 FIELD GROUP LEADER: J. ANDREWS

PARAMETERS	STORET #	SAMPLE NUMBERS						
		1	2	3	4	5	6	7
		298700	298701	298702	298703	298704	298705	298706
DATE		10/27/83	10/27/83	10/27/83	10/27/83	10/27/83	10/27/83	10/27/83
TIME		0	0	0	0	0	0	0
NITROGEN, NH3+NH4, T (MG/L)	610	0.55	0.63	0.59	0.52	0.25	0.68	0.12
CHLORIDE (MG/L)	940	530	550	510	480	445	440	290
SELENIUM, TOTAL (UG/L)	1147	<60	<60	<60	<60	<60	<60	<60
PH, LAB (STD UNITS)	403	7.81	7.72	7.70	7.67	7.66	7.58	7.76
MERCURY, TOTAL (UG/L)	71900	<0.2	0.7	<0.2	0.3	0.4	<0.2	0.4
ZINC, TOTAL (UG/L)	1092	139.0	136.0	152.0	194.0	67.0	179.0	119.0
PHOS, T, ICAP (MG/L-P)	99914	2	2	1	1	0.6	0.9	0.3
CADMIUM, TOTAL (UG/L)	1027	<9.0	<9.0	<9.0	<9.0	<9.0	<9.0	<9.0
COPPER, TOTAL (UG/L)	1042	24.0	23.0	19.8	27.8	9.1	13.3	9.9
SILVER, TOTAL (UG/L)	1077	<9.0	<9.0	<9.0	<9.0	<9.0	<9.0	<9.0
IRGN, TOTAL (UG/L)	1045	280	285	280	267	781	238	273
NICKEL, T, (UG/L)	1067	14	20	<10.0	<10.0	10	18	20
NITROG, NH3, UN-IGN'D CALC (MG/L)	619	0.015	0.014	0.013	0.012	0.006	0.012	0.003
DISS. SOLIDS (MG/L)	70300	1770	1820	1790	1690	1560	1630	1110

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Buck Oven  
THRU: C. H. Fancy *CHF*  
FROM: Tom Rogers *TR* and Bob King *BK*  
DATE: December 1, 1983  
SUBJ: Pinellas County Resource Recovery Facility

Attached, please find the final version of the air quality analysis for the subject facility completed in support of the power plant certification requirements. Please send us a copy of the final document released by your office.

TR/BK/s

I. Impacts on Air Quality and Water Quality

1. Air Quality

a. Rule Applicability

The proposed site of the Pinellas County Resource Recovery Facility (RRF) is located in an area designated as nonattainment for ozone under 40 CFR 81.310 and Rule 17-2.410, Florida Administrative Code, and attainment under 40 CFR 81.310 and Rule 17-2.420, for all other criteria pollutants.

The maximum emissions for the proposed resource recovery facility and significant emission rates (40 CFR 52.21(b)(23) and Rule 17-2.500-2), in tons per year, are as follows:

<u>Pollutant</u>	<u>Maximum Emission</u>	<u>Significant Emission Rate</u>
Particulate Matter (PM)	109	25
Sulfur Dioxide (SO <sub>2</sub> )	364	40
Nitrogen Oxides (NO <sub>x</sub> )	577	40
Carbon Monoxide (CO)	288	100
Hydrocarbons (HC)	58(1)	40(VOC)
Lead (Pb)	5.7	0.6
Mercury (Hg)	2.1	0.1
Beryllium (Be)	0.00025	0.004
Fluorides	19	3
Chlorides	764(2)	1 (Vinyl Chloride)

- (1) non-methane HC emissions (VOC) will be less than 40 tons per year
- (2) vinyl chloride emissions will be less than 1 ton per year

The proposed facility has the potential to emit more than 100 tons per year of one or more regulated pollutants and is, therefore, subject to review for prevention of significant deterioration (PSD) under 40 CFR 52.21 and Rule 17-2.500(5)(c). PSD review consists of a determination of best available control technology (BACT) and an air quality impact analysis for each attainment and noncriteria pollutant that would be emitted in a significant amount. For the proposed facility, PSD review is required for seven pollutants: PM, SO<sub>2</sub>, NO<sub>x</sub>, CO, lead, mercury, and fluorides.

The proposed facility is not subject to nonattainment review for volatile organic compounds (VOC) because it is a minor source of this pollutant and the proposed increase will be less than 100 tons per year.

b. Control Technology Review

Based on an analysis of the economic, environmental, and energy impacts of the proposed project - the construction of a third Martin combustion unit, the Department has made a preliminary BACT determination for the boiler. The emission limits from the BACT determination are as follows:

<u>Pollutant</u>	<u>Emission Limit</u>
Particulate Matter	0.03 gr/dscf, corrected to 12 percent CO <sub>2</sub>
Sulfur Dioxide	83 pounds per hour, maximum 3-hour average
Nitrogen Oxides	132 pounds per hour
Carbon Monoxide	66 pounds per hour
Lead	1.3 pounds per hour
Mercury	3200 grams per day*
Visible Emissions	10% opacity

\* When more than 2,205 lb/day of municipal sewage sludge (dry basis) is fired, compliance with the mercury emission limit shall be demonstrated in accordance with 40 CFR 61, Method 101 Appendix B.

Compliance with the limitations for particulates, sulfur dioxide, visible emissions, and nitrogen oxides should be demonstrated in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 5, 6, 9 and EPA Method 9 (40 CFR 60, Appendix A), respectively.

A continuous monitoring system to measure the opacity of emissions shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710, Continuous Monitoring Requirements. The system must be installed and operational prior to compliance testing.

(1) BACT for Particulate Matter

The proposed mass burn combustion unit will have a charging rate of more than 50 tons per day, and is therefore, subject to the provisions of 40 CFR 60.50, Subpart E, New Source Performance Standards (NSPS). The NSPS for particulate matter emissions is a rate not to exceed 0.08 gr/dscf corrected to 12 percent CO<sub>2</sub>. An electrostatic precipitator (ESP) will be installed to control particulate emissions. The two existing mass burn units have a permitted particulate emission limit not to exceed 0.08 gr/dscf (NSPS).

For the third unit, the applicant has proposed better control on particulate emissions than the 0.08 gr/dscf required by NSPS. The control equipment is an ESP capable of achieving the 0.03 gr/dscf particulate emission limit proposed by the County and accepted by the Department as BACT. The baghouse is another control device capable of achieving the particulate emission limit determined as BACT, but was not recommended for two reasons: (1) the existing combustion units use ESPs, therefore, using an ESP will reduce the spare parts inventory; and (2) maintenance and operating personnel have experience with ESP control devices.

#### (2) BACT for Sulfur Dioxide

The Department has determined the limit for SO<sub>2</sub> emissions to be 83 pounds per hour. The amount of SO<sub>2</sub> generated when burning municipal type waste is less than the SO<sub>2</sub> emissions from the burning of distillate fuel oil containing 0.5 percent sulfur. The use of low sulfur fuel oil is considered one method of controlling SO<sub>2</sub> emissions, therefore, the installation of a flue gas desulfurization system is not warranted.

#### (3) BACT on Nitrogen Oxides

In the application, the applicant recommends that BACT is the use of proper boiler design and operating procedures. The proposed NO<sub>x</sub> emission rate is 132 pounds per hour as indicated in the air quality analysis. Annual emissions of NO<sub>x</sub> will be 577 tons. This level of control is judged to represent BACT.

During combustion of municipal solid waste, NO<sub>x</sub> is formed in high temperature zones in and around the furnace flame by oxidation of atmospheric nitrogen and nitrogen in the waste. The two primary variables that affect the formation of NO<sub>x</sub> are the temperature and the concentration of oxygen. Techniques such as the method of fuel firing, the distribution of combustion air between overfire and underfire air, exhaust gas recirculation and decreased heat release rates have been used to reduce NO<sub>x</sub> emissions. A few add-on control techniques such as the catalytic reduction with ammonia process and the thermal de-NO<sub>x</sub> are still experimental. None of these techniques are considered to be demonstrated technology for the proposed project.

#### (4) BACT on Carbon Monoxide

Carbon monoxide is a product of incomplete combustion by insufficient air supply. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The Department agrees with the applicant that BACT is the use of state-of-the-art boiler controls to insure sufficient underfire and overfire air so that the

emissions of products of incomplete combustion are minimized. The proposed CO emission rate is 66 pounds per hour. This level of control is judged to represent BACT.

(5) BACT on Lead

Lead emissions from the boiler occur because this element is present in varying amounts in the solid waste. The inlet temperature of the ESP is estimated at 425-475 °F. At these temperatures the lead emissions should not be in a vaporous state, and will be removed by the ESP as particulate.

(6) BACT on Mercury

The mercury emission limit is the National Emission Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The proposed source would be subject to the provisions of NSPS, 40 CFR 60.150, Sewage Treatment Plants, if more than 2,205 pounds per day (dry basis) municipal sewage sludge is charged. The Department has determined the emission limit for mercury to be 3,200 grams per day applicable only when more than 2,205 pounds per day municipal sewage sludge (dry basis) is charged into the mass burn combustion unit.

(7) BACT on PVC and Hydrogen Fluoride

The combustion of plastics can result in the emission of acid gases, such as hydrogen chloride and hydrogen fluoride. Burning polyvinyl chloride (PVC), of all the polymers, has been implicated as causing the most serious disposal problem due to the release of HCl gas. This problem has long been realized resulting in other polymers being used in packaging. Burning polypropylene and polystyrene, for example, produce carbon monoxide and the monomer styrene.

Both HCl and HF are hydrogen halides and are soluble in water. A water scrubbing system will remove approximately 75% of the HF gases. The Department does not believe the air quality impact due to HF emissions justifies the cost of installing a wet scrubber system.

(8) BACT on Visible Emissions

The visible emissions limit of 10% opacity is based on operating data from the two existing units.

c. Air Quality Impacts

As noted in section I. 1. a., the proposed source at the Pinellas County RRF will result in significant emissions of the criteria pollutants PM, SO<sub>2</sub>, NO<sub>x</sub>, CO and lead, and of the non-criteria pollutants mercury and fluorides.



The air quality impact analysis required for these pollutants includes:

- An analysis of existing air quality;
- A PSD increment analysis (for PM and SO<sub>2</sub> only);
- An Ambient Air Quality Standards (AAQS) analysis;
- An analysis of impacts on soils, vegetation, visibility, acid rain, and growth-related air quality impacts; and;
- A "good engineering practice" (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses depend on air quality modeling carried out in accordance with EPA guidelines.

Based on these required analyses, the department has reasonable assurance that the proposed source at the Pinellas County RRF, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A discussion of the modeling methodology and required analyses follows:

#### (1) Modeling Methodology

Two EPA-approved dispersion models, the Single Source CRSTER model and the Industrial Source Complex Short-term (ISCST) model, were used in the air quality impact analysis. Both of these models relate ground-level concentrations at some distance to pollutant emissions of some inert gas or small particles from a point source by imposing a Gaussian solution to the steady-state mass conservation equation. The CRSTER model, which is confined by the collocation of all point sources, was used to identify the critical years of meteorology. The ISCST model, which allows for separation of sources and several other features, such as the inclusion of downwash, was used to refine the analysis.

The surface and upper air meteorological data used in these models were National Weather Service data collected at Tampa, Florida, during the period 1970-1974. Since five years of data were used, the highest, second-high short-term predicted concentrations may be used to compare with the appropriate ambient standard or PSD increment.

The stack parameters and emission rates used in evaluating the ambient impacts are contained in Table I-1 and Table I-2, respectively. Only for the pollutants SO<sub>2</sub> and PM were all the sources evaluated. Total ambient air quality impacts were based on the modeled impacts plus the monitored "background" concentrations.

## (2) Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review. In general, one year of quality assured data using an EPA-reference, or the equivalent, monitor must be submitted. Sometimes less than one year of data, but no less than four months, may be accepted when department approval is given. An exemption to this requirement can be obtained if the maximum air quality impact, as determined through modeling, is less than a pollutant-specific de minimus concentration. In addition, if current monitoring data already exist and these data are representative of the proposed source area, then at the discretion of the department these data may be used.

The predicted maximum air quality impacts of the proposed project (Unit 3) for each of the seven pollutants subject to review are given in Table I-3 along with the monitoring de minimus levels. From this table it is seen that PM, NO<sub>x</sub>, CO, and Hg have maximum air impacts less than the de minimus level; therefore no preconstruction monitoring is required. Sufficient data in the area of the source already exist for SO<sub>2</sub> and Pb to define existing air quality for these pollutants. The department did not require additional monitoring for these pollutants. Although fluorides are subject to monitoring requirements, no EPA-approved method currently exists to measure ambient concentration of this pollutant.

Table I-4 shows the monitored ambient air quality levels for the most recent complete year (1982) for all the criteria pollutants, including the required data for SO<sub>2</sub> and Pb. These data were collected from existing monitors in Pinellas County.

## (3) PSD Increment Analysis

The Pinellas County RRF is located in an area where the Class II PSD increments apply. The facility is also located approximately 75 kilometers from the Class I Chassahowitzka National Wilderness Area. As such an analysis of the impact on this area must be performed.

A PSD increment analysis is required for the pollutants SO<sub>2</sub> and PM only. The PSD increments represent the amount that new sources in the area may increase ambient ground-level concentrations of these pollutants for various time averages. At no time, however, can the increased loading of these pollutants into the atmosphere from these new sources cause or contribute to a violation of the ambient air quality standards.

For the Pinellas County RRF the proposed Unit 3 along with the previously built Units 1 and 2 all consume PSD increment. In addition, several other new sources in the area have been identified which may interact with the Pinellas County RRF in

consuming the allowed PSD increments. These sources are the McKay Bay RRF and the TECO Big Bend power plant.

Atmospheric dispersion modeling was performed, as discussed previously, taking into account only those new sources which consume PSD increment. The results of this modeling are summarized in Table I-5.

The impact of these sources on the nearest Class I area was not explicitly modeled. The models used in this air quality analysis are not appropriate for predicting ground-level concentrations beyond 50 kilometers. However, the impact on the Class I area may be extrapolated from the modeling results showing the proposed Unit 3 impact on the two distant nonattainment areas. An SO<sub>2</sub> nonattainment area is located near Tarpon Springs approximated 23.5 kilometers from the Pinellas County RRF. The impacts of Unit 3 alone on this area are 2.2 ug/m<sup>3</sup>, 3-hour average; 0.3 ug/m<sup>3</sup>, 24-hour average; and 0.02 ug/m<sup>3</sup>, annual average. These values are less than significant for impacts on nonattainment areas and would be much less at the distance of the Class I area. A PM nonattainment area is located in Tampa, 14.4 kilometers from the RRF. Here, the impacts of Unit 3 alone are 0.01 ug/m<sup>3</sup>, 24-hour average and 0.006 ug/m<sup>3</sup>, annual average. Again, these impacts are less than significant for nonattainment areas and the concentrations would be much less at the distance of the Class I area. Table I-5 indicates the results of all the PSD increment modeling.

#### (4) AAQS Analysis

Given existing air quality in the area of the Pinellas County RRF, the proposed Unit 3 emissions are not expected to cause or contribute to a violation of an AAQS. The results of the AAQS analysis are contained in Table I-6.

Of the pollutants subject to PSD review only the criteria pollutants SO<sub>2</sub>, PM, CO, NO<sub>2</sub>, and Pb have an AAQS to compare with. All sources listed in Table I-1 were modeled to determine the maximum ground-level impacts for SO<sub>2</sub> and PM. For CO, NO<sub>2</sub>, and Pb only the three units at the Pinellas County RRF were modeled to determine the maximum ground-level concentrations resulting from this facility.

The total impact on ambient air is obtained by adding a "background" concentration to the maximum modeled concentrations. This "background" concentration takes into account all sources of the particular pollutant in question that were not explicitly modeled. A conservative estimate of these "background" concentrations is given by the second highest monitored concentration as listed in Table I-4. This is a conservative estimate because sources used in the modeling may have contributed to the monitored value and this would be contributing doubly to the total impact.

(5) Analysis of Impacts on Soils, Vegetation, Visibility, and Acid Rain and Growth-Related Air Quality Impacts

(a) Impact on Soils and Vegetation

The maximum ground-level concentrations predicted to occur as a result of emissions from the proposed project in conjunction with all other sources, including a background concentration, will be below all applicable AAQS including the secondary standards designed to protect public welfare-related values. No soils or species of vegetation highly sensitive to these emissions in the concentrations predicted are known to occur in the site vicinity, or in the Chassowitzka Class I area.

(b) Impact on Visibility

A level I visibility screening analysis was performed to determine if any impact may occur in the Class I area. The analysis showed that there was no potential for an adverse impact on visibility in this area.

(c) Acid Rain Impact

The increased emissions of SO<sub>2</sub> and NO<sub>x</sub>, precursors to possible acid formation and subsequent acidic rain, from the proposed Unit 3 project are relatively small. In comparison with the emissions of these pollutants from nearby power plants the increased loading due to the proposed project is inconsequential. Thus, no adverse impact on the acidity of rainfall is expected as a result of this project.

(d) Growth-Related Air Quality Impacts

The construction of the proposed Unit 3 will require between 200 and 300 persons. Nearly all will be from the local area. The project is not expected to stimulate any additional growth or shift the nature of projected growth to the extent that an air quality impact will result.

(e) GEP Stack Height Determination

Good engineering practice (GEP) stack height means the greater of: (1) 65 meters; or (2) the maximum nearby building height plus 1.5 times the building height or width, whichever is less. For the proposed project the building height is 35.4 meters and the building width is 35.0 meters. Thus definition (2) above leads to a GEP stack height of 87.9 meters.

Due to the proximity of the facility to an airport, the stack height cannot be built to the GEP height. The applicant has addressed the possible increased ground-level concentrations (as a result of aerodynamic effects of the nearby building) by including a downwash mechanism in the modeling.

TO: Tom Rogers and Bob King  
FROM: Hamilton S. Oven, Jr.  
DATE: November 28, 1983  
SUBJECT: Pinellas County RRF

Other than a few typographical errors, the draft air quality report is highly satisfactory. Please submit a final copy.

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: <i>Buck Owen</i>	Loctn.:	
To: _____	Loctn.:	
To: _____	Loctn.:	
From: _____	Date:	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Buck Owen  
THRU: Clair Fancy *CF*  
FROM: Tom Rogers *TR* and Bob King *BK*  
DATE: November 21, 1983  
SUBJ: Pinellas County RRF, Air Quality Analysis

Attached please find a draft of the air quality report for the subject facility. We will finalize the report after you have made your comments.

TR/BK/s

Best Available Copy

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Jim Estler

FROM: Ed Palagyi *EP*

DATE: November 16, 1983

SUBJ: BACT Determination for Pinellas Resource Recovery

Enclosed is the final draft of the BACT determination for the Pinellas County resource recovery modifications.

Your comments and recommendations and those received from other sectors of our environmental family were included in the review process. This input was appreciated.

Now, one more time, you are asked to review this BACT determination. The response period will end December 1, 1983. ←  
No response is necessary unless there is some aspect of this project that was overlooked which should be considered in this determination.

EP/s

D.E.R.

NOV 18 1983

SOUTHWEST DISTRICT  
TAMPA

Best Available Control Technology (BACT) Determination  
Public Works and Utilities  
Pinellas County

The applicant plans to construct a third municipal solid waste fired boiler to increase the throughput of the existing resource recovery facility located in Pinellas County, Florida. The proposed mass burn Martin combustion system will be similar to the two existing units. The new unit will be capable of incinerating 1050 tons per day of municipal waste, and will increase the solid waste processing capacity of the facility to 3150 tons per day.

The proposed mass burn unit is designed for a heat input of 411 million Btu per hour based upon a waste heat content of 5000 Btu per pound. This added unit will increase the processing throughput of the facility to allow incineration of the solid waste expected to be generated over the next ten years.

Potential Air Pollutant Emissions (ton/year)

Particulate	- 109	(25)*
Sulfur Dioxide	- 577	(40)*
Nitrogen Oxides	- 577	(40)*
Carbon Monoxide	- 288	(100)*
Lead	- 58	(0.6)*
Beryllium	- .0002	(.0004)*
Mercury	- 2.1	(0.1)*
Hydrogen Fluoride	- 28	(3)*

\* Regulated Air Pollutants - Significant Emission Rates.  
Florida Administrative Code Rule 17-2.500, Table 500-2.

The steam generated will be used to produce electrical power for distribution into the peninsula grid system. The new source is being reviewed according to Florida Administrative Code Chapter 17-17, Electrical Power Plant Siting and Rule 17-2.500, Prevention of Significant Deterioration. The Bureau of Air Quality Management is performing the air quality review and the BACT determination for the siting committee. The certification number for the existing facility is PA 78-11.

BACT Determination Requested by the Applicant:

An electrostatic precipitator (ESP) will be installed to control the discharge of particulate matter at 0.03 gr/dscf, or less, corrected to 12% CO<sub>2</sub>. The ESP will also control lead, beryllium and mercury emissions. Sulfur dioxide emissions will be limited by firing municipal waste, a low sulfur content fuel. Burner design and operating procedures will be the methods used to limit NO<sub>x</sub> emissions.



Burner controls will be installed to minimize the emission of CO due to incomplete combustion.

Date of Receipt of a BACT Application:

September 7, 1983

Date of Publication with Florida Administrative Weekly:

September 16, 1983

Review Group Members:

Bob King - New Source Review Section  
Clair Fancy - Central Air Permitting  
Tom Rogers - Air Modeling Section  
Jim Estler - SW District Office  
Jacob Stowers - Pinellas County DEM

BACT Determination by DER:

Pollutant	Emission Limits
Particulates	0.03 grains/dscf, corrected to 12 percent CO <sub>2</sub>
Sulfur dioxide	83/pounds/hour
Nitrogen Oxides	132 pounds/hour
Carbon Monoxide	66 pounds/hour
Lead	1.3 pounds/hour
Mercury	3200 grams/day [1]
Visible Emissions	10% opacity

[1] When more than 2205 lb/day of municipal sewage sludge is fired, compliance with the mercury emission limit shall be demonstrated in accordance with 40 CFR 61, Method 101 Appendix B.

Compliance with the limitations for particulates, sulfur oxides and nitrogen oxides will be demonstrated in accordance with Florida Administrative Code Rule 17-2.700, DER Methods, 1,2,3,5,6 and 40 CFR 60, Appendix A; Method 7. Compliance with the opacity limit shall be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6)(2)9., DER Method 9.

A continuous monitoring system to measure the opacity of emissions shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710 - Continuous

Monitoring Requirements. The CEM must be installed and operational prior to compliance testing.

#### BACT Determination Rationale

The proposed mass burn combustion unit will have a charging rate more than 50 tons per day, and therefore, subject to the provisions of 40 CFR 60.50, Subpart E, New Source Performance Standards (NSPS). The NSPS for particulate matter emissions is a rate not to exceed 0.08 grains/dscf corrected to 12 percent CO<sub>2</sub>. The applicant has proposed to limit particulate emissions rate not to exceed 0.03 grains/dscf corrected to 12 percent CO<sub>2</sub>. An electrostatic precipitator (ESP) will be installed to control particulate emissions at the proposed rate. The two existing mass burn units have a permitted particulate emission limit not to exceed 0.08 grains/dscf (NSPS).

The Department agrees that the use of an ESP is an air pollution control technology currently capable of achieving the 0.03 grain/dscf particulate emission limit, and is considered BACT for this source. The baghouse is another control device capable of achieving the particulate emission limit determined as BACT, but was not recommended for two reasons; 1) the existing combustion units use ESPs, therefore the spare parts inventory is minimized, 2) maintenance and operating personnel have experience with this type of control device.

The mercury emission limit is the National Emission Standard for Hazardous Air Pollutants (NESHAPs), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The proposed source would be subject to the provisions of NSPS, 40 CFR 60.150, Sewage Treatment Plants, if more than 2205 pounds per day (dry basis) of municipal sewage sludge is charged. The Department has determined the emission limit for mercury to be 3200 grams per day applicable only when more than 2205 pounds per day (dry basis) of municipal sewage sludge is charged into the mass burn combustion unit. The Department has determined the limit for SO<sub>2</sub> emissions to be 83 pounds per hour. The amount of SO<sub>2</sub> generated when burning municipal type waste is less than the SO<sub>2</sub> emissions from the burning of distillate fuel oil containing 0.5 percent sulfur and the use of low sulfur fuel oil is considered one method of controlling SO<sub>2</sub> emissions, therefore, the installation of a flue gas desulfurization system is not warranted.

The combustion of plastics can result in the emission of acid gases, such as hydrogen chloride and hydrogen fluoride. Polyvinyl chloride (PVC), of all the polymers, has been implicated as causing the most serious disposal problem due to the release of HCl gas when burning. This problem has long been realized resulting in other polymers being used in packaging.

Polypropylene and polystyrene, for example, produce carbon monoxide or the monomer styrene when burned.

Both HCl and HF are a hydrogen halide and soluble in water. A water scrubbing system will remove approximately 75% of the HF gases. The Department does not believe the air quality impact due to HF emissions justifies the cost of installing a wet scrubber system.

During combustion of municipal solid waste, NO<sub>x</sub> is formed in high temperature zones in and around the furnace flame by oxidation of atmospheric nitrogen and nitrogen in the waste. The two primary variables that affect the formation of NO<sub>x</sub> are the temperature and the concentration of oxygen. Techniques such as the method of fuel firing, the distribution of combustion air between overfire and underfire air, exhaust gas recirculation and decreased heat release rates have been used to reduce NO<sub>x</sub> emissions. A few add-on control techniques such as the catalytic reduction with ammonia process and the thermal de-NO<sub>x</sub> are still experimental. None of these techniques are considered to be demonstrated technology for the proposed project.

In their application, the applicant contends that BACT is the use of proper boiler design and operating procedures. The proposed NO<sub>x</sub> emission rate is 132 pounds per hour as indicated in their air quality analysis. Annual emissions of NO<sub>x</sub> will be 577 tons. This level of control is judged to represent BACT.

Lead emissions from the incinerator occur because this element is present in varying amounts in the solid waste. The inlet temperature of the ESP is estimated at 425-475 °F. At these temperatures the lead emissions should be in a non vaporous state, and will be removed in the ESP along with the rest of the particulates.

The visible emissions opacity limit is based on operating data from the two existing units.

Carbon monoxide is a product of incomplete combustion where there is insufficient air. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The Department agrees with the applicant that BACT is the use of state-of-the-art boiler controls to insure sufficient underfire and overfire air so that the emissions of products of incomplete combustion are minimized. The proposed CO emission rate is 66 pounds per hour. This level of control is judged to represent BACT.

Details of the Analysis May be Obtained by Contacting:

Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Recommended by:

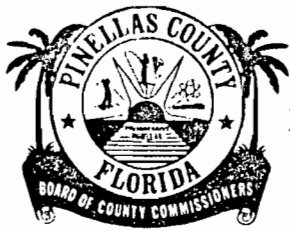
C. H. Fancy, Deputy Bureau Chief

Date: \_\_\_\_\_

Approved:

Victoria J. Tschinkel, Secretary

Date: \_\_\_\_\_



# BOARD OF COUNTY COMMISSIONERS

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DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565

P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623



November 15, 1983

Mr. W. K. Hennessey, District Manager  
State Department of Environmental Regulation  
Southwest District Office  
7601 Highway 301, North  
Tampa, FL 33610-9544

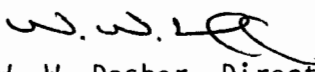
Re: Stormwater Management

Dear Mr. Hennessey:

With further information concerning the above with particular attention to the introduction of the report under Mr. Jordan's response of November 15, 1983, to Mr. Hamilton S. Oven, P.E., please be advised that our pumping of the 20-acre holding pond has allowed a 1.4'+ freeboard in the holding pond and ditches. Recharge is minimal.

The pump is available at Solid Waste, with our intention to pump as required to maintain this additional freeboard. Any discharge into the 28 Street ditch will be minimized, except during major rainfalls.

Very truly yours,

  
W. W. Dasher, Director  
Public Works Operations

WWD:ltl  
cc: Hamilton S. Oven, P.E., HDR  
Jim Andrews, HDR

Received DER

NOV 21 1983

PPS



## BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

DEPARTMENT OF PUBLIC WORKS AND UTILITIES  
ENGINEERING - OPERATIONS - SOLID WASTE - WATER - SEWER315 COURT STREET  
CLEARWATER, FLORIDA 33516  
Phone: (813) 462-3251

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BRUCE TYNDALL

November 14, 1983

Received DER

NOV 21 1983

PPS

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator, Power Plant Siting Section  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

Dear Mr. Oven:

In response to your letter of October 19, please find enclosed the following documents:

1. Study for the proposed use of stormwater as cooling water.
2. Stormwater drainage system plans at the Resource Recovery Facility.

In the past few months the plant has become operational and the many site and drainage improvements discussed in the original PPSC application have been installed. Since then, it has been observed that high intensity, short duration storms can tax on-site stormwater storage facilities. To assess compliance with Condition of Certification XIV D.1, the County began sampling stormwater discharges from the site and analyzing them for Chapters 17-3 and 17-25 parameters. When it was learned that a particular discharge contained chemical constituents which exceeded allowable concentrations for Class III waters, the County immediately notified the District office of the Department, as per Conditions of Certification II (see letter from W. W. Dasher to E. G. Snipes, October 27, 1983). Since that date more sampling regimens have been conducted and the analytical results are forthcoming. We will continue to apprise District personnel of these results as we receive them.

Regarding a long term solution to stormwater management at the plant, be advised we are currently evaluating a system to supplement cooling tower

continued.....

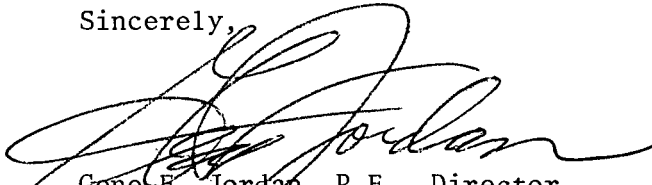
Mr. Hamilton S. Oven, Jr  
November 14, 1983  
Page Two

makeup water at the plant with stormwater. The details of this plan, though conceptual at this time, are presented in the first enclosure. It is felt that a necessary freeboard in the pond can be maintained in this manner, thus limiting off-site discharges to extreme rainfall events.

As discussed in Enclosure 1, two design parameters must be determined for the final design of the system: water quality and rate of pumping. Pinellas County is verifying the quality data submitted in the enclosure with an additional sampling regimen conducted on November 4. A pump test to calibrate anticipated continuous flow rates was begun on November 7, 1983.

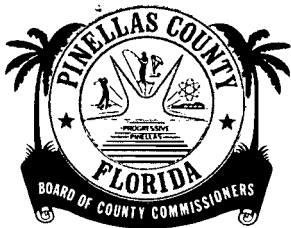
We expect the duration of the pump test to last a minimum of fifteen (15) days. The additional pond samples should be available by the time the pump test is over. After an approximate three week review of these results by the County's engineer and plant operations personnel, design plans should be ready for submittal to the Department.

Sincerely,



Gene E. Jordan, P.E., Director  
Public Works and Utilities

cc: W. K. Hennessey, DER  
W. W. Dasher, Director Public Works Operations



# BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 33516

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BRUCE TYNDALL

October 31, 1983

Received DER

NOV 7 1983

P P S

Mr. Hamilton Oven, Jr., P.E.  
Department of Environmental Regulation  
Power Plant Siting Section  
2600 Blair Stone Road  
Tallahassee, FL 32301-8241

RE: Pinellas County Resource Recovery Project - Phase II PA-83-18  
DOAH Case Number 83-2355

Dear Mr. Oven:

The Pinellas County, Division of Air Quality has reviewed the above noted application with regard to air quality impact. The revised application was received September 15, 1983 and the missing supplements to the appendices were received September 30, 1983.

The proposed third unit, a mass-burn Martin combustion system, is similar to the existing units. The capacity, heat input and design/operational characteristics are all similar to the other two units. The proposed/estimated air emissions and the expected ambient air quality impacts contained in the BACT and Air Quality Analysis sections of the application are addressed as follows:

1. The BACT determination for particulate emissions proposed by the applicant is 0.03 gr/dscf, corrected to 12% CO<sub>2</sub>. The NSPS TSP emissions limits established by Florida and EPA for incinerators of this size and type are 0.08 gr/dscf corrected to 50% EA. Previous EPA and FDER BACT determinations for similar units (the Dade Co. RRF and the existing two units of Pinellas County RRF) established the NSPS limits as BACT for those units. The proposed controls (four field ESP) will surpass these requirements for particulate emissions as well as aiding in the increased control of lead, beryllium and particulate mercury. Based upon the available information included in the application the modeling analysis does not appear to indicate a problem with TSP impacts of the project even with the downwash scenario of the ISCST model. The existing TSP monitoring facilities should be adequate for this project.
2. A BACT determination and emissions limitations for SO<sub>2</sub> were not proposed by the applicant. As stated in the application, use of low sulfur fuel is considered to meet BACT for SO<sub>2</sub> emissions from municipal incinerators.



Mr. Hamilton Oven, Jr., P.E.  
Department of Environmental Regulation  
October 31, 1983  
Page -2-

The expected sulfur content is less than .2%. The expected emission rate of 1.9 lb/Ton MSW (83 lb/hr) is well below the limit imposed on electric utility steam generating units classified as Resource Recovery Facilities in 40 CFR, Subpart Da, Section 60.43a(d) which allows 1.2 lb/MMBTU heat input (or approximate 493 lb/hr for this unit). Therefore, the emission rate of 1.2 lb/MMBTU of heat input should be the applicable limiting standard. Again it is expected that the existing monitoring data systems should be sufficient for this project in order to monitor compliance and evaluate ambient impacts. It may, however, be prudent to also require SO<sub>2</sub> stack sampling analysis, during the annual compliance testing which will be required for particulates, as a means of certifying compliance with the standard imposed. Modeling appears to indicate no significant problems associated with the impacts of the project.

3. The NO<sub>x</sub> and CO emissions are stated to be controlled by "state-of-the-art" boiler design and operation. This is requested as BACT by the applicant. Again, no expressed emission limitation is proposed for these criteria pollutants. Neither, is it discussed how the critical elements for proper combustion parameters will be monitored to "control" the emissions of these pollutants. If this project were compared to a solid fuel fired steam generator as above (40 CFR Subpart Da) the allowed emission rate would be 0.6 lb NO<sub>x</sub>/MMBTU heat input, and/or 65% reduction of the potential combustion concentration. This would yield an allowable rate of 246 lb/hr for this unit (at a firing rate of 411 MMBTU/hr heat input). The expected emission rate is 132 lb/hr. While this is only slightly more than half of an allowable rate the aspect of achieving 65% reduction of the potential concentration should be addressed via detailed analysis if feasible. Continuous in-stack monitoring may be applied if deemed necessary for compliance assurance purposes. The modeled expected impacts for NO<sub>x</sub> and CO do not appear to indicate a significant problem. The Certification document and/or BACT determination should prescribe the specific emissions limiting standard of 0.6 lb NO<sub>x</sub>/MMBTU heat input.
4. The control of particulate lead, beryllium and mercury are effected by the ESP. The expected levels of mercury and beryllium emissions are well below the De Minimus levels established under PSD. However, lead exceeds the De Minimus impact level by .15 ug/m<sup>3</sup>. The modeling indicates that the likelihood of an exceedance is only slight. It is expected that the existing ambient monitoring analysis will provide adequate compliance assurance.

cont.

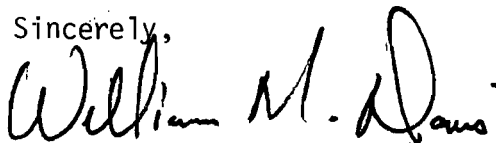
Mr. Hamilton Oven, Jr., P.E.  
Department of Environmental Regulation  
October 31, 1983  
Page -3-

5. The notably high expected emissions of chlorides is not addressed in the analysis of impacts. Comment should be provided regarding possible control and limiting emissions. It is the largest in quantity pollutant being emitted. If burner design and operation can be utilized as the "control" for "unburned" plastics and other chloride sources then it should be discussed in the proposal.
6. While fluoride emissions exceed the PSD De Minimus levels the expected ambient air impact as well as the impact on soils and vegetation are considered slight. The monitoring and/or stack analysis for fluorides is not considered necessary for this source at this time.
7. The expected level of hydrocarbon emissions is 58 T/yr. Combined with hydrocarbon emissions from the existing two units this facility is a major source. Considering that Pinellas County is still technically an ozone non-attainment area, an emission limitation should be established for the facility. Additional controls are impracticable but a limiting standard could be set. The means of verifying compliance would have to be decided upon; i.e. whether stack analysis or continuous monitoring are feasible.

It should be noted that the comments above regarding modeling aspects of the application are solely based on the limited information provided for review. The detailed study of the modeling should be addressed by BAQM personnel.

The limited resources and capabilities of this agency prohibit a more detailed analysis of this project. As the local agency it was felt that some comment should be provided on the project regardless of our affiliation with the project applicant. If there are any questions regarding this review or if further comment is required please contact this office at SUNCOM 570-4761.

Sincerely,



Jacob F. Stowers III, Director  
Department of Environmental Management

JFS/wn

cc: DER S.W. District  
Ed Palaygi - BAQM



BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565



P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623

Received DER

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BRUCE TYNDALL

October 28, 1983

NOV 4 1983

RRS

Mr. W. K. Hennessey  
Southwest District Manager  
Department of Environmental Regulation  
7601 Highway 301 North  
Tampa, FL 33610

Re: PPSC # PA 78-11

Dear Mr. Hennessey:

Enclosed herewith is the report for the third quarter of 1983 for the Pinellas County Solid Waste System. It is in accordance with Appendix "A", page 10 of the PPSC.

The same footnotes attached to our last report apply. A copy of them is also enclosed.

Very truly yours,

Robert S. Becker  
Solid Waste Operations Manager

RSB:pa

Encl

cc: Buck Oven, DER  
Gene Jordan, Dir., PW&U  
W. W. Dasher, Dir., PW Opns  
W. Gray Dunlap, County Attorney

QUARTERLY REPORT

Third Quarter 1983

(All Figures Shown in Tons)

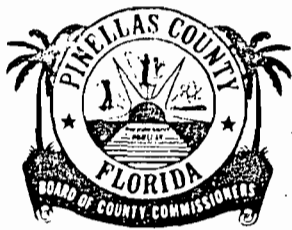
<u>INTAKE</u>	<u>JULY 1983</u>	<u>AUGUST 1983</u>	<u>SEPTEMBER 1983</u>
1. To Plant	61,147.62	65,362.94	35,534.27
2. To Landfill	11,168.19	19,916.67	44,234.45
3. To Mini Station	309.73	284.78	223.00
4. To Tire Splitter	167.73	163.62	254.09
<u>TOTAL</u>	<u>72,793.27</u>	<u>85,728.01</u>	<u>80,025.04</u>
 <u>REHANDLED MATERIALS</u>			
11. Residue to Landfill	156.55	18,531.64	3,474.31
12. Reject to Landfill	.00	11.06	25.88
13. Mini Station to Landfill	309.73	284.78	223.00
14. Aggregate to Landfill	2,575.93	6,078.58	5,699.44
15. Recovered Metals	2,201.10	2,510.46	1,132.12
16. Stockpiled Aggregate*	.00	.00	.00
Total Landfilled Materials: Sum 2,11,12,13 &14	14,210.40	44,822.73	53,436.31
Relocated Aggregate From Stockpile to Landfill (one-thirds)	1,521.54	1,521.54	1,521.54
Grand Total Landfilled	15,731.94	46,344.27	54,957.85

\* Stockpiled aggregate has been relocated to landfill for use as cover but those amounts previously shown are not counted for a second time in Line 11.

PINELLAS COUNTY SOLID WASTE SYSTEM

Table Notes

1. All wastes deemed "processable", and arriving in self-unloading vehicles are deposited in the intake room of the Resource Recovery Plant.
2. Wastes arriving in vehicles requiring hand unloading, loads observed as containing unprocessable wastes, and wastes diverted from the plant for any reason are sent to the landfill inside the landfill there are three possible destinations: Class I for putrescible, Class III for brush/construction/trash wastes, and demolition for non-organic rubble. Based on operating volumes, there are occasions where destinations are consolidated wastes are treated as required for the more difficult content; e.g., brush is covered daily when mixed with putrescible.
3. Wastes arriving in small quantities are unloaded at the mini station, consolidated in large containers, and then moved to the plant or landfill.
4. The County operates an isolated and unrelated program to split, bale, and transport used tires for artificial reef construction. Tires enter the system through the single scalehouse point.
  
11. Gross residue materials (after combustion) is the raw stock for the plant's material recovery section. In addition, materials remaining after separation into streams having value (metals and large items still containing some metal, which can be sold), and streams having little value (can be given away), are removed at County cost and placed in the landfill. There is no additional treatment per se.
12. Reject materials originate in the intake room of the Plant and are removed prior to combustion. They do not contain putrescible wastes. Rejects are landfilled in either the Class III or the Class I landfill areas.
13. Materials deposited in the mini station are normally transferred to the landfill (Class I) but occasionally to the Plant if there is excess capacity available.
14. Aggregate materials are fine almost exclusively inorganic and considered suitable for road building purposes. These materials are stockpiled or used for haul road construction at the landfill. It is also being used for interim cover.



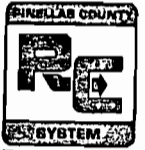
# BOARD OF COUNTY COMMISSIONERS

## COMMISSIONERS

BARBARA SHEEN TODD, CHAIRMAN  
JOHN CHESNUT, JR., VICE-CHAIRMAN  
GABRIEL CAZARES  
CHARLES E. RAINEY  
BRUCE TYNDALL

DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565

P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623



Received DER

October 27, 1983

Mr. E. G. Snipes, P.E. II  
Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, FL 33610-9544

OCT 31 1983

P P S

Re: Non-Compliance Notification Per Pinellas County Power Plant Siting Certification (PPSC)

Dear Mr. Snipes:

The following information is submitted in compliance with paragraph 11, Conditions of Certification covering the Pinellas County Power Plant Siting Certification (Case No. 78-11).

Water samples taken by ESE on September 14 and 15, 1983, and received by this office on October 24, 1983, indicate that maximum allowable amounts of six (6) of the fourteen (14) parameters tested for, were exceeded. Specific concentration found are shown in the attached listing.

While the sampling locations were within the site boundaries, they were also close to the overflow weir constructed just south of 110 Avenue. It is, therefore, possible that some water having somewhat similar concentrations flowed over the weir. This, because the samples were taken at a time of frequent rainfalls.

The source of high levels of the four elements is uncertain; however, it can be concluded that the "blowout" along the east face of the landfill which occurred last spring is a good suspect. Since that occurrence has been corrected through efforts which the Department is aware of, we don't expect this to be an on-going problem.

Mr. E. G. Snipes, P.E. II

October 27, 1983

Page 2

Plans now being developed, call for stormwater in the 20-acre holding lake to be utilized as a portion of the cooling tower make-up, thus assuring that the free board in the lake will virtually eliminate storm water overtopping the weir except following times of very major storms.

Very truly yours,



W. W. Dasher, Director  
Public Works Operations

WWD:ACE:ltl

Attach

cc: W. K. Hennessey, DER  
Gene Jordan, Dir, PW&U  
✓ Buck Oven

ENVIRONMENTAL SCIENCE &amp; ENGINEERING

10/18/83

FIELD GROUP PIN2 STATUS IS FINAL

PROJECT NUMBER 83405400

SAMPLES: ALL

PROJECT MANAGER KAREN HATFIELD

PROJECT NAME PINELLAS CO

PARAMETERS: ALL

FIELD GROUP LEADER GARY DALBEC

PARAMETERS	STORET #	SAMPLE NUMBERS						
		1	2	3	4	5	6	7
		282200	282201	282202	282203	282204	282205	282206
DATE		9/14/83	9/14/83	9/14/83	9/14/83	9/15/83	9/15/83	9/15/83
TIME		1100	1500	1900	2300	300	700	1030
NITROGEN, NH <sub>3</sub> +NH <sub>4</sub> , T (MG/L)	610	0.09	0.23	0.16	0.27	0.29	0.28	0.23
<del>CADMIUM, TOTAL (UG/L)</del>	<del>1027</del>	<del>4.8</del>	<del>4.7</del>	<del>4.5</del>	<del>4.9</del>	<del>6.3</del>	<del>4.3</del>	<del>6.3</del>
CHLORIDE (MG/L)	940	113	158	158	143	128	113	108
<del>COPPER, TOTAL (UG/L)</del>	<del>1042</del>	<del>14.0</del>	<del>29.0</del>	<del>11.0</del>	<del>29.0</del>	<del>31.0</del>	<del>23.0</del>	<del>18.0</del>
SELENIUM, TOTAL (UG/L)	1147	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
SILVER, TOTAL (UG/L)	1077	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
PH, LAB (STD UNITS)	403	7.54	7.70	7.53	7.53	7.59	7.53	7.56
IRON, TOTAL (UG/L)	1045	143	755	383	551	625	652	488
<del>MERCURY, TOTAL (UG/L)</del>	<del>71900</del>	<del>0.5</del>	<del>&lt;0.2</del>	<del>&lt;0.2</del>	<del>&lt;0.2</del>	<del>0.3</del>	<del>0.4</del>	<del>0.2</del>
NICKEL, T, (UG/L)	1067	<12	<12	<12	<12	<12	<12	<12
<del>ZINC, TOTAL (UG/L)</del>	<del>1092</del>	<del>156.0</del>	<del>157.0</del>	<del>137.0</del>	<del>183.0</del>	<del>174.0</del>	<del>153.0</del>	<del>151.0</del>
RESIDUE, DISS, 105 DEG (MG/L)	515	555	736	731	696	610	517	492
NITROG, NH <sub>3</sub> , UN-ION'D CALC (MG/L)	619	0.003	0.009	0.004	0.007	0.009	0.008	0.007
PHOS, T, ICAP (MG/L-P)	99914	0.1	0.3	0.1	0.2	0.2	0.2	0.2



BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Pinellas County ) DOCKET 830417-EU  
for determination of need for a solid) ORDER NO. 12611  
waste-fired cogeneration power plant.) ISSUED: 10-14-83

The following Commissioners participated in the disposition of this matter:

GERALD L. GUNTER, Chairman  
JOSEPH P. CRESSE  
JOHN R. MARKS, III  
KATIE NICHOLS  
SUSAN LEISNER

NOTICE OF PROPOSED AGENCY ACTION

ORDER

BY THE COMMISSION:

Under the Florida Electrical Power Plant Siting Act, Section 403.501, Florida Statutes, the Commission is charged with the responsibility of determining whether construction of a proposed electrical generation facility is necessary to meet the present or expected need for electricity in all or part of Florida. Under the Act, the Department of Environmental Regulation must determine whether the proposed plant will comply with all relevant environmental standards and whether the proposed site for the plant is suitable for that use. Weighing all of these determinations, the Governor and Cabinet, sitting as the Power Plant Siting Board, ultimately determine whether approval will be granted for construction of the proposed plant.

Certification under the Act must be obtained for the construction of any generating facility greater than 50 MW, or for the expansion of any existing electrical power plant. Pinellas County currently owns an existing solid waste-fired power plant containing a single 50.9-megawatt (gross) turbine generator and two incinerator/boilers located near Pinellas Park in Pinellas County, Florida, and has an existing Power Plant Site Certification for the facility. Pinellas County proposes to construct and operate an additional incinerator/boiler, and a single 29-megawatt (gross) turbine generator facility at the same site. The proposed incinerator/boiler will be similar to the two incinerator/boilers currently owned by the County and will have the capacity to burn up to 1,050 tons per day of 5000 BTU per pound solid waste. This is a small power production facility within the meaning of PURPA and Rules 25-17.80 through 25-17.87, Florida Administrative Code.

The steam generated by the proposed incinerator/boiler plant will be used to drive a single 29-megawatt (gross) turbine generator which will produce electricity that will be sold to Florida Power Corporation. The projected in-service date for the unit is July 1986, with construction scheduled to begin in the summer of 1984. The existing facility presently is selling an average of 38-40 MW a year to Florida Power Corporation. With increasing fuel supply and capacity expansion, the facility will ultimately have about 60 MW available for sale to Florida Power Corporation in mid-1990's. By a petition filed on August 29, 1983, Pinellas County seeks an affirmative determination of need for the 29 MW generating plant.

While the Power Plant Siting Act requires the Commission to determine whether a need exists for the proposed generating facility, the purpose of the Commission's need determination is

DOCUMENT NO.  
2775-95

to protect electric utility ratepayers from unnecessary expenditures. The statute lists four criteria the Commission must consider in determining need:

- 1) the need for electrical system reliability and integrity;
- 2) the need for adequate electricity at a reasonable cost;
- 3) whether the proposed plant is the most cost effective alternative available; and
- 4) conservation measures taken or reasonably available that might mitigate the need for new plant (Sec. 403.519, F.S.)

Congress and the Florida Legislature have determined that cogeneration and small power production should be encouraged on the premise that they constitute alternate sources of power that either displace production of fossil fuel electricity or use fossil fuels more efficiently. Moreover, the proliferation of cogeneration and small power production facilities may obviate the need for construction of additional generating facilities by electric utilities. Therefore, in the present context, we find that the County's proposed small power production facility will increase electrical system reliability and integrity and will maintain the supply of adequate electricity at a reasonable cost while reducing our dependence on fossil fuel. When viewed as an alternative to construction of additional generating facilities by electric utilities, and considering the permissible level of payments to small power producers outlined in Rules 25-17.80 through 25-17.87, Fla. Admin. Code, the proposed facility is the most cost effective alternative available. Finally, construction of the plant is a conservation measure which we have encouraged precisely because it may mitigate the need for additional construction by electric utilities. Therefore, the relief sought in this petition, an affirmative determination of need, will be and the same is hereby granted. It is, therefore,

ORDERED by the Florida Public Service Commission that this Order constitute the final report required by Section 403.507(1)(b), Florida Statutes, the report concluding that a need exists, within the meaning of Section 403, Florida Statutes, for the construction of the 29 MW generating facility proposed by Pinellas County, Florida. It is further

ORDERED that a copy of this Order be furnished to the Department of Environmental Regulation, as required by Section 403.507(1)(b), Florida Statutes. It is further


ORDERED that any person adversely affected by the action proposed herein may file a petition for a formal proceeding, as provided in Rule 25-22.29, within 21 days of the date of this order, November 4, 1983, in the form provided by Rule 25-22.36(7)(a) and (f). It is further

ORDERED that in the absence of such a petition, this Order shall become effective and final as provided by Rule 25-22.29(6), as stated in a subsequent order.

By Order of the Florida Public Service Commission, this  
14th day of OCTOBER 1983.

( S E A L )

BED

  
STEVE TRIBBLE  
COMMISSION CLERK

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Ed Palagyi, BACT Coordinator  
THROUGH: Bill Thomas and Dan Williams  
FROM: Jim Estler  
DATE: October 25, 1983  
SUBJECT: Pinellas County Resource Recovery Facility  
Preliminary BACT

In response to your memo of September 12, 1983, regarding the draft BACT for Pinellas County Resource Recovery Facility's new incinerator we have reviewed the information submitted and offer the following:

1. The proposed emissions used in the modeling (Appendix II Table II-1) do not relate back to Appendix VI "Development of Emission Factors". It is difficult, if not impossible, to propose emission limitations without knowing how they calculated the emission rates.
2. The information from the BACT clearinghouse is interesting, however the background information on each of these sources is needed in order to evaluate the rationale behind the determinations.
3. Regardless of what emission limitations are developed for NO<sub>x</sub> and CO, an actual limitations must be established. A statement that emissions are to be controlled by burner design (controls) and operating procedures would be unenforceable. In conjunction with this, emission rates must be monitored in some means either continuous emission monitors or stack testing.
4. The emission of hydrocarbons (VOC) and chlorides should be addressed by the state in some manner. The BACT process may not be appropriate since these pollutants are not on the list of criteria and non-criteria pollutants contained in the PSD Section, Chapter 17-2. VOC's are of concern since the expansion is to occur in a ozone non-attainment area. Chlorides are of concern because of the quantities involved. The consultant which conducted the initial compliance test on the existing units said the stack gases were extremely acidic and damaged the probe used.

Upon receipt of the explanation of the conflict in No. 1 and additional information in No. 2, the District will make their recommendations for a BACT for this unit. Please except our apologies for the delay in comments, our only excuse is that our permitting workload has drastically increased.

If you have any questions, please give us a call.

JWE/scm

October 24, 1983

Gene Jordan, Director  
Public Works and Utilities  
315 Court Street  
Clearwater, Florida 33516

Dear Mr. Jordan:

Attached are two letters received from cities in your county concerning the Resource Recovery Project expansion. You may wish to respond to these concerns as appropriate.

You may also wish to advise your attorney of these letters. Your attorney should contact the Hearing Officer to discuss the necessity of a land use hearing.

Sincerely,

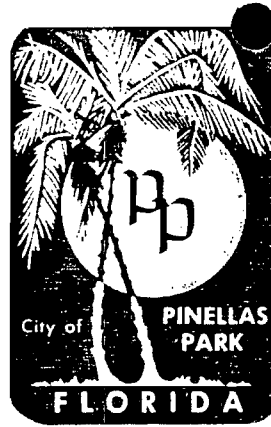
Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: Bill Deane  
Bill Hennessey

City of

5141-78TH AVE. • PINELLAS PARK, FLA. 33565-5141



PHONE • (813) 544-8831

August 25, 1983

Received DER

Ms. Sandra Eberhard, Associate Planner  
Tampa Bay Regional Planning Council  
9455 Koger Blvd.  
St. Petersburg, Fl. 33702

OCT 21 1983

P P S

Dear Ms. Eberhard:

The City of Pinellas Park has reviewed the Application for Power Plant Site Certification as it is within and adjacent to its city limits. We offer the following comments and requests for additional information.

1. The site plan (Figure 2-1) is illegible at this scale. An appropriate detailed site plan should be distributed prior to any action on this item. Any site plan additions or changes on lands within the City of Pinellas Park must be approved by the City Council as this is a conditional use in the IH and P zoning districts.

2. Figures 2-2 and 2-4 do not clearly exhibit the residential nature of the area to the southwest. In addition to the Mainlands community which existed at the time of the original Phase I document, there are two new developments within one mile, totalling nearly 2,000 units. The Lakes, which abuts the landfill is constructing 1,100 units, while Coventry Park, south of Mainlands, proposes approximately 600 new units. Further, several hundred acres of industrial land have been annexed into Pinellas Park in the last two years.

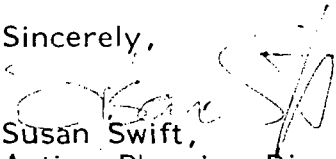
3. Additional air quality and noise stations should be added to monitor the residential areas to the southwest of the plant.

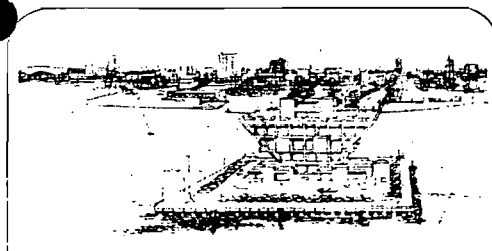
4. Chapter 7 indicates that this expansion will decrease landfilling. By what amount will the Class I solid wastes be reduced? How many acres does the RRF now hold for land filling purposes and by what amount will this need be reduced?

5. The plant is within the Pinellas Park Fire District. Detailed plans must be reviewed as soon as possible by the City's Fire Chief in order to assess the impact and servcability of the additional stack, boiler and generator.

Until the above requests are met, the City must reserve comment and suggest tabling this item in order to obtain said plans. We appreciate the opportunity to comment on this proposal. Please keep this office informed of any future meetings in this regard.

Sincerely,

  
Susan Swift,  
Acting Planning Director



CITY  
OF  
ST. PETERSBURG  
THE SUNSHINE CITY

August 23, 1983

Ms. Sandra Eberhard  
Tampa Bay Regional Planning Council  
9455 Koger Boulevard  
St. Petersburg, FL 33702

Re: TBRPC A-95 Clearinghouse Review #186-83; Pinellas County  
Resource Recovery Project - Phase II, Power Plant Site Certification  
Application

Dear Ms. Eberhard:

The Planning Department urges the Clearinghouse Review Committee (CRC) to approve this application. The additional boiler for the Resource Recovery facility, proposed in the application, will minimize the need for landfilling of Class I solid waste in the future.

The Sanitation Department is currently reviewing the application and will communicate their comments to you directly. The Planning Department noted one inaccuracy: the annexation map (Figure 2-2) should be updated. (See attached.)

We appreciate this opportunity to comment. If you require additional information, please contact me.

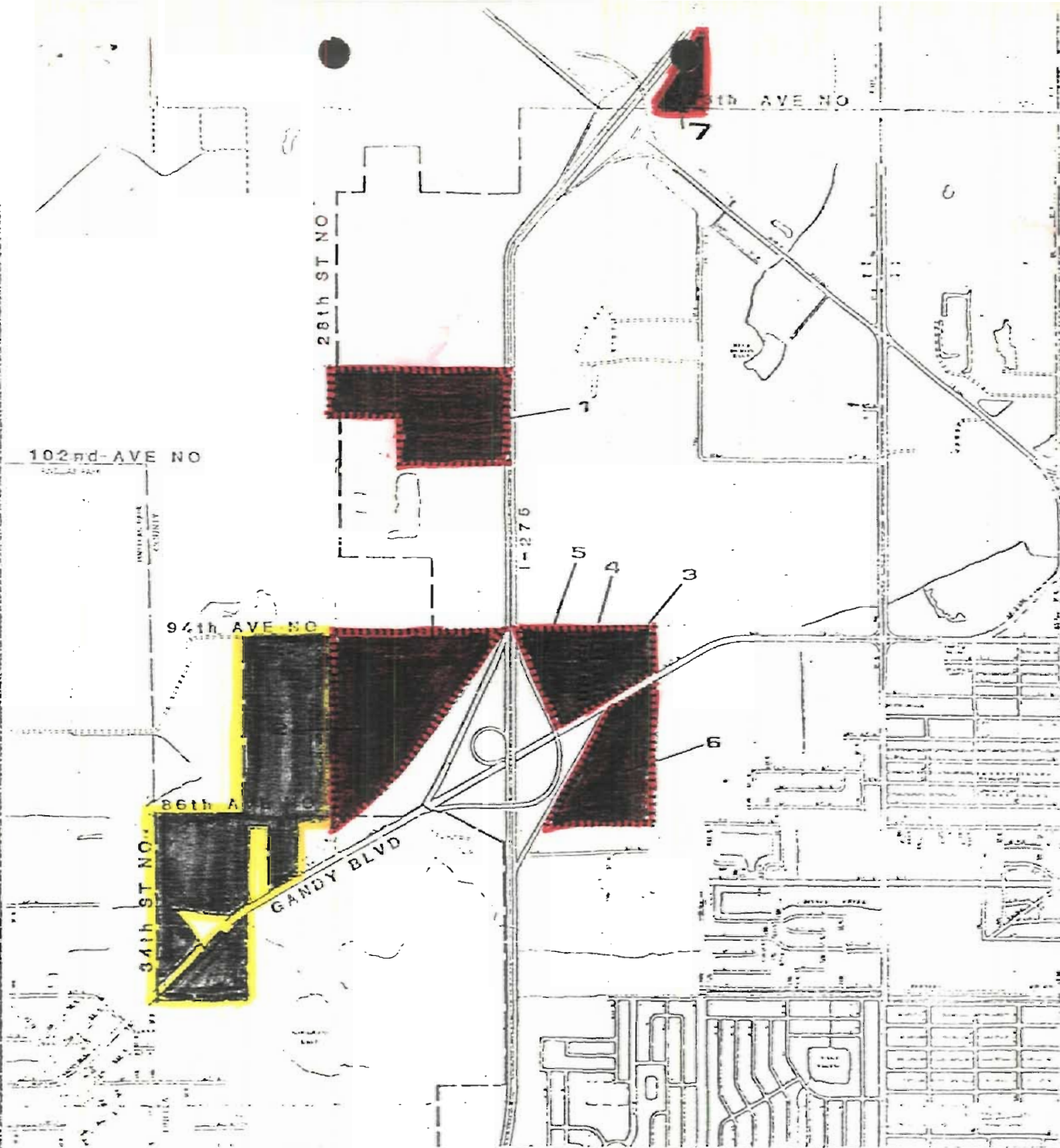
Sincerely,

Richard E. Mussett, AICP  
Planning Director

REM/bs/h

Attachment

cc: Tee Corbo, Director, Sanitation Department



ANNEXED INTO ST. PETERSBURG



DEANNEXED BY ST. PETERSBURG, ANNEXED BY PINELLAS PARK



October 19, 1983

Gene E. Jordan, P.E., Director  
Public Works and Utilities  
315 Court Street  
Clearwater, Florida 33516

Dear Mr. Jordan:

Please clarify sections 2.5 and 3.10 of the application for site certification of the Resource Recovery Facility, Phase II, by providing plans showing the location of ditches and stormwater retention pond in plan and cross-sectional views. Also please provide plans detailing the discharge structure mentioned in section 2.5, and calculations computing stormwater flows. The department wishes to review compliance of the facility with Chapter 17-25, FAC, and Condition of Certification XIV D.1.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: Bill Hennessey  
Jim Andrews

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Pinellas County ) DOCKET 830417-EU  
for determination of need for a solid) ORDER NO. 12611  
waste-fired cogeneration power plant.) ISSUED: 10-14-83

The following Commissioners participated in the disposition of this matter:

GERALD L. GUNTER, Chairman  
JOSEPH P. CRESSE  
JOHN R. MARKS, III  
KATIE NICHOLS  
SUSAN LEISNER

NOTICE OF PROPOSED AGENCY ACTION

ORDER

BY THE COMMISSION:

Under the Florida Electrical Power Plant Siting Act, Section 403.501, Florida Statutes, the Commission is charged with the responsibility of determining whether construction of a proposed electrical generation facility is necessary to meet the present or expected need for electricity in all or part of Florida. Under the Act, the Department of Environmental Regulation must determine whether the proposed plant will comply with all relevant environmental standards and whether the proposed site for the plant is suitable for that use. Weighing all of these determinations, the Governor and Cabinet, sitting as the Power Plant Siting Board, ultimately determine whether approval will be granted for construction of the proposed plant.

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The steam generated by the proposed incinerator/boiler plant will be used to drive a single 29-megawatt (gross) turbine generator which will produce electricity that will be sold to Florida Power Corporation. The projected in-service date for the unit is July 1986, with construction scheduled to begin in the summer of 1984. The existing facility presently is selling an average of 38-40 MW a year to Florida Power Corporation. With increasing fuel supply and capacity expansion, the facility will ultimately have about 60 MW available for sale to Florida Power Corporation in mid-1990's. By a petition filed on August 29, 1983, Pinellas County seeks an affirmative determination of need for the 29 MW generating plant.

While the Power Plant Siting Act requires the Commission to determine whether a need exists for the proposed generating facility, the purpose of the Commission's need determination is

Received DER  
OCT 17 1983  
P.P.S

DOCUMENT NO.  
1773-83

to protect electric utility ratepayers from unnecessary expenditures. The statute lists four criteria the Commission must consider in determining need:

- 1) the need for electrical system reliability and integrity;
- 2) the need for adequate electricity at a reasonable cost;
- 3) whether the proposed plant is the most cost effective alternative available; and
- 4) conservation measures taken or reasonably available that might mitigate the need for new plant (Sec. 403.519, F.S.)

Congress and the Florida Legislature have determined that cogeneration and small power production should be encouraged on the premise that they constitute alternate sources of power that either displace production of fossil fuel electricity or use fossil fuels more efficiently. Moreover, the proliferation of cogeneration and small power production facilities may obviate the need for construction of additional generating facilities by electric utilities. Therefore, in the present context, we find that the County's proposed small power production facility will increase electrical system reliability and integrity and will maintain the supply of adequate electricity at a reasonable cost while reducing our dependence on fossil fuel. When viewed as an alternative to construction of additional generating facilities by electric utilities, and considering the permissible level of payments to small power producers outlined in Rules 25-17.80 through 25-17.87, Fla. Admin. Code, the proposed facility is the most cost effective alternative available. Finally, construction of the plant is a conservation measure which we have encouraged precisely because it may mitigate the need for additional construction by electric utilities. Therefore, the relief sought in this petition, an affirmative determination of need, will be and the same is hereby granted. It is, therefore,

ORDERED by the Florida Public Service Commission that this Order constitute the final report required by Section 403.507(1)(b), Florida Statutes, the report concluding that a need exists, within the meaning of Section 403, Florida Statutes, for the construction of the 29 MW generating facility proposed by Pinellas County, Florida. It is further

ORDERED that a copy of this Order be furnished to the Department of Environmental Regulation, as required by Section 403.507(1)(b), Florida Statutes. It is further


ORDERED that any person adversely affected by the action proposed herein may file a petition for a formal proceeding, as provided in Rule 25-22.29, within 21 days of the date of this order, November 4, 1983, in the form provided by Rule 25-22.36(7)(a) and (f). It is further

ORDERED that in the absence of such a petition, this Order shall become effective and final as provided by Rule 25-22.29(6), as stated in a subsequent order.

By Order of the Florida Public Service Commission, this  
14th day of OCTOBER 1983.

( S E A L )

BED

  
STEVE TRIBBLE  
COMMISSION CLERK

# HDR

Henningson, Durham & Richardson

cc Don Kell  
Pat Lewis

Suite 108  
3455 Koger Boulevard  
St. Petersburg, FL 33702  
(813) 577-9455

Received DER

October 12, 1983

OCT 14 1983

PPS

E.S.E.  
P.O. Box ESE  
Gainesville, FL 32602

Attention: Karen Hatfield

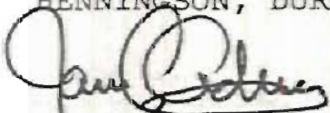
Dear Karen:

I have re-examined the location of monitoring wells at the Pinellas Resource Recovery Facility and have concluded that well #2 (see attached Figure) is not required. This is due to the planned expansion of the Class I landfill in a southerly direction. Once this is accomplished, this well could no longer be termed an "up-gradient monitor" and would not be useful.

I spoke with Steve Denahan about this and he concurred. Therefore, on this date, I have directed your representative with the well contractor to delete well #2 from the monitoring plan.

Very truly yours,

HENNINGSON, DURHAM & RICHARDSON, INC.



James C. Andrews

JCA:jm

Attachment

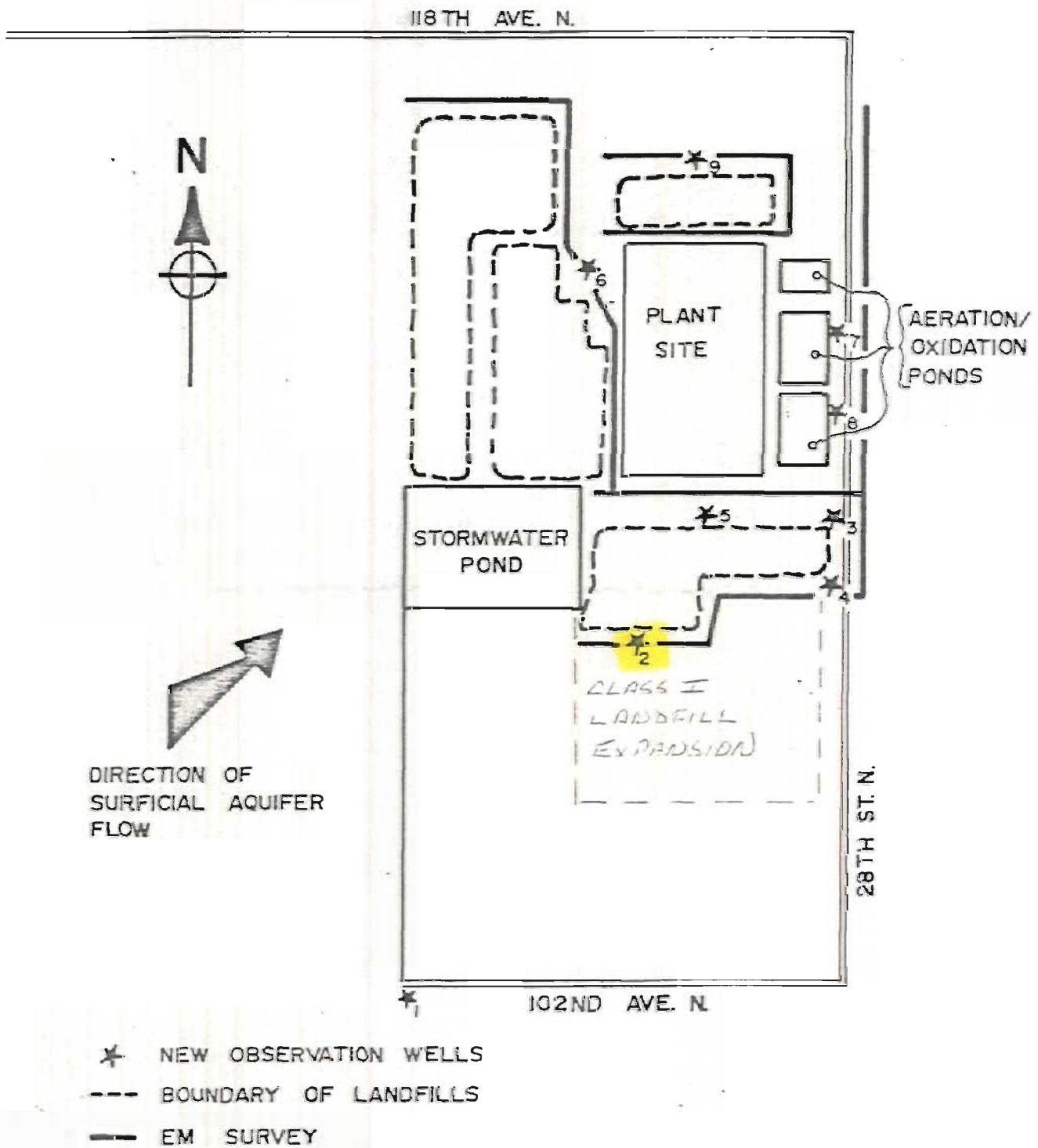
cc: W. W. Dasher  
D. F. Acenbrack  
Hamilton Oven

Architecture  
Engineering  
Planning  
Systems  
Sciences

Alexandria  
Atlanta  
Austin  
Charlotte  
Chicago  
Dallas  
Denver  
Houston  
Minneapolis  
Norfolk  
Omaha  
Pensacola  
Phoenix  
Santa Barbara  
Seattle

FIGURE 6-4

WELL LOCATIONS AND EM SURVEY LINES



October 4, 1983

Mr. W. W. Dasher  
Pinellas County Department  
of Solid Waste  
Post Office Box 21623  
St. Petersburg, Florida 33742-1623

Dear Mr. Dasher:

The Department of Environmental Regulation has reviewed your letter of September 19, 1983 concerning the use of resource recovery boiler aggregate. The department has no objection to use of the aggregate for daily cover at the Bridgeway Acres II, Class I landfill, stockpiling at the Refuse-to-Energy Facility and general above grade usage within the perimeters of the proposed slurry wall construction at the Refuse-to-Energy Facility site.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: Bill Hennessey  
Pat Lewis

LAW OFFICES

BLAIN & CONE, P. A.

September 30, 1983

L. M. BUDDY BLAIN  
THOMAS E. CONE, JR.  
GARY A. GIBBONS  
PETER J. T. TAYLOR  
MALCOLM P. MICKLER, III  
MINDY K. OGDEN

202 MADISON STREET  
TAMPA, FLORIDA 33602  
(813) 223-3888

Received DER

OCT 3 1983

PPS

Mr. Hamilton S. Oven, Jr.  
Professional Engineer  
Administrator  
Power Plant Siting Section  
Florida Department of  
Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Re: Pinellas County Resource Recovery Project

Dear Buck:

Our contract representing the Southwest Florida Water Management District is expiring September 30, 1983. Please forward future correspondence relating to this subject directly to Stephen A. Walker, General Counsel, Southwest Florida Water Management District, 2379 Broad Street, Brooksville, Florida 33512-9712.

We appreciate your assistance and cooperation.

Sincerely,



Thomas E. Cone, Jr.

TEC, JR/gc

cc: Stephen A. Walker, Esquire

# HDR

Henningson, Durham & Richardson

P.O. Box 12744  
Pensacola, FL 32575  
(904) 432-2481

R.E. Ratcliff, P.E.  
K.L. Gregory, A.I.A.

October 3, 1983

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Fl. 32301-8241

Dear Mr. Oven:

Attached, please find the information requested in your 21 September letter. This page of emission source data should be inserted after page II-1 in the third boiler application.

Very truly yours,

HENNINGSON, DURHAM & RICHARDSON, INC.

*James C. Andrews*

James C. Andrews

*(VED)*

Enclosure

JCA/ved

Architecture  
Engineering  
Planning  
Systems  
Sciences

Alexandria  
Atlanta  
Austin  
Charlotte  
Chicago  
Dallas  
Denver  
Helena  
Knoxville  
Minneapolis  
Norfolk  
Omaha  
Pensacola  
Phoenix  
Santa Barbara  
Seattle  
Washington, D.C.



Pinellas County Resource Recovery Project  
Source Parameters Used in Modeling

Source Number	Source Description	Emission Rate (g/s)		Source Location		Stack Parameters				PSD Source
		SO <sub>2</sub>	TSP	UTM-E	UTM-N	Diam. (m)	Temp. (K)	Height (m)	Exit Velocity (m/s)	
1	RRF Unit 3	10.5	2.8	335.2	3084.1	2.37	505.0	49.1	26.8	yes
2	RRF Units 1-2	21.0	5.6	335.2	3084.1	2.37	505.0	49.1	26.8	yes
3	McKay Bay RRF	21.4	4.1	360.0	3091.9	1.91	500.0	45.7	21.3	yes
4	TECO Big Bend	6002.2	79.2	361.9	3075.0	7.00	426.0	149.4	15.6	yes
5	FPC Bartow	722.2	30.9	342.4	3082.7	3.35	408.0	91.4	44.0	no
6	FPC Higgins	286.7	8.9	336.5	3098.5	3.81	422.0	53.0	10.4	no
7	Anclote-Unit 1	1631.9	58.1	324.9	3119.0	3.66	416.0	152.1	50.0	no
8	Anclote-Unit 2	816.0	29.0	324.9	3119.0	3.66	416.0	152.1	28.3	no
9	Hooker Pt.-Units 1&2	328.0	15.1	360.0	3087.5	4.30	427.0	61.0	8.1	no
10	Hooker Pt.-Units 3&5	384.8	16.7	360.0	3087.5	3.20	400.0	93.3	26.9	no
11	Hooker Pt.-Unit 4	142.6	9.6	360.0	3087.5	2.90	438.0	93.3	42.4	no
12	Hooker Pt.-Unit 6	832.6	10.1	360.0	3087.5	5.40	417.0	93.3	23.4	no
13	TECO Gannon-Units 1-5	130.7	11.8	385.0	3091.0	3.43	403.0	85.3	9.2	no
14	TECO Gannon-Unit 6	58.3	2.6	385.0	3091.0	2.87	403.0	85.3	18.0	no
15	Golden Triangle	0.457	0.0	330.0	3085.0	-	-	12.45	-	no

T7215/9-28-83

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9544



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

WILLIAM K. HENNESSEY  
DISTRICT MANAGER

September 27, 1983

Mr. W. W. Dasher  
Pinellas County Department of  
Solid Waste  
Post Office Box 21623  
St. Petersburg, Florida 33742-1623

Dear Mr. Dasher:

Re: Aggregate Cover

This is in response to your letter dated September 19 concerning the use of aggregate as cover material at the Bridgeway Acres Class III Landfill and at the Refuse-to-Energy Facility.

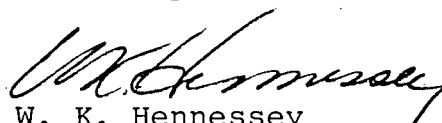
The Southwest District has primary responsibility on matters related to the Class III landfill, whereas the Power Plant Siting Section in Tallahassee has primary responsibility over the Refuse-to-Energy Facility.

As to Item #1, the District does not have any objection, as per the attached letter dated September 1, 1983.

By copy of this letter, we are referring response to Items #2, #3 and #4 to Mr. Hamilton Oven, from our Power Plant Siting Section in Tallahassee, as this pertains directly to the Power Plant Siting Certification Area.

If you have any further questions concerning this matter, please contact Mr. Pat Lewis at telephone 813/985-7402.

Sincerely,

  
W. K. Hennessey  
District Manager

PWL/jdj  
Attachment  
cc: Buck Oven

DEPARTMENT OF ENVIRONMENTAL REGULATION

**ROUTING AND TRANSMITTAL SLIP**

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION) <i>Hamilton Owen</i>	INITIAL
	DATE
2. <i>Thru: W. K. Hennessy</i> <i>WCK</i>	INITIAL
	DATE
3. <i>Thru: E. G. Squires, H. Kervus</i>	INITIAL
	DATE
4.	INITIAL
	DATE

REMARKS:

Attached please find our response to Pinellas County's letter of Sept. 19, 1983, concerning possible uses of aggregate material. We have responded to item #1, but have referred response to #2, 3 and 4 to the Power Plant Siting Section, as these are directly related to the power plant certified area.

It is our recommendation that disposal or use of this type of material be limited to on-site, in areas that have zones of discharge or appropriate containment (see attached memo from Jim Estler).

INFORMATION

REVIEW & RETURN

REVIEW & FILE

INITIAL & FORWARD

DISPOSITION

REVIEW & RESPOND

PREPARE RESPONSE

FOR MY SIGNATURE

FOR YOUR SIGNATURE

LET'S DISCUSS

SET UP MEETING

INVESTIGATE & REPT

INITIAL & FORWARD

DISTRIBUTE

CONCURRENCE

FOR PROCESSING

INITIAL & RETURN

FROM:

*Pat Lewis*

DATE *9-27-83*

PHONE *552-7270*

STATE OF FLORIDA



DEPARTMENT OF

# Health & Rehabilitative Services

Bob Graham, Governor

1317 WINEWOOD BOULEVARD

TALLAHASSEE, FLORIDA 32301

September 27, 1983

Hamilton S. Owen, Jr., P.E.  
Administrator  
Power Plant Siting Section  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241


RE: Pinellas County Resource  
Recovery Project - Phase II  
Power Plant Site Certification  
Application

Dear Mr. Owen:

I have had staff in program areas of environmental health, radiological health and contaminated waste disposal carefully review the referenced application. It is the consensus opinion of these professionals that the application is appropriate and reflects a primary need in Pinellas county.

Our review of records through conferences with Pinellas county health officials also indicates operation of the present unit is very good and that planned waste disposal meets current standards. The public health impacts should be positive and the Department recommends approval of the application.

Sincerely,

  
David H. Pingree  
7a Secretary

Received DER  
SEP 29 1983  
RBS

September 26, 1983

Mr. William E. Williams  
Division of Administrative Hearings  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery  
Project - Phase II PA-83-18  
DOAH Case No. 83-2355

Dear Mr. Williams:

Please find attached four pages previously omitted by the applicant for the Pinellas County Resource Recovery Project power plant siting application.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: William W. Deane  
— Bonnie E. Davis  
— C. Laurence Keeseey  
Tom Cone  
Gary Kuhl  
■ Jim Hoffsis  
— Barney Capehart  
— W. Gray Dunlap  
Scott Wilson  
Jacob Stowers, III  
Larry Chako

TO: Power Plant Siting Review Committee  
FROM: Hamilton S. Oven, Jr., P.E.  
DATE: September 26, 1983  
SUBJECT: Pinellas County Resource Recovery Project -  
Phase II PA-83-18

Attached are four pages previously omitted by the applicant  
for the Pinellas County Resource Recovery Project power plant  
siting application.

LAW OFFICES

BLAIN & CONE, P. A.

September 26, 1983

L. M. BUDDY BLAIN  
THOMAS E. CONE, JR.  
GARY A. GIBBONS  
PETER J. T. TAYLOR  
MALCOLM P. MICKLER, III  
MINDY K. OGDEN

202 MADISON STREET  
TAMPA, FLORIDA 33602  
(813) 223-3888

Hamilton S. Oven, Jr., Esquire  
Administration  
Power Plant Siting Section  
Florida Department of Environmental  
Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Re: Pinellas County Resource Recovery Project  
PA 83-18, DOAH Case No. 83-2355

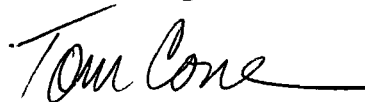
Dear Buck:

Effective October 1, 1983 our office will no longer be representing the Southwest Florida Water Management District in connection with this case. I suggest you forward all future correspondence directly to:

Stephen A. Walker, Esquire  
Southwest Florida Water Management District  
2379 Broad Street  
Brooksville, Florida 33512-9712

If you have any questions about this, please let us know. It's been a pleasure working with you.

Sincerely,



Thomas E. Cone, Jr.

TEC, JR/gc

cc: Stephen A. Walker, Esq.

Received DER

SEP 28 1983

BBS

# SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

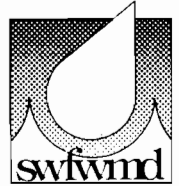


2379 BROAD STREET, BROOKSVILLE, FLORIDA 33512-9712  
PHONE (904) 796-7211 SUNCOM 684-1011

BRUCE A. SAMSON, Chairman, Tampa  
Wm. O. STUBBS, JR., Vice Chairman, Dade City  
JIM KIMBROUGH, Secretary, Brooksville  
RONALD B. LAMBERT, Treasurer, Wauchula  
DON CRANE, Assistant Secretary, St. Petersburg  
ARCH UPDIKE, JR., Assistant Treasurer, Lake Wales

WALTER H. HARKALA, Plant City  
MARY A. KUMPE, Sarasota  
MICHAEL ZAGORAC, JR., Belleair

GARY W. KUHL, Executive Director



September 22, 1983

Received DER

SEP 26 1983

RRS

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator, Power Plant Siting Section  
Twin Towers Office Bldg.  
2600 Blair Stone Rd.  
Tallahassee, FL 32301-8241

Re: Pinellas County Resource Recovery Project

Dear Mr. Oven:

The Southwest Florida Water Management District (SWFWMD) Staff has reviewed the above referenced August 1983 application. As stated in Section 2.2, "Changes in Regional Demography, Land and Water Use" and Section 2.5.2 "Water Withdrawals", no onsite water withdrawals are required or proposed, and the county has acquired a guaranteed supply of non-potable water from the City of St. Petersburg's reclaimed water supply and potable water from the Pinellas County Water System. Therefore, the project's water use will not require District Consumptive Use Permits.

The county is using reclaimed water for its industrial non-potable needs, which reduces the demand for potable water and promotes water conservation. We encourage the use of reclaimed water for this and other similar projects.

We appreciate the opportunity to review and comment on these documents. The District is always interested in measures to assure the protection of the state's groundwater resources. If we can be of any further assistance, please do not hesitate to contact this office.

Sincerely,

W. D. COURSER  
Director  
Resource Regulation Department

WDC:DLS:cm

cc: S. A. Walker  
J. E. Curren  
T. H. Luter  
D. L. Slonena  
K. A. Weber  
P. M. Dooris



September 21, 1983

Mr. James C. Andrews  
Post Office Box 12744  
Pensacola, Florida 32575

RE: Pinellas County Resource Recovery Project

Dear Mr. Andrews:

Please provide to the Department a list of the sources used in modeling the impacts of the third boiler of the Resource Recovery Project. The sources should be identified by name and should include the following information for each emission point: 1) emission rate for each applicable pollutant; 2) UTM coordinate; 3) stack parameters; and 4) an indication of whether the emission point consumes any PSD increment.

Sincerely,

*KWA for*

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: Bene E. Jordan, P.E.  
Tom Rogers

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Hamilton S. Oven, Jr.

THROUGH: W. K. Hennessey *WKH*

THROUGH: Dan Williams *DW*

FROM: Jim Estler *JE*

DATE: September 20, 1983

SUBJECT: Pinellas County Resource Recovery Project PA83-18

In response to your memo of September 7, 1983, the District has reviewed the revised application and request the following be included in the Department review.

At issue is the ultimate disposal of the boiler residue. As stated on Page 26 of their application, non-marketable boiler residue is to be disposed of in one of the following manners:

1. Landfill above the natural water table at the Class I Site (Bridgeway Acres II).
2. Weekly cover for Class III landfill (experimental-coordinated with District DER).
3. Daily cover for Class I landfill (separated from putrescible solid waste).
4. Stockpiled and/or used above grade within County property.

Fly ash is part of what is referred to as boiler residue. If the material separation process is in operation, the fly ash would end up as part of what they consider aggregate. According to the previous tests conducted on the boiler residue and aggregate, the levels of some metals are above drinking water standards. These results are similar to the analysis of fly ash from coal fired power plants.

As you are aware, we have expressed our concerns regarding fly ash in the past and have requested an agency policy be developed on this matter. We have recently requested that this review include the boiler residue (ie: aggregate). We have recommended the safeguards listed in our original fly ash memo be applied to boiler residue.

MEMORANDUM

Re: Pinellas County Reesource  
Recovery Project PA83-18

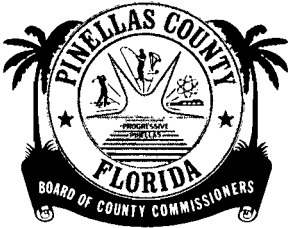
September 20, 1983  
Page Two

The following concerns should be addressed as part of the Department's review of this and similar applications:

1. Disposal of boiler residue when the separation process is down should be governed by the safeguards previously proposed for fly ash.
2. Non-marketable residue should only be disposed of in an approved manner at an approved site. The statement that it may be "stock piled and/or used above grade within County property" could be interpreted to mean the County could use this matter as fill at other locations other than at the resource recovery site.
3. Ultimate use of the marketable residue which could include the aggregate should be controlled in some manner in order to provide reasonable assurance that environmental problems will not develop from its sale and ultimate use. We do not however want to get in the mode of approving the use of marketable residue for projects like metal recycling where environmental problems are not anticipated. An example of this potential problem would be the sale of the aggregate as fill material to some outside party. There are presently no safeguards proposed governing where and how the fill would be used.

Please advise what your feelings are in this regard. If you have any questions, please give me a call at SunCom 552-7270.

JWE/scm



# BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

DEPARTMENT OF PUBLIC WORKS AND UTILITIES  
ENGINEERING - OPERATIONS - SOLID WASTE - WATER - SEWER  
315 COURT STREET  
CLEARWATER, FLORIDA 33516  
Phone: (813) 462-3251

COMMISSIONERS

BARBARA SHEEN TODD, CHAIRMAN  
JOHN CHESNUT, JR., VICE-CHAIRMAN  
GABRIEL CAZARES  
CHARLES E. RAINEY  
BRUCE TYNDALL

Received DER

September 20, 1983

SEP 23 1983

PPS

Mr. Hamilton S. Oven, Jr.,  
Administrator - Power Plant Siting Section  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

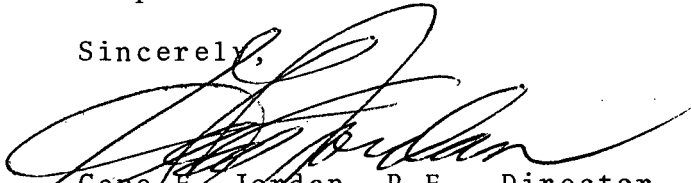
Dear Mr. Oven:

This will acknowledge receipt of your letter of September 14, 1983.

We will take the necessary action to correct the statements in the application Section 2.2 page 10.

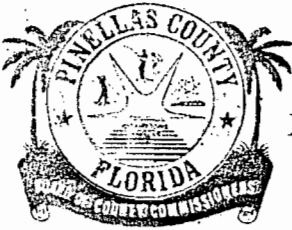
I have asked our County Attorney, Mr. W. Gray Dunlap, to advise us as to the rezoning matter and we will let you know as soon as possible as to the outcome.

Sincerely,



Gene E. Jordan, P.E., Director  
Public Works and Utilities

cc: W. Gray Dunlap - County Attorney  
W. W. Dasher - Director of Public Works Operations  
D. F. Acenbrack - Director of Solid Waste Management



BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 33518

COMMISSIONERS

BARBARA SHEEN TODD, CHAIRMAN  
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BRUCE TYNDALL

W. GRAY DUNLAP  
COUNTY ATTORNEY

September 20, 1983

Division of Administrative Hearings  
State of Florida  
2000 Apalachee Parkway  
Oakland Building  
Tallahassee, Florida 32301

Received DER

Attention: William E. Williams

SEP 23 1983

Re: Pinellas County's Application for  
Power Plant Siting Certification-V  
Case No. 83-2355

P.P.S

Gentlemen:

By letter dated August 9, 1983, the Department of Environmental Regulation (DER) stated that the County's application for certification was incomplete pursuant to the requirements of Section 403.5065(2), Florida Statutes.

In response to that notification, provisions of the application were modified to fulfill the concerns expressed by the Department. The revised application was submitted on September 6, 1983.

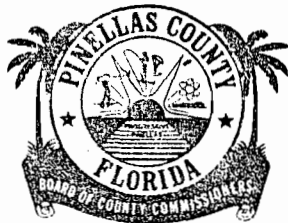
Pinellas County hereby requests that your Order, dated September 9, 1983, be set aside based on resubmittal of the application and subsequent statement by DER that the revised document is complete and accepted by the Department.

Very truly yours,

W. Gray Dunlap  
County Attorney

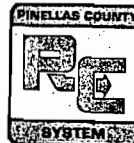
WGD/cam

cc: DER - Power Plant  
Siting Section



# BOARD OF COUNTY COMMISSIONERS

DEPARTMENT OF SOLID WASTE MANAGEMENT  
2800 110TH AVENUE NORTH  
ST. PETERSBURG, FLORIDA 33702  
PHONE (813) 825-1565



**COMMISSIONERS**

BARBARA SHEEN TODD, CHAIRMAN  
JOHN CHESNUT, JR., VICE-CHAIRMAN  
GABRIEL CAZARES  
CHARLES E. RAINEY  
BRUCE TYNDALL

P.O. BOX 21623  
ST. PETERSBURG, FLORIDA 33742-1623

September 19, 1983

Mr. W. K. Hennessey  
Southwest District Manager  
Department of Environmental Regulation  
7601 Highway 301 North  
Tampa, FL 33610-9455

D.E.R.

SEP 20 1983

SOUTHWEST DISTRICT  
TAMPA

Re: Aggregate Cover

Dear Mr. Hennessey:

One byproduct of the incineration of solid waste at the Pinellas Refuse-to-Energy Plant is a material composed of glass, sand, grit, clinkers, and flyash, and described as aggregate. Presently, nearly 500 tons per day is being produced. In a previous experiment, the County utilized this aggregate material as cover material at its' Class III landfill. The Department has reviewed the results of this experiment and has conditionally approved the continuation of this practice.

At this time, Pinellas County proposes to expand the use of aggregate to include the following:

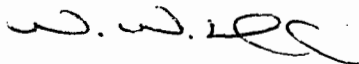
1. Continued use of the aggregate as weekly cover for the Class III landfill.
2. Utilization as daily cover at the Bridgeway Acres II, Class I landfill.
3. Stockpiling on County-owned lands at the Refuse-to-Energy Facility above grade.
4. General above grade usage at the Refuse-to-Energy Facility for road stabilization, fill, and platforms for the proposed slurry wall construction.

*1 only that site*

Mr. W. K. Hennessey  
September 19, 1983  
Page 2

Due to the problems associated with managing the large volume of aggregate being produced daily, Pinellas County asks that the Department review this proposal as expeditiously as is possible. Pending a favorable review by the Department, use of the aggregate at the Class III landfill will continue.

Sincerely,



W. W. Dasher, Director  
Public Works Operations

WWD:ltl


cc: Buck Owen, DER  
Gene Jordan, Dir, PW&U  
G. Dunlap, County Attorney  
HDR

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

**INTEROFFICE MEMORANDUM**

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Hamilton S. Oven, Jr.  
Bureau of Permitting

FROM: Donald P. Schiesswohl   
Bureau of Wastewater Management and Grants

DATE: September 19, 1983

SUBJECT: Power Plant Siting Application  
Pinellas County Resource Recovery Project

The revised application for the power plant siting of the third boiler expansion at the Pinellas County Resources Recovery Facility has been reviewed with respect to the use of treated wastewater effluent for the cooling tower make-up water and the discharge of boiler blowdown and other waste streams to the Pinellas County Wastewater Treatment System. The questions raised in our memorandum of August 5, 1983 have been responded to satisfactorily. Accordingly, it is our opinion that the proposed additional unit will not present a problem. This statement is based on the information furnished and that apparently no problems have been experienced with the present arrangement of using treated wastewater effluent (AWT quality) and discharging waste streams to the Pinellas County Wastewater Treatment System.

DPS/jt



DEPARTMENT OF ENVIRONMENTAL REGULATION

**ROUTING AND TRANSMITTAL SLIP**

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

*H. S. Overz Bur of Permitting  
Power Plant Siting*

INITIAL

DATE

2.

*Power Plant Siting*

INITIAL

DATE

3.

INITIAL

DATE

4.

INITIAL

DATE

REMARKS:

*Please let me know if you  
would like the Pinellas project  
reports returned to you.*

INFORMATION

REVIEW & RETURN

REVIEW & FILE

INITIAL & FORWARD

DISPOSITION

REVIEW & RESPOND

PREPARE RESPONSE

FOR MY SIGNATURE

FOR YOUR SIGNATURE

LET'S DISCUSS

SET UP MEETING

INVESTIGATE & REPT

INITIAL & FORWARD

DISTRIBUTE

CONCURRENCE

FOR PROCESSING

INITIAL & RETURN

FROM:

*Don Schiesswohl*

DATE

*Sept 19, 1983*

PHONE

*8-2582*

September 19, 1983

Mr. William E. Williams  
Division of Administrative Hearings  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery Project  
PA 83-18, DOAH Case No. 83-2355

Dear Mr. Williams:

The Department of Environmental Regulation has reviewed the revised Pinellas County Power Plant Siting Application pursuant to Section 403.5065(2), F.S. The department hereby finds the application complete as of September 6, 1983.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: William W. Deane, Esq.  
W. Gray Dunlap, Esq.  
Bonnie E. Davis, Esq.  
C. Laurence Keeseey, Esq.  
Tom Cone, Esq.  
Gene Jordan  
Barney Capehart

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

To: H.S. Owen, Administrator, Power Plant Siting

Through: Dr. G.J. Thabaraj, Chief, Bureau of Water Analysis  
Dr. L.T. Ross, Chief Biologist, Biology Section

*EST for GJT  
CWS for JTR*

From: *LLO* Lawrence A. Olsen, Biology Section

Date: 16 September, 1983

Subject: Power Plants- Pinellas County Resource Recovery Project PA 83-18;  
review of sufficiency of application

I have reviewed the above-referenced document for sufficiency in terms of ecological effects of plant construction and operation. Since the land is already heavily affected by previous industrial and landfill operations and by the already existing resource recovery facility, the effects of the additional capacity will be insignificant, as the document points out. However, there is one point which I believe has been insufficiently addressed. That is, under Section 2.5.1 Affected Waters, the applicant indicated that during heavy rain-falls, stormwater discharge does get offsite, via a ditch which eventually reaches tidal mangrove wetlands in Old Tampa Bay. I have the following questions pertaining to this runoff:

1. How often does this occur during a year?
2. Has the water quality of the water in the ditch ever been monitored?
3. What is the frequency with which the 20 acre holding pond overflows into the ditch?

I would expect that the answers to the above questions are fairly readily at hand, at least for questions 1 and 3. I would like to be sure that the potential for the export of nutrients, contaminants and suspended solids to the wetlands is minimal.

Received DER

SEP 20 1983

PPS

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

**INTEROFFICE MEMORANDUM**

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Hamilton S. Oven  
THRU: Clair Fancy *CH*  
FROM: Tom Rogers *TR*  
DATE: September 15, 1983  
SUBJ: Pinellas County Resource Recovery Project PA 83-18;  
Completeness and Sufficiency Review

Please have the consultant for this project provide me a list of the sources used in the modeling. These sources should be identified by name and include the following information for each emission point: (1) emission rate for each applicable pollutant; (2) UTM coordinate; (3) stack parameters; and (4) indication of whether the emission point consumes PSD increment.

TR/ks

September 14, 1983

Mr. Gene Jordan  
Pinellas County Public Works  
and Utilities  
315 Court Street  
Clearwater, Florida 33516

Dear Mr. Jordan:

In reviewing the revised application for the Pinellas County Recovery Project as received on September 6, 1983, the department noted in Section 2.2 on page 10 the following:

1. A statement that "The COC for the original application recommended actions on three parcels of land on and adjacent to the certified site". This statement is incorrect. The department's Site Certification Review report contained those recommendations. The recommended zoning changes were not incorporated in the Conditions of Certification.

2. Paragraph No. 2 reads: "The majority of the 160 acre portion of the certified site which was zoned M-1 was rezoned, by special ordinance, to IH, heavy industrial. This designation permits, among other things, solid waste landfills. A small portion of this tract, located in the southwest corner and nearest the residential area, was rezoned as P, public. This designation allows for the disposal of boiler residue only (see Figure 2-4)." This was not a part of the department's recommendations.

The rezoning indicates a possible procedural error on the County's part. Rezoning of the site appears contrary to the Order Relating to Land Use and Zoning by the Governor and Cabinet dated March 21, 1979, and appears contrary to subsection 403.508(2), Florida Statutes.

Page Two  
Mr. Jordan  
September 14, 1983

It is suggested that the attorney representing the County contact the department's attorney and the attorney for the Department of Community Affairs to discuss this matter.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: William W. Deane, Esq.  
W. Gray Dunlap, Esq.  
C. Laurence Keeseey, Esq.  
Bonnie E. Davis, Esq.  
Lynn Capehart, Esq.  
Tom Cone, Esq.  
D. F. Acenbrack, Esq.

**INTEROFFICE MEMORANDUM**

For Routing To District Offices And/Or To Other Than The Addressee		
To: <i>Hamilton Owen</i>	Loctn.:	
To: _____	Loctn.:	
To: _____	Loctn.:	
From: <i>Don Kell</i>	Date:	<i>9/16/83</i>
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Hamilton Owen, Jr.  
Power Plant Siting Section

THROUGH: Dr. Rodney S. DeHan, Administrator *RSD*  
Groundwater Section

FROM: Don Kell *DK*  
Groundwater Section

DATE: September 14, 1983

SUBJECT: Pinellas County Resource Recovery Project - August 1983  
PPS Application

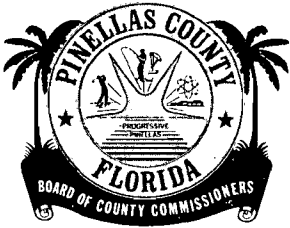
Received DER

SEP 19 1983  
**PPS**

Pending completion of, and subsequent approval of, the "Comprehensive surface and ground water management program for the entire 730 acre site", we have no adverse comment regarding the slurry wall - zone of discharge concept that might be adopted as an option, and as described in the application.

It is assumed that points 1 through 10 of item (5) in your August 9, 1983 letter to Mr. Williams will be satisfied upon finalization of the proposal.

DK/mj



# BOARD OF COUNTY COMMISSIONERS

PINELLAS COUNTY, FLORIDA

315 COURT STREET

CLEARWATER, FLORIDA 33516

## COMMISSIONERS

BARBARA SHEEN TODD, CHAIRMAN  
JOHN CHESNUT, JR., VICE-CHAIRMAN  
GABRIEL CAZARES  
CHARLES E. RAINEY  
BRUCE TYNDALL

September 13, 1983

Received DER

SEP 16 1983

P.P.S

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator, Power Plant Siting Section  
State Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301

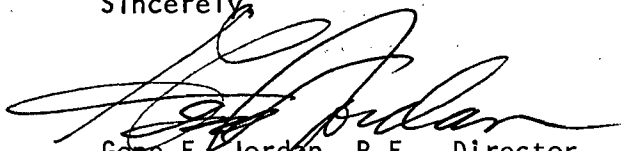
Re: Power Plant Siting Certification (PPSC)

Dear Mr. Oven:

This is in response to your letter of August 31, 1983, concerning the boiler load rate and suggested ways of modifying the Conditions of Certification to confirm that the combustion unit will be capable of handling 1,050 TPD of solid waste at 5,000 BTU/pound.

As seen in paragraph 3.0 on page 20 of the PPSC application, we have taken your suggestion and included the information as part of the proceedings for certifying the Phase II boiler. Also, page 4 of Appendix entitled Operate/Construct Air Pollution Source makes reference to this matter.

Sincerely,



Gene E. Jordan, P.E., Director  
Public Works and Utilities

GEJ:ltl

cc: W. K. Hennessey, SW Dist Dir  
W. Gray Dunlap, County Attorney  
W. W. Dasher, Dir, PW Opns  
D. F. Acenbrack, Dir, S/W Mgt  
HDR



September 12, 1983

Mr. Larry Chako  
City of St. Petersburg  
Pollution Control  
Post Office Box 2842  
St. Petersburg, Florida 33731

RE: Pinellas County Resource Recovery  
Project, Phase II, PA 83-18  
DOAH Case No. 83-2355

Dear Mr. Chako:

Attached please find a revised application for power plant site certification for an expansion of the Pinellas County Resource Recovery Project as received on September 6, 1983. The application was revised in response to my August 9, 1983 letter to the Hearing Officer.

The Department will review the new application for completeness and sufficiency as required by Chapter 403, Part II, Florida Statutes.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

September 12, 1983

Mr. Jacob Stowers, III  
Pinellas County Pollution Control  
Pinellas County Courthouse  
315 Court Street  
Clearwater, Florida 33516

RE: Pinellas County Resource Recovery  
Project, Phase II, PA 83-18  
DOAH Case No. 83-2355

Dear Mr. Stowers:

Attached please find a revised application for power plant site certification for an expansion of the Pinellas County Resource Recovery Project as received on September 6, 1983. The application was revised in response to my August 9, 1983 letter to the Hearing Officer.

The Department will review the new application for completeness and sufficiency as required by Chapter 403, Part II, Florida Statutes.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

September 12, 1983

Mr. Scott Wilson  
Tampa Bay Regional  
Planning Council  
9455 Koger Boulevard  
St. Petersburg, Florida 33702

RE: Pinellas County Resource Recovery  
Project, Phase II, PA 83-18  
DOAH Case No. 83-2355

Dear Mr. Wilson:

Attached please find a revised application for power plant site certification for an expansion of the Pinellas County Resource Recovery Project as received on September 6, 1983. The application was revised in response to my August 9, 1983 letter to the Hearing Officer.

The Department will review the new application for completeness and sufficiency as required by Chapter 403, Part II, Florida Statutes.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb  
Attachment

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

## INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional: <input type="checkbox"/>	Reply Required: <input type="checkbox"/>	Info. Only: <input type="checkbox"/>
Date Due: _____	Date Due: _____	

TO: Dan Williams                      SW District  
 Joyce Gibbs                      Pinellas County DEM  
 Clair Fancy  
 Bob King

FROM: Ed Palagyi, BACT Coordinator

DATE: September 12, 1983

SUBJ: Resource Recovery - Pinellas County

Greetings: One of the prodigious honors of air program affiliation is being a member of the prestigious BACT review group.

Your global proximity and environmental concerns have won you a choice seat on this illustrious committee.

Please review the attached set-up preliminary pre-draft of a BACT for the proposed Pinellas County Resource Recovery proposed modification. Fill in the blanks with your recommended emission limits. A list of incinerator projects taken from the EPA BACT clearinghouse report is attached as background information.

Please send your completed response to Ed Palagyi, BAQM, before October 1, 1983. Your cooperation in this matter is very much appreciated.

EP/ks

**D.E.R.**

SEP 15 1983

SOUTHWEST DISTRICT  
TAMPA

BACT Clearinghouse Reports  
Refuse Incinerators

Westchesler County Resource Rec. NY

3 @ 750 T/D

PM - 0.3 gr/dscf at 12% CO<sub>2</sub>  
CO - .62 lb/ton waste  
NOx - 3 " " "  
Pb - .03 gr/dscf  
Hg - .03 " "  
Be - .03 " "

Steam Supply Corp. OK

3 @ 230 T/D

PM - .06 gr/dscf  
SO<sub>2</sub> - 17.5 lb/hr  
NOx - 46 " "  
VOC - 3.5 " "  
CO - 54.6 " "  
Hg - .2 " "

Energy Answers Corp. MA

3 @ 600 T/D Semas Project

PM 0 .05 gr/dscf  
NOx - .5 lb/10<sup>6</sup> Btu

Tampa McKay Bay Res. Rec. FL

4 @ 250 T/D

SO<sub>2</sub> - 170 lb/hr  
NOx - 300 " "  
VOC - 9 " "  
Pb - 3 " "  
F - 6 " "  
Hg - .6 " "  
Be - 5 grams/day

Municipal Inc. MD

600 T/D  
PM - .03 gr/dscf  
SO<sub>2</sub> - 35 lb/hr  
CO - 30 " "  
VOC - 1.3 " "  
NOx - 2.6 " "

NESWC Resource Rec. MA

750 T/D  
PM - /05 gr/dscf  
NOx - .32 lb/10<sup>6</sup> Btu  
CO - .07 " " "  
SOx - .02 " " "

N. W. Maryland Waste Disposal MD

2010 T/D  
(Modified Source)  
SO<sub>2</sub> - 335 lb/hr  
CO - 109 " "  
NOx - 227 " "  
F - 4.2 " "

# PRELIMINARY

## Best Available Control Technology (BACT) Determination

### Public Works and Utilities

#### Pinellas County

The applicant plans to construct a third municipal solid waste fired boiler to increase the throughput of the existing resource recovery facility located in Pinellas County, Florida. The proposed mass burn Martin combustion system will be similar to the two existing units. The new unit will be capable of incinerating 1050 tons per day of municipal waste, and will increase the solid waste processing capacity of the facility to 3150 tons per day.

The proposed mass burn unit is designed for a heat input of 411 million Btu per hour based upon a waste heat content of 5000 Btu per pound. This added unit will increase the processing throughput of the facility to allow incineration of the solid waste expected to be generated over the next ten years.

#### Potential Air Pollutant Emissions (ton/year)

Particulate - 109 (25)\*

Sulfur Dioxide - 577 (40)

Nitrogen Oxides	- 577	(40)
Carbon Monoxide	- 288	(100)
Lead	- 58	(0.6)
Beryllium	- .0019	(.0004)
Mercury	- 2.1	(0.1)
Hydrogen Floride	- 28	(3)

\* Regulated Air Pollutants - Significant Emission Rates.

The steam generated will be used to produce electrical power for distribution into the peninsula grid system. The new source is being reviewed according to Florida Administrative Code Chapter 17-17, Electrical Power Plant Siting and Rule 17-2.500, Prevention of Significant Deterioration. The Bureau of Air Quality Management is performing the air quality review and the BACT determination for the siting committee. The certification number for the existing facility is PA 78-11.

BACT Determination Requested by the Applicant:

An electrostatic precipitator (ESP) will be installed to control the discharge of particulate matter at 0.03 gr/dscf, or less, corrected to 12% CO<sub>2</sub>. The ESP will also control lead, beryllium and mercury emissions. Sulfur dioxide emissions will be limited by firing municipal waste, a low sulfur content fuel. Burner design and operating procedures will <sup>be</sup> the methods used to limit NOx emissions. ~~Burner controls installed to minimize the~~

~~limit NOx emissions.~~ Burner controls installed to minimize the emission of CO due to incomplete combustion.

Date of Receipt of a BACT Application:

September 7, 1983

Date of Publication with Florida Administrative Weekly:

September 16, 1983

Review Group Members:

Bob King - New Source Review Section

Clair Fancy - Central Air Permitting

Tom Rogers - Air Modeling Section

Dan Williams - SW District Office

BACT Determination by DER:

Pollutant

Emission

Particulates

0.03 grains/dscf, corrected  
to 12 percent CO<sub>2</sub>

Sulfur dioxide



Nitrogen Oxides

\_\_\_\_\_

Carbon Monoxide

\_\_\_\_\_

Lead

\_\_\_\_\_

Beryllium

\_\_\_\_\_

Mercury

3200 grams/day

Particulates

40 CFR 60.150, Subpart O,  
will apply when more than  
2205 lb/day (dry basis)  
of municipal sewage sludge  
is fired in the incinerator.

Visible Emissions

\_\_\_\_\_opacity

Compliance testing for the mass emission rate limits for particulate, SO<sub>2</sub>, and NO<sub>x</sub> shall be conducted in accordance with Rule 17-2.700.

Compliance with the opacity limit shall be demonstrated in accordance with DER Method 9, Rule 17-2.700.

When more than 2205 lb/day of municipal sewage sludge is fired, compliance with the Mercury emission limit shall be conducted in accordance with 40 CFR 61, Method 101 Appendix B.

A continuous monitoring system to measure the opacity of emissions shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710 - Continuous Monitoring Requirements. The CEM must be installed and operational prior to compliance testing.

#### BACT Determination Rationale

NSPS, 40 CFR 60.50, Subpart E is applicable to this source. If more than 2205 pounds per day of municipal sewage sludge (dry basis) is fired in the incinerator, NSPS 40 CFR 60.150, Subpart O, also applies. The mercury emission limit is the National Emission Standard for Mercury 40 CFR 61.50, Subpart E. If Subpart E is applicable to the proposed source is subject to interpretation.

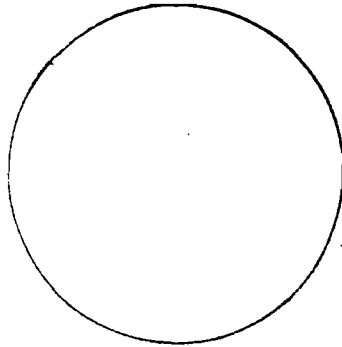
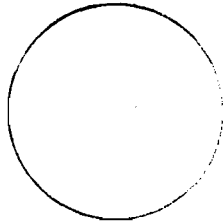
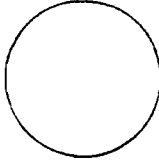
Several factors to be considered are:

- 1) Resource recovery facilities have a high potential for severely and adversely affecting air quality. Pollutants of concern SO<sub>2</sub>, NO<sub>x</sub>, particulates, HC, HCL, and HF acid gases.

- 2) The thermal destruction of municipal waste is a recognized method of disposal, and A. reduces landfill area requirements; B. eliminates a breeding ground for rodents; C. reduces possibility of ground water contamination; D. allows for the recovery of various metals for recycle.
- 3) Air pollution control technology is currently commercially available and capable of achieving the levels of control necessary to reduce most emissions from resource recovery facilities.
- 4) Calculation of sulfur dioxide emission factors for solid waste based upon the amount of SO<sub>2</sub> generated per million Btu of solid waste burned show the high value of the solid waste SO<sub>2</sub> emission factor for residue fuel oil containing 0.5 percent sulfur.
- 5) The technology for controlling NO<sub>x</sub> emissions from resource recovery facilities is still in the experimental stage.
- 6) The land area needed for a landfill (dump) will be reduced approximately 90 percent. The residue (ash) to be disposed of in a landfill will be 15 percent of the mass but only 5 percent of the volume of waste collected and burned.

This is a set-up preliminary pre-draft for your review and comments. Please write in your recommended BACT limits and rationale.

Return to Ed Palagyi, BAQM, before October 1, 1983.



STATE OF FLORIDA  
DIVISION OF ADMINISTRATIVE HEARINGS

SEP 13 1983

P P S

In Re: PINELLAS COUNTY RESOURCE RECOVERY ) PROJECT, Application for Power Plant ) Cite Certification )	CASE NO. 83-2355
--	------------------

---

O R D E R

THIS CAUSE having come on for consideration on the Hearing Officer's own motion, and the Hearing Officer having reviewed the matters on file in this cause, it is found and ordered as follows:

1. By letter dated July 27, 1983, the Department of Environmental Regulation requested the assignment of a Hearing Officer to conduct further proceedings in this cause. That correspondence reflected that the Department of Environmental Regulation received a power plant site certification application concerning the Pinellas County Resource Recovery Project-Phase II on July 26, 1983.

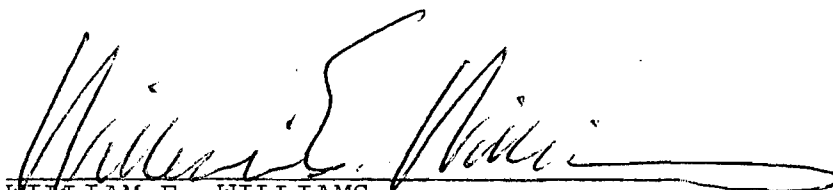
2. Subsequently, by letter dated August 9, 1983, the Hearing Officer and other parties to this cause were advised that the Department of Environmental Regulation had determined that the referenced application was incomplete pursuant to the requirements of Section 403.5065(2), Florida Statutes.

3. As of the date of this order, no pleadings or appearances of any nature have been filed by or on behalf of the applicant. Specifically, the applicant in this cause has neither filed a statement agreeing with the Department's statement of incompleteness, nor a statement contesting that conclusion. Accordingly, it is

ORDERED:

1. The parties to this proceeding shall have a period of ten (10) days from receipt of this order to show cause, if any they can, why the applicant's silence should not be construed as a withdrawal of this application. Failure to comply with the requirements of this order will result in the entry by the Hearing Officer of a recommended order of dismissal.

DONE AND ORDERED this 9th day of September, 1983,  
at Tallahassee, Florida.



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

FILED with the Clerk of the Division  
of Administrative Hearings this 9th  
day of September, 1983.

Copies furnished to:

William W. Deane, Esq.  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Pinellas County Board of  
County Commissioners  
Post Office Box 21623  
St. Petersburg, Florida 33742-1623  
Attn: Department of Solid Waste  
Management

W. Gray Dunlap, Esq.  
County Attorney  
Pinellas County Courthouse  
315 Court Street  
Clearwater, Florida 33516

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

## INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: <u>Tom RODGERS</u>	Loctn.:	<u>TLH</u>
To: _____	Loctn.:	_____
To: _____	Loctn.:	_____
From: _____	Date:	_____
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

DER

SEP 7 1983

TO: Power Plant Siting Review Committee

FROM: Hamilton S. Oven, Jr. *Hso*

DATE: September 7, 1983

SUBJECT: Pinellas County Resource Recovery Project  
PA 83-18

BAQM

Attached is a revised copy of the Pinellas County power plant siting application. The application was revised in response to comments made by the department in early August. Please review the revised application for completeness and sufficiency and submit your comments concerning the same to me by September 16, 1983.

cc: Frank Andrews  
Clair Fancy  
Tom Rodgers  
Ed Palagyi  
Larry Olsen  
Don Kell  
Don Schiesswohl  
Bill Hennessey  
Patrick Lewis  
Suzanne Walker

September 7, 1983

Mr. William E. Williams  
Division of Administrative Hearings  
2009 Apalachee Parkway  
Tallahassee, Florida 32301

RE: Pinellas County Resource Recovery  
Project, Phase II, PA 83-18  
DOAH Case No. 83-2355

Dear Mr. Williams:

Attached please find a revised application for power plant site certification for an expansion of the Pinellas County Resource Recovery Project as received on September 6, 1983. The application was revised in response to my August 9, 1983 letter to you. *to the Hearing Officer*

The Department will review the new application for completeness and sufficiency as required by Chapter 403, Part II, Florida Statutes.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: William W. Deane - a  
Bonnie E. Davis - PSC  
C. Laurence Keeseey - a  
Tom Cone  
Gary Kuhl - a - SLWFUMD  
Jim Hoffsis - a - PSC  
Barney Capehart - a  
W. Gray Dunlap -



TO: Power Plant Siting Review Committee  
FROM: Hamilton S. Oven, Jr.  
DATE: September 7, 1983  
SUBJECT: Pinellas County Resource Recovery Project  
PA 83-18

Attached is a revised copy of the Pinellas County power plant siting application. The application was revised in response to comments made by the department in early August. Please review the revised application for completeness and sufficiency and submit your comments concerning the same to me by September 16, 1983.

cc: Frank Andrews  
Clair Fancy  
Tom Rodgers -2  
Ed Palagyi -1  
Larry Olsen -1  
Don Kell -1  
Don Schiesswohl -1  
Bill Hennessey -1  
Patrick Lewis -1  
Suzanne Walker

September 1, 1983

Mr. W. W. Dasher  
Director, Public Works Operations  
Pinellas County Department of Solid  
Waste Management  
Post Office Box 21623  
St. Petersburg, Florida 33742-1623

Dear Mr. Dasher:

The Department of Environmental Regulation has reviewed the conceptual hydrogeological investigation presented in Ardaman Associates' August 9, 1983, letter. This preliminary survey appears comprehensive enough to provide the information necessary to assess the feasibility of the bentonite-slurry wall leachate control proposal and future ground water monitoring plans.

Sincerely,

Hamilton S. Oven, Jr., P.E.  
Administrator  
Power Plant Siting Section

HSO/sb

cc: Pat Lewis  
Don Kell

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee		
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
To: _____	Loctn.: _____	
From: _____	Date: _____	
Reply Optional [ ]	Reply Required [ ]	Info. Only [ ]
Date Due: _____	Date Due: _____	

TO: Steve Fox

THROUGH: W. K. Hennessey *WKH*

FROM: Jim Estler *JWE*

DATE: September 6, 1983

SUBJECT: Agency Position On the Use of  
Fly Ash Material

On April 11, 1983, we requested an agency position on the use of fly ash material. We have received a copy of Buck Oven's comments on this matter but have not yet heard anything further.

Recently, we attended two meetings in Tallahassee on resource recovery facilities applying for certification under the Power Plant Siting Act. The issue of fly ash was brought up at both meetings. Apparently, the combustion by-products of these sources yield a material containing a percentage of fly ash. The remainder of the materials, referred to by Pinellas County Resource Recovery representatives as aggregate (material which passes through their metal separation process), has a chemical analysis similar to that of fly ash. The County uses the aggregate in their construction activities (ie: as fill).

It appears that these materials, if deposited in contact with groundwater, will contribute to a water quality violation. We therefore plan to limit such disposal to sites having zones of discharge or appropriate containment.

We expressed a concern at the meetings that disposal of this aggregate material should be governed by the same safeguards as our recommended ones for fly ash.

Please include disposal of wastes from resource recovery facilities in your review of the fly ash issue and ultimate formulation of an agency policy.

Should you or your staff have any questions, please give Jim Estler a call at Sun Com 552-7270.

JE/scm

## REPORT ON USE OF AGGREGATE AS COVER MATERIAL - AUGUST 29, 1983

In midJuly a review of the Bridgeway Acres Class III Landfill posed the opportunity to experiment with the use of a refined "aggregate" from the Resource Recovery Plant as a material for use as a maneuvering surface and for cover over deposited wastes.

The Pinellas County Solid Waste System had stockpiled several thousand tons of aggregate in the vicinity, pending determination of its character and application. The Tampa Regional office of DER was consulted and agreed to a month's trial, provided the material not be placed below the natural water table and further provided that it remain on site.

The Department of Solid Waste Management authorized and directed its contractor, Laidlaw Waste Systems, to use aggregate it was hauling as cover. This was done during the 30 day period ending on August 20.

Climatic conditions were typical for the season, with almost daily rainfall and low to moderate winds. On some occasions heavy rainfall (2" to 3") fell.

Immediately into the trial period extensive roadway and maneuvering surfaces were laid out from the top of the paved entry roadway westward. This enabled delivering vehicles to travel to the westernmost limit of the landfill. The new surface was built on earlier daily cover, which was predominantly clay soil, and built with about 8" of aggregate.

### CONCLUSIONS

1. As a roadway, the aggregate remained pourous and bound well into the clay cover soil, which was barely saturated, thus not releasing much moisture upward during compaction. Rolling wheels of delivery vehicles compacted the aggregate well and resulting slopes drained moderately to well. Even during rains, the traffic did not rut on straight runs and surfaces held up better than on natural soils when making turns.
2. Because of the bed thickness and compacted stability, the aggregate isolated troublesome materials from vehicle wheels, thus substantially reducing flat tires and the congestion normally associated with incapacitated trucks.
3. The combined drying effects of sun and wind were offset by overnight dampness and rain to keep to an absolute minimum any airborne dust from aggregate constituents. This is likely to change once

seasonal weather changes take place.

4. After steel wheel compaction of wastes, aggregate was easily moved with excellent feathering characteristics to accomplish weekly cover. After secondary compaction the (cover) objective of fire-stop appeared to be properly met.
5. Resistance to air movement through compacted aggregate was not measured.
6. Weathering resistance of both naturally piled and compacted aggregate appeared to be higher than any naturally available on--site material.
7. No measure was attempted of any corrosibility or resulting abrasive wear from aggregate on refuse vehicles or heavy machinery.

RECOMMENDATION:

The practice of utilizing aggregate for surface and cover construction be continued throughout the remainder of the season when we can expect rain, to be discontinued immediately if natural drying appears to produce any airborne difficulties with dust, especially off--site.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9544



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

WILLIAM K. HENNESSEY  
DISTRICT MANAGER

September 1, 1983

Mr. Robert S. Becker  
Solid Waste Operations Manager  
Pinellas County Department of Solid Waste Management  
P.O. Box 21623  
St. Petersburg, FL 33742-1623

Re; Aggregate Cover  
Class III Landfill

Dear Mr. Becker:

This is in response to your letter of August 19, 1983 concerning the above referenced subject. Following our on-site meeting of August 30, 1983 and review of the report concerning the use of the aggregate as cover material at the Class III landfill, we offer the following comments:

1. During the inspection, no fugitive dust problem was observed as a result of the use of this material as initial cover. We concur that a closer look should be taken during dry periods when cover may become dry. If a dust problem should develop, use should be discontinued unless adequate dusting controls are taken.
2. This material appears to meet the criteria for "initial cover" pursuant to Section 403.703(16), F.S. (see attached).
3. We have no objection for the use of this material as initial cover at the Class III landfill, provided that it does not create a fugitive dust problem, and it is not used as part of the intermediate or final soil cover.

If you have any questions concerning this matter, please do not hesitate to contact me at telephone number 813/985-7402.

Sincerely,

Patrick W. Lewis  
Environmental Specialist

PWL/bc

cc: W.W. Dasher  
Doug Bramlett  
John Reese

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9544



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

WILLIAM K. HENNESSEY  
DISTRICT MANAGER

September 1, 1983

Mr. Gene E. Jordan  
Director of Public  
Works & Utilities  
315 Court Street  
Clearwater, FL 33516

- Re: (1) DER Warning Notice #52-83-04-087  
(2) DER letter dated April 29, 1983  
(3) Residue analysis submitted to DER  
on June 28, 1983

Dear Mr. Jordan:


Concerning the referenced correspondence relating to disposal of boiler residue generated at the Resource Recovery Plant, we feel the requirements of paragraph E.6 of Certification Case #PA 78-11 have been met in that the residue analysis shows the residue to be non-hazardous. We, therefore, approve of your plans to place boiler residue below the groundwater level in the existing "pit" which has remained open and is now full of leachate contaminated stormwater and groundwater.

The contaminated water should be pumped to treatment then spray irrigated in such a manner as to prevent run-off into the stormwater collection system. We recommend removal of the ferrous materials before disposal of residue into the dewatered pit. This dewater to treatment and disposal plan approval is a one time event intended to correct a severe specific problem area of the Bridgeway Acres Landfill.

This letter hereby constitutes closure of our enforcement involving warning notice #52-83-04-087.

Please contact this office when this project commences so our field personnel can monitor the work.

Sincerely,

  
R. Craig McArthur  
Enforcement Supervisor

DSB/err

cc: W.K. Hennessey  
Ace Acenbrack  
Bill Dasher  
Pat Lewis

Protecting Florida and Your Quality of Life  
Buck Owen