HDR

September 15, 1997

Mr. Hamilton S. Oven, Jr., P.E., Administrator
Florida DEP Office of Siting Coordination, Mail Station 48
2600 Blair Stone Road, Twin Towers Office Building
Tallahassee, FL 32399-2400

RE: Site Certification
Pinellas County Resource Recovery Facility Units 1-3
Certification No. PA 78-11 and PA 83-18

Dear Mr. Oven:

Enclosed please find four copies of Pinellas County's permit application to revise the PPSA Conditions of Certification for the retrofit project. The revisions requested to the PPSA Conditions of Certification (given in Appendix B to the application) are as follows:

1. Replace the flyash storage silo with two flyash surge bins to be located inside the new ash conditioning building (emissions controlled by a high-energy wet venturi scrubber) and
2. Add Method 26A as an acceptable testing method for HCL compliance tests in accordance with 40 CFR 60.58a(f)(1).

Pinellas County also proposes the following changes to the previously approved retrofit design which need review by the Bureau of Air Regulation:

1. Increasing the size of the MWC auxiliary burners to 130 MMBTU/hour based on combustor operating requirements, increasing the MWC auxiliary burner NOx emission factor to 0.3 lb./MMBTU consistent with the auxiliary burners' design and function, and increasing the permitted annual consumption of natural gas by the MWC auxiliary burners to 97.76 million cubic feet per year per combustor based on potential operating loads; and
2. Including ventilation fans in the ash storage and processing building and ash conveyor gallery (no particulate emissions are expected from these fans since the ash is stored, handled, and conveyed in a wet state).

None of the proposed changes would result in a PSD significant increase in permitted facility emissions. In fact, the overall retrofit project will result in a significant reduction in actual facility emissions from current levels. However, since there will be a slight increase

HDR Engineering, Inc.
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 287-1960

in permitted emissions based on the proposed revisions to the retrofit design, a complete PPSA permit modification fee of $10,000 is enclosed. It is our understanding that the DEP will return any unused portion of the fee upon completion of the permit modification. Also, based on your conversation with David Dee concerning this project, Pinellas County may be due reimbursement of a portion of the PPSA application fees from our previous application submitted in May 1995 for the retrofit project. Pinellas County has submitted under separate cover, dated August 22, 1997, a request for information regarding the applicability of a refund on this matter.

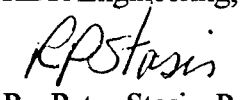
Pinellas County has mailed copies of the enclosed permit application to all parties of interest as required by Condition XII.B of the PPSA Conditions of Certification.

In addition to the changes detailed in this letter, we will contacting your staff to incorporate the changes contained in the August 25, 1997 Direct Final Rule for Large Municipal Waste Combustion Units. We request that the changes that respond to the final rule be included in this Amendment to the PPSA Conditions of Certification.

If you have any questions concerning the enclosed permit application, please feel free to contact me at 813/464-7527, William E. Corbin of RTP at 732/968-9600 or David S. Dee, Esq. of Landers & Parsons at 904/681-0311.

Sincerely,

HDR Engineering, Inc.



R. Peter Stasis, P.E.
Florida Registration Number 46220
Vice President

Enclosures: Certificate of Service
Permit Application (4 copies)

cc: File

CERTIFICATE OF SERVICE

I HEREBY CERTIFY this 15th day of September 1997, that a true and correct copy of the foregoing has been sent by Certified Mail to the following listed persons:

Hamilton S. Oven, Jr., P.E., Administrator
FDEP Office of Siting Coordination
Mail Station 48
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, FL 32399-2400

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Atlanta, GA 30365

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Clearwater, FL 34616

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c/o G. Wallace
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St. Petersburg, FL 33710

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Department of Community Affairs
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Tallahassee, FL 32399

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c/o Fred Stiles
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St. Petersburg, FL 33702-2491

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5100 West Kennedy Blvd., Suite 300
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PINELLAS COUNTY CLEARWATER, FLORIDA

63-751
631

CHECK NO.
105559

IMPREST FUND

APPROVED IN OPEN SESSION
VOID IF NOT CASHED WITHIN SIXTY DAYS

TEN THOUSAND DOLLARS NO CENTS

PAY TO THE ORDER OF

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
C/O UTILITIES

SEAL

8/29/97

CHECK AMOUNT
$10,000.00

CHAIRMAN OF THE BOARD OF COUNTY COMMISSIONERS

CLERK CIRCUIT COURT, EX-OFFICIO CLERK
OF THE BOARD OF COUNTY COMMISSIONERS

BOARD OF COUNTY COMMISSIONERS
PINELLAS COUNTY CLEARWATER, FLORIDA

DATE	CHECK NO.
8/29/97	105559

AP TR 70337

DATE	INVOICE OR CREDIT MEMO NUMBER	TYPE	DESCRIPTION	REFERENCE NO.	GROSS	AMOUNTS DISCOUNTS	NET
829 97	CERT082897		CERTIFICATION		10 000 00		10 000 00
	0521						
				TOTAL ▶	10 000 00		10 000 00

THE ATTACHED CHECK IS IN PAYMENT FOR ITEMS DESCRIBED ABOVE.

APPLICATION FOR MINOR REVISIONS TO THE AIR PERMIT FOR THE PINELLAS CO. RESOURCE RECOVERY FACILITY RETROFIT PROJECT

AND

APPLICATION FOR MODIFICATION OF PPSA CONDITIONS OF CERTIFICATION

Prepared for:

THE PINELLAS COUNTY RESOURCE RECOVERY FACILITY
Pinellas County Department of Solid Waste Operations
3095 114th Avenue North
St. Petersburg, Florida 33716

Prepared by:

RTP Environmental Associates, Inc.
239 U.S. Highway 22 East
Green Brook, New Jersey 08812
(908) 968-9600

and

HDR Engineering, Inc.
5100 W. Kennedy Blvd., Suite 300
Tampa, Florida 33609
(813) 287-1960

August, 1997

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

Abbreviation	Definition
acfm	actual cubic feet per minute
ACI	Activated Carbon Injection (system)
APC	Air Pollution Control (equipment)
BACT	Best Available Control Technology
BTU	British Thermal Unit
CO	Carbon Monoxide
CFR	Code of Federal Regulations
dscfm	dry standard cubic feet per minute
EG	USEPA Emission Guidelines (40 CFR 60 Subpart Cb)
ESPs	Electrostatic Precipitators
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FF	Fabric Filter (baghouse or dust collector)
GCP	Good Combustion Practices
gr/dscf	grains per dry standard cubic foot
HCl	Hydrogen Chloride
Hg	Mercury
lb/hr	pound (of pollutant) per hour
lb/$(10^6)ft^3$	pound (of pollutant) per million cubic feet of natural gas
lb/MMBTU	pound (of pollutant) per million BTU
MMBTU/hr	million BTU per hour
MSW	Municipal Solid Waste
MWC(s)	Municipal Waste Combustor(s)
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards (in 40 CFR 60)
PCRRF	Pinellas County Resource Recovery Facility
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in diameter
PPSA	Power Plant Siting Act
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
SDA	Spray Dry Absorbers
SNCR	Selective Non-catalytic Reduction (system)
SO_2	Sulfur Dioxide
tons/yr	tons (of pollutant) per year
TSP	Total Suspended Particulates
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

In May 1995, an application to revise the Power Plant Site Act (PPSA) Conditions of Certification and Prevention of Significant Deterioration (PSD) permits was submitted to the Florida Department of Environmental Protection (FDEP) for proposed improvements to the Pinellas County Resource Recovery Facility (PCRRF). Revised permit application forms and comment responses were also submitted on July 7 and September 6, 1995. The proposed improvements would allow the facility's Municipal Waste Combustors (MWCs) to meet the final MWC Emission Guidelines (EG) requirements promulgated by the United States Environmental Protection Agency (USEPA) at 40 CFR 60, Subpart Cb. On October 11, 1995, FDEP issued a permit amendment to PSD permits PSD-FL-011 and PSD-FL-098 to allow the construction of the proposed improvements. On July 29, 1996, FDEP filed a Final Order modifying the PPSA Conditions of Certification (Certification Numbers PA 78-11 and PA 83-18), which included appropriate emission limitations, operating requirements, and permit conditions for the Final EG requirements promulgated by USEPA on December 19, 1995.

The revised PPSA Conditions of Certification permitted the following proposed improvements to the air pollution control (APC) equipment for MWC units 1-3:

- Replacing the existing electrostatic precipitators (ESPs) with fabric filters (FF) for improved control of particulate and MWC metal emissions;
- Adding spray dry absorbers (SDA) for the control of MWC acid gas emissions;
- Adding activated carbon injection (ACI) systems for the control of mercury (Hg) emissions; and
- Adding selective non-catalytic reduction (SNCR) systems for the control of nitrogen oxides (NO_x) emissions.

Other minor sources associated with the PCRRF improvements permitted by the PPSA Conditions of Certification include fabric filter dust collectors to control particulate matter (PM) emissions from a flyash storage silo, a lime storage silo, and two activated carbon storage silos; and a cyclone/wet scrubber to control PM emissions from the Metal Recovery System in the Ash Storage and Processing Building. The permitted PCRRF improvements also include adding natural gas-fired auxiliary burners to achieve or maintain proper MWC temperatures during warm-up, start-up, and shut-down periods and intermittently during normal operations when required for poor fuel conditions (e.g., wet or low BTU wastes).

The Pinellas County Department of Solid Waste Operations is currently involved in soliciting bids for the MWC improvements. Based on vendor responses, two minor revisions to the permitted improvements are required. First, the flyash storage silo is being deleted from the improved facility design. The silo will be replaced by two flyash surge bins. The surge bins will be housed in an Ash Conditioning Building, a recent addition to the proposed PCRRF

retrofit design. Emissions from Ash Conditioning Building activities will be controlled by a wet scrubber. Second, some modifications to the MWC auxiliary burners are proposed, as described later. Since the first change will require revision of the PPSA Conditions of Certification, Pinellas County is also requesting that the PPSA Conditions of Certification be revised to allow the use of USEPA Method 26A for annual hydrogen chloride (HCl) compliance tests. Finally, slight design changes to the Ash Storage and Processing Building are discussed.

This application is being submitted to revise the PPSA Conditions of Certification (Certification Numbers PA 78-11 and 83-18) and to obtain a permit amendment to the PSD permits (PSD-FL-011 and -098). The requested revisions will affect improvements to the PCRRF that were previously permitted but not yet constructed. Section 2.0 contains a description of the proposed revisions. Section 3.0 discusses the regulatory requirements for the affected emissions units. Revisions to the permit application forms are contained in Appendix A. Proposed modifications to the PPSA Conditions of Certification are contained in Appendix B.

1.1 Other Facility Permitting Actions

As noted above, an application was submitted in May 1995 for certain facility improvements required by the MWC EG. In response, FDEP issued a PSD permit amendment and modified the PPSA Conditions of Certification. Other recent permitting actions are described below.

In December 1994, an air construction permit application was submitted for a small hydrated lime storage silo used by the PCRRF water softening system. Construction Permit AC52-259351 and Operating Permit AO52-268853 for the hydrated lime storage silo were issued by the FDEP Southwest District on January 24, 1995 and June 5, 1995, respectively. These permits for the lime storage silo were incorporated by reference into the July 29, 1996 PPSA Conditions of Certification at Condition XIV.A.

In April 1996, an air construction permit application was submitted for an auxiliary boiler and 30,000 gallon fuel oil storage tank at the facility. Permit conditions for the auxiliary boiler were incorporated into the July 29, 1996 PPSA Conditions of Certification at Condition XV.A. Since the auxiliary boiler has yet to be constructed, an operating permit application has not been submitted nor an operating permit issued.

In June 1996, a Title V operating permit application was submitted for emission units at the facility as they existed at the time of the application -- i.e., the MWC units as currently configured with the existing ESPs and the small hydrated lime storage silo for the water softening system. Also, in accordance with Section 62-210.300(3)(b) of the Florida Administrative Code, two small sources not currently permitted were included in the Title V permit application: (1) a diesel engine used in mulching operations at the adjacent landfill and (2) a cyclone/wet scrubber

owned and operated by Resource Recycling, LLC., which operates a metal recovery system onsite. In addition, fugitive volatile organic compound (VOC) emissions for the adjacent Bridgewater Acres solid waste landfill were included in the Title V application. Since the July 29, 1996 PPSA Conditions of Certification reduced the certified site to exclude landfilling operations, landfill and diesel engine emissions are not subject to PPSA requirements.

2.0 PROPOSED REVISIONS TO FACILITY IMPROVEMENTS

This application addresses the proposed revisions to the permitted design for the PCRRF improvements, which consist of: (1) replacing the flyash storage silo with two flyash surge bins located in the Ash Conditioning Building and (2) revising the size, type, and permitted annual consumption of natural gas for the MWC auxiliary burners. This application also notes that the Ash Storage and Processing Building (including the Metal Recovery System) has some roof vents, but no emissions are associated with these vents. Since the first change will require revision of the PPSA Conditions of Certification, Pinellas County is also requesting that the PPSA Conditions of Certification be revised to allow the use of USEPA Method 26A for annual HCl compliance tests. While the proposed revisions to the EG improvements might cause a slight increase in potential facility emissions, the previously permitted EG improvements will result in a substantial decrease in current facility emissions, even with the proposed revisions.

2.1 Ash Conditioning Building

In this application for the revised design for the facility improvements, Pinellas County proposes to replace the flyash storage silo with two 20 ton capacity flyash surge bins. The surge bins will be housed in an Ash Conditioning Building, a recent addition to the proposed PCRRF retrofit design. As described in the May 1995 application, stabilizers such as lime and phosphoric acid will be added to condition the flyash, collected from the economizer, SDA, and fabric filter of each MWC. A drawing of the Ash Conditioning Building is attached. Emissions from the Ash Conditioning Building activities will be controlled by a high-energy wet venturi scrubber. PM emissions from the wet scrubber will be controlled to 0.03 grains per dry standard cubic foot (gr/dscf). A maximum flowrate of 5,000 dry standard cubic feet per minute (dscfm) is proposed (conservatively assuming dscfm flow equal to the design flow in actual cubic feet per minute [acfm]). Thus, wet scrubber PM emissions will be as follows:

$$\frac{0.03\ grains}{dscf} \times \frac{lb}{7000\ grains} \times \frac{5{,}000\ dscf}{minute} \times \frac{60\ minutes}{hour} = \frac{1.3\ lb}{hour}$$

$$\frac{1.3\ lb}{hour} \times \frac{8760\ hours}{year} \times \frac{ton}{2000\ lbs} = \frac{5.7\ tons}{year}$$

The originally proposed flyash storage silo being replaced would have been controlled by a FF dust collector and had permitted PM emissions of 0.005 gr/dscf at 1500 dscfm, 0.064 pounds per hour (lb/hr), and 0.28 tons per year (tons/yr). Thus, this revision represents an increase in potential PM emissions of 1.2 lb/hr and 5.4 tons/yr. This is less than the PSD significant emission levels of 25 tons/yr for total suspended particulates (TSP) and 15 tons/yr for particulate matter less than 10 microns in diameter (PM_{10}). Thus, this minor revision does not represent a significant increase in PM emissions. And, as noted above, the overall EG facility improvements will result in a substantial decrease in actual facility emissions, even with this minor potential PM emissions increase. Revised permit application forms and proposed revisions to Condition XIV.A.2.b of the PPSA Conditions of Certification are presented in Appendices A and B, respectively, to authorize the replacement of the flyash storage silo with the two flyash surge bins and wet scrubber to be located in the Ash Conditioning Building.

2.2 MWC Auxiliary Burners

Auxiliary burners are required in the improved facility design to minimize MWC organic emissions and to meet the carbon monoxide (CO) emission limitations specified by the EG Good Combustion Practices (GCP) requirements. The auxiliary burners are used during: (1) *warm-up periods* to heat the MWCs prior to introducing municipal solid waste (MSW), (2) *start-up periods* when MSW input rates are increased to normal operating conditions, (3) *shut-down periods* when MSW is not introduced into the MWC (but combustion conditions are maintained to completely combust any remaining MSW), and intermittently under (4) *poor fuel conditions* (fuel-related malfunctions), such as low-BTU and wet MSW, when the auxiliary burners are required to maintain adequate combustion temperatures.

Although the auxiliary burners will be an integral part of the improved MWCs, they were permitted as separate emission units at the request of FDEP. Permit application forms showing the auxiliary burners as separate emission units, with corrected emissions information, were submitted on July 7 and revised on September 6, 1995.

Based on current engineering estimates, the presently permitted auxiliary burner capacity of 108.3 million BTU per hour (MMBTU/hr) per MWC unit may not be sufficient under all possible operating scenarios. Therefore, Pinellas County proposes to increase the gross heat input of the auxiliary burners to 130 MMBTU/hr per MWC unit (two burners per MWC unit at 65 MMBTU/hr each). Estimated annual hours of operation during warm-up/start-up/shut-down periods are based on 8 hours per episode with 47 episodes per year per unit. In the original application, an additional 15% annual fuel consumption was added for auxiliary burner usage during poor fuel conditions. Pinellas County is requesting that the estimated warm-up/start-up/shut-down fuel consumption be doubled to account for operation during poor fuel conditions. Therefore, natural gas usage for the revised burner size is as follows:

$$\frac{130\ MMBTU}{MWC\text{-}hour} \times \frac{10^6\ BTU}{MMBTU} \times \frac{ft^3}{1000\ BTU} = \frac{0.130(10^6)ft^3}{MWC\text{-}hour}$$

$$\frac{0.130(10^6)ft^3}{MWC\text{-}hour} \times \frac{8\ hours}{episode} \times \frac{47\ episodes}{MWC\text{-}year} \times 200\% = \frac{97.76(10^6)ft^3}{MWC\text{-}year}$$

As noted above, the purpose of the auxiliary burners is to heat the MWCs during warm-up, start-up, and shut-down periods as well as maintain adequate combustion temperatures during certain poor fuel conditions. A hot, intense burner flame is required for these uses. Consequently, low-NO_x burners as originally proposed are not appropriate for this facility. A revised NO_x emission factor of 300 pounds per million cubic feet of natural gas (lb/$(10^6)ft^3$) or 0.3 pounds per million BTU (lb/MMBTU) is being proposed for the correct type of auxiliary burner. This emission factor is equivalent to the New Source Performance Standard (NSPS) Subpart Db NO_x emission limit for boilers greater than 100 MMBTU/hr which simultaneously combust natural gas with municipal-type solid waste. Since the SNCR system cannot be used during the warm-up period and part of the start-up period due to inadequate furnace temperature profiles, reductions in NO_x emissions due to the SNCR system were not included in the auxiliary burner emissions calculations.

Revised potential emissions for the auxiliary burners are compared on the following table to potential emissions presented as part of the original permit application for NO_x, CO, TSP/PM_{10}, VOC, and sulfur dioxide (SO_2).

Pollutant	Original Permit Emissions			Proposed Revised Emissions			Facility Increase (tons/yr)
	lb/ $(10^6)ft^3$	lb/hr /MWC[a]	tons/yr /MWC[b]	lb/ $(10^6)ft^3$	lb/hr /MWC[c]	tons/yr /MWC[d]	
NO_x	81	8.77	1.90	300	39.00	14.66	38.28
SO_2	0.6	0.065	0.014	0.6	0.078	0.029	0.05
CO	40	4.33	0.94	40	5.20	1.96	3.06
TSP/PM_{10}	5	0.542	0.12	5	0.650	0.24	0.36
VOC	1.7	0.184	0.040	1.7	0.221	0.083	0.13

[a]Based on 0.1083$(10^6)ft^3$ of natural gas usage per MWC per hour.
[b]Based on 46.83$(10^6)ft^3$ of natural gas usage per MWC per year.
[c]Based on 0.130$(10^6)ft^3$ of natural gas usage per MWC per hour.
[d]Based on 97.76$(10^6)ft^3$ of natural gas usage per MWC per year.

As expected, the largest increase in auxiliary burner emissions for the facility due to the increased size, annual fuel consumption, and NO_x emission factor is for NO_x at 38 tons/yr. However, emissions increases for NO_x and all other PSD pollutants are less than the PSD significant emission rates. Thus, this proposed revision does not represent a significant increase in facility emissions. (As noted earlier, the overall EG facility improvements will actually result in a substantial decrease in actual facility emissions due to replacing the current ESPs with SDA/FF/ACI/SNCR systems.)

Permit application forms for the auxiliary burners are contained in Appendix A. Appendix A shows the revisions from the 1995 permit application submittals for the new gross heat input, annual fuel consumption, and NO_x emission factor. These permit application forms also show the emission calculations in more detail.

2.3 Ash Storage and Processing Building

Construction of the proposed PCRRF improvements are staged to minimize impacts on facility operations. Construction of the Ash Storage and Processing Building (including the Metal Recovery System) has been completed. FDEP has witnessed the initial visible emissions test of the cyclone/wet scrubber.

The Ash Storage and Processing Building includes four typical roof ventilation fans and the attached conveyor enclosure contains two typical roof ventilation fans, as shown on the attached drawings. Since emissions from the Metal Recovery System will be controlled by the cyclone/wet scrubber, and the ash is wetted before conveying and processed and stored in a wet state, it is anticipated that no PM emissions will be released by the ventilation fans. Hence, no revised forms are included in Appendix A and no revisions are required to the PPSA Conditions of Certification in Appendix B for these ventilation fans. Although no PM emissions are expected, this minor revision to the plans for the Ash Storage and Processing Building is being described here to notify FDEP of the existence of the ventilation fans.

2.4 Hydrogen Chloride Test Method

Since the PPSA Conditions of Certification must be revised to replace the flyash storage silo with the two flyash surge bins to be located in the Ash Conditioning Building, Pinellas County is also requesting that another minor revision be incorporated into the PPSA Conditions of Certification for annual HCl compliance tests.

Condition XIV.A.2.d(7) of the current PPSA Conditions of Certification provides that compliance with the HCl emission limit is to be based on annual stack tests using USEPA Method 26 after the facility improvements are completed. Pinellas County is requesting that

Method 26A be added as an acceptable compliance test method consistent with the compliance and performance testing requirements specified in 40 CFR 60.58a(f)(1). Method 26A consists of the large impinger Method 5 sampling train with Method 26 reagents, sampling procedures, and analytical methods. The Method 5 train is easier to use in the field than the Method 26 midget impinger train. The use of the Method 5 train greatly reduces the chances of obtaining negative bias in the results due to moisture condensation in the Method 26 probe and 3-way valve. Method 26A improves the accuracy and precision of the HCl test results due to the higher sample volumes obtained in a one hour test run.

3.0 REGULATORY REQUIREMENTS

This permit application is being submitted to obtain the necessary FDEP approvals as required by Chapter 62-210 of the Florida Administrative Code (FAC). The revisions being proposed to the PCRRF facility improvements involve changes to the size or type of emissions units. FAC 62-210.300 requires the applicant to obtain an appropriate permit from FDEP prior to beginning construction. The proposed revisions are also subject to the preconstruction review requirements of Chapter 62-212, FAC. As noted above, the proposed revisions have associated emissions increases less than the PSD significant emission rates. Therefore, the "General Preconstruction Review Requirements" of FAC 62-212.300 apply, rather than PSD requirements of FAC 62-212.400. The preceding information and attached permit application forms should provide FDEP with the necessary information to meet the requirements of FAC 62-212.300(3). There are no nonattainment areas in Florida (FAC 62-210.340(2)), so "Preconstruction Review for Nonattaiment Areas" in FAC 62-212.500 does not apply here. The "Specific Preconstruction Review Requirements" in FAC 62-212.600 are not applicable because they apply only to sulfur storage and handling facilities.

Regulatory requirements for the overall EG facility improvements were discussed in detail in the May 1995 permit application. Regulatory requirements for the facility itself were listed in detail in the June 1996 Title V operating permit application. Therefore, the following discussion focuses on the regulatory requirements for the proposed systems that are being revised.

3.1 Ash Conditioning Building

There are no federal regulations and very few state rules applicable to the Ash Conditioning Building. The "General Pollutant Emission Limiting Standards" of FAC 62-296.320 apply, primarily the objectionable odor prohibition (FAC 62-296.320(2)) and the general requirements for unconfined PM emissions (FAC 62-296.320(4)(c)). The requirements of FAC 62-296.320(4)(a) and (b) are not applicable because of other applicable limits described next.

The entire State of Florida is either classified as attainment or considered to be in attainment (i.e., unclassifiable) with respect to the federal ambient air quality standards. However, the facility is located within 50 kilometers (i.e., within the area of influence) of a PM maintenance area identified in FAC 62-204.340(4)(b). Consequently, the wet scrubber is subject to certain Reasonably Available Control Technology (RACT) requirements. General PM RACT requirements in FAC 62-296.700 are applicable to the wet scrubber, including:

- Requirements for the Operating Permit to contain certain specifications and information (FAC 62-296.700(4));
- Prohibition on circumventing emission limit by increasing the volume of gas for purposes of reducing the stack gas concentration (FAC 62-296.700(5));
- Requirements for the Operating Permit to contain an Operation and Maintenance Plan (FAC 62-296.700(6));

The information required under FAC 62-296.700(4) and (6), such as equipment specifications and an Operation and Maintenance Plan, will be submitted as part of the Operating Permit Application after the final equipment is selected.

Specific RACT emission limits applicable to the wet scrubber are contained in FAC 62-296.711 for materials handling, sizing, screening, crushing, and grinding operations. These RACT limits are applicable to the loading of trucks and storage structures, conveyor systems, storage of materials, and sizing or screening operations (FAC 62-296.711(1)). Emission limits in FAC 62-296.711 applicable to Ash Conditioning Building operations are:

- Opacity from handling operations is limited to no visible emission (5% opacity) by FAC 62-296.711(2)(a).
- When materials handling operations are enclosed (like the Ash Conditioning Building) to meet the opacity limit and exhausted through a stack (like the wet scrubber stack), PM emissions from the stack are limited to 0.03 gr/dscf by FAC 62-296.711(2)(b).

As discussed in Section 2.1, potential PM emissions from activities in the Ash Conditioning Building will be controlled by a high-energy wet venturi scrubber. The wet scrubber will control PM emissions to 0.03 gr/dscf or less. Since the wet scrubber is functionally equivalent to a baghouse, Pinellas County is requesting that compliance with the RACT emission limits for the wet scrubber be determined using a USEPA Method 9 test indicating no visible emissions in lieu of particulate stack tests pursuant to FAC 62-296.711(3)(c) and 62-297.620(4).

3.2 MWC Auxiliary Burners

The EG limits do not apply to the auxiliary burners during start-up, shut-down, or malfunction periods, provided these periods are limited to less than three hours per occurrence (40 CFR

60.58b(a)(1)), or during warm-up periods when only natural gas is combusted (warm-up times are not limited by the EG). Therefore, although the auxiliary burners are being added to the improved facility to meet the EG requirements, there are no EG emission limits applicable to the auxiliary burners during those times when the auxiliary burners are used during warm-up, start-up, shut-down, or malfunction periods.

There are no other federal requirements or emission limits applicable to the auxiliary burners. NSPS Subpart Db requirements apply to industrial-commercial-institutional steam generating units with heat input capacity greater than 100 MMBTU/hr which commenced construction, modification, or reconstruction after June 19, 1984. Initial construction on the PCRRF MWCs commenced prior to June 19, 1984 on all three units. The planned EG improvements to the PCRRF will result in a net decrease in actual short-term emissions of all PSD pollutants and therefore do not qualify as a modification for NSPS purposes. The planned expenditures for the EG improvements do not exceed 50% of the capital cost of the facility and therefore do not qualify as a reconstruction. Therefore, NSPS Subpart Db requirements do not apply to the facility or the auxiliary burners.

State emission limits applicable to the MWCs at FAC 62-296.401(3) and mercury control requirements at FAC 62-296.416 do not apply to the auxiliary burners. The auxiliary burners would be subject to the "General Pollutant Emission Limiting Standards" of FAC 62-296.320. However, the requirements of FAC 62-296.320(1), (2), (3), (4)(a), and (4)(c) are not applicable. FAC 62-296.320(4)(b) limits general visible emissions to 20% opacity. The auxiliary burners when used alone would have visible emissions much less than 20% opacity (when the auxiliary burners are used during poor fuel conditions, the EG limit is 10% opacity).

The auxiliary burners would be limited to the emission limits in FAC 62-296.406 for new and existing fossil fuel steam generating units with less than 250 MMBTU/hr heat input. These requirements are:

- Visible emissions limited to 20% opacity except for either one 6-minute period per hour during which opacity shall not exceed 27% or one 2-minute period per hour during which opacity shall not exceed 40% (FAC 62-296.406(1));
- PM limited to Best Available Control Technology (BACT) (FAC 62-296.406(2)); and
- SO_2 limited to BACT (FAC 62-296.406(3)).

Since the auxiliary burners utilized natural gas, a very low-sulfur and low-ash fuel, they would be presumed to meet BACT requirements for SO_2 and PM. As noted above, the auxiliary burners will have visible emissions much less than 20% opacity (EG limit when combusting MSW is 10% opacity).

4.0 SUMMARY

In May 1995, an application was submitted to FDEP to revise the PPSA Conditions of Certification and PSD permits for proposed improvements to the PCRRF. FDEP issued a permit amendment to the PSD permits on October 11, 1995 to allow the construction of the proposed improvements. A Final Order modifying the PPSA Conditions of Certification was issued on July 29, 1996, which included appropriate emission limitations, operating requirements, and permit conditions for the EG requirements. At this time, it is necessary to make two minor revisions to the proposed improvements: (1) replace the flyash storage silo with two flyash surge bins to be housed in a new Ash Conditioning Building and (2) increase the size, the permitted annual consumption of natural gas, and the NO_x emission factor for the MWC auxiliary burners.

Since the proposed revisions involve changes to the size, type, or use of specific emissions units, Pinellas County is requesting the necessary FDEP approvals as required by Chapters 62-210 and 62-212, FAC. Therefore, this application is being submitted for authorization to revise the PPSA Conditions of Certification and to obtain a permit amendment to the PSD permits for these two minor revisions to the PCRRF improvement project.

Revisions to the affected permit application forms originally submitted with the May 1995 application (and the July 7 and September 6 revisions) are contained in Appendix A. The replacement pages are the same version as those originally submitted to allow for easy replacement. Also included are signature and summary pages for this amendment to append to the original submittal.

Proposed revisions to the PPSA Conditions of Certification to replace the flyash silo with the Ash Conditioning Building wet scrubber are contained in Appendix B. The affected section is PPSA Condition XIV.A.2.b, which describes the minor sources for the PCRRF improvements. In addition, one other minor revision to the PPSA Conditions of Certification is proposed at Condition XIV.A.2.d(7) to allow Method 26A, in addition to Method 26, for annual HCl compliance tests.

APPENDIX A

REVISED PERMIT APPLICATION FORMS

Attached are revised permit application forms for the Pinellas County Resource Recovery Facility (PCRRF). As described in Section 1.0 of the enclosed August 1997 permit application, an application to revise the PPSA Conditions of Certification and PSD permits was originally submitted in May 1995 and revised permit application forms were submitted on July 7 and September 6, 1995. The May 1995 permit application was for proposed improvements to the PCRRF to meet the USEPA MWC Emission Guidelines. Accordingly, FDEP issued a permit amendment to the PSD permits on October 11, 1995 and a Final Order modifying the PPSA Conditions of Certification on July 29, 1996.

At this time, two minor revisions to the permitted improvements are needed, based on project requirements. First, the flyash storage silo is being replaced in the improved facility design with two flyash surge bins, to be located in the new Ash Conditioning Building. Emissions from Ash Conditioning Building activities will be controlled by a wet scrubber. Second, the size of the MWC auxiliary burners is being increased to 130 MMBTU/hr/unit, the NO_x emission factor increased to 300 lb/$(10^6)ft^3$, and the permitted annual natural gas consumption rate increased to 97.76$(10^6)ft^3$/year/unit.

Revisions to the affected permit application forms originally submitted with the May 1995 application (and the July 7 and September 6, 1995 revisions) are given here in Appendix A. Replacement pages to the original permit application forms are being submitted based on discussions with FDEP (May 28, 1997 telephone conversation with Syed Aris, FDEP Bureau of Air Quality Regulation). The page numbers on these revised forms correspond to the page numbers in the original submittal. Replacement pages are denoted by including "(Replacement)" beside the page number. The replacement pages are the same version as those originally submitted to allow for easy replacement. Revisions from the original are either redlined (in text/tables) or **bolded** (in equations). Also included are signature and summary pages for this permit application amendment to append to the original submittal. These pages are denoted by including "(Amendment)" beside the page number.

Department of Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT APPLICATION FOR AIR PERMIT - LONG FORM

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form provides general information on the scope of this application, the purpose for which this application is being submitted, and the nature of any construction or modification activities proposed as a part of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department on diskette, this section of the Application for Air Permit must also be submitted in hard-copy.

Identification of Facility Addressed in This Application

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility name, if any; and a brief reference to the facility's physical location. If known, also enter the ARMS or AIRS facility identification number. This information is intended to give a quick reference, on the first page of the application form, to the facility addressed in this application. Elsewhere in the form, numbered data fields are provided for entry of the facility data in computer-input format.

Applicant: Pinellas County Florida Board of County Commissioners
Facility: Pinellas County Resource Recovery Facility
3095 114th Ave. North, St. Petersburg, Florida 33716

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   Pick Talley, Director of Utilities, Pinellas County

2. Owner/Authorized Representative or Responsible Official Mailing Address:

   Organization/Firm: **Pinellas County Florida Board of County Commissioners/ Utilities Administration**
   Street Address: **14 South Fort Harrison Avenue, 5th Floor**
   City: **Clearwater** State: **Florida** Zip Code: **33756**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: **(813) 464-3438** Fax: **(813) 464-3944**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative of the facility (non-Title V source) addressed in this Application for Air Permit or the responsible official, as defined in Chapter 62-213, F.A.C., of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. Further, I agree to operate and maintain the air pollutant emissions units and air pollution control equipment described in this application so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. If the purpose of this application is to obtain an air operation permit or operation permit revision for one or more emissions units which have undergone construction or modification, I certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Pick Talley
Signature

Sept. 3, 1997
Date

* Attach letter of authorization if not currently on file.

Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility (or Title V source). An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

Emissions Unit ID	Description of Emissions Unit
001	Mass Burn Incinerator Unit 1
002	Mass Burn Incinerator Unit 2
003	Mass Burn Incinerator Unit 3
004	Ash Conditioning Building - Wet Scrubber (replaces Fly Ash Storage Silo)
005	Activated Carbon Storage Silo 1
006	Activated Carbon Storage Silo 2
007	Lime Storage Silo
008	Cyclone/Wet Scrubber for Metals Recovery System
009	Auxiliary Burner Set - Unit 1 (size revised)
010	Auxiliary Burner Set - Unit 2 (size revised)
011	Auxiliary Burner Set - Unit 3 (size revised)

Application Processing Fee

Check one:

[X] Attached - Amount: $ 10,000 [ ] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Facility improvements to the Pinellas County Resource Recovery Facility (PCRRF) were originally permitted in an October 11, 1995 permit amendment to the PSD permits and a July 29, 1996 Final Order modifying the PPSA Conditions of Certification. The improvements are to be made to comply with the USEPA Emission Guidelines (40 CFR 60 Cb) and Florida mercury standards (Section 62-296.416, FAC). Actual facility emissions of all PSD pollutants will either remain the same or decrease as a result of the improvement project.

The permitted improvements to the PCRRF air pollution control (APC) equipment consist of replacing the current electrostatic precipitator (ESPs) on each of the municipal waste combustors (MWC) with APC systems consisting of a spray dry absorber (SDA), a fabric filter (FF) baghouse, an activated carbon injection (ACI) system, and a selective non-catalytic reduction (SNCR) system. Also, combustion controller and furnace upgrades will also be installed. The permitted facility improvements include four outdoor storage silos (i.e., one lime storage silo, two carbon storage silos, and one flyash storage silo); auxiliary burners (used to heat the MWCs prior to introducing municipal solid waste [MSW] and to augment MSW heat release rates as necessary during normal operations); and a cyclone/wet scrubber system to control particulate matter (PM) emissions from the metals recovery system.

Minor modifications to the improvement project design are needed consisting of:

- **Replacing the flyash storage silo with two flyash surge bins, located in a new Ash Conditioning Building, with emissions controlled by a wet scrubber; and**
- **Increasing the the size, correcting the NO_x emission factor, and increasing the annual natural gas consumption rate for the MWC auxiliary burners.**

2. Projected or Actual Date of Commencement of Construction (DD-MON-YYYY):

-/06/1996

3. Projected Date of Completion of Construction (DD-MON-YYYY):

-/11/2000

Professional Engineer Certification

1. Professional Engineer Name: **Robert Peter Stasis**
   Registration Number: **0046220**

2. Professional Engineer Mailing Address:

   Organization/Firm: **HDR Engineering, Inc.**
   Street Address: **5100 W. Kennedy Blvd., Suite 300**
   City: **Tampa** State: **Florida** Zip Code: **33609-1806**

3. Professional Engineer Telephone Numbers:
   Telephone: **(813) 287-1960** Fax: **(813) 282-2440**

4. Professional Engineer Statement:

   I, the undersigned, hereby certify, except as particularly noted herein, that:*

   (1) To the best of my knowledge, there is reasonable assurance (a) that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; or (b) for any application for a Title V source air operation permit, that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application;

   (2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application; and

   (3) For any application for an air construction permit for one or more proposed new or modified emissions units, the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

Robert Peter Stasis — Signature

September 3, 1997 — Date

(seal)

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact:

   Russell Menke, Project Manager

2. Application Contact Mailing Address:

   Organization/Firm: **Pinellas County Florida Board of County Commissioners/ Pinellas County Resource Recovery Facility Air Pollution Control Retrofit Project**
   Street Address: **14 South Fort Harrison Avenue, 5th Floor**
   City: **Clearwater** State: **FL** Zip Code: **33756**

3. Application Contact Telephone Numbers:
   Telephone: **(813) 464-4913** Fax: **(813) 464-3944**

Application Comment

This permit application is an amendment to the permit application submitted as part of a Power Plant Siting Act (PPSA) application for the Pinellas County Resource Recovery Facility in May 1995 and revised on July 7, 1995 and September 6, 1995. For further information, please refer to the current August 1997 permit application or Volume II of the original May 1995 PPSA application.

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

Construction of an Ash Conditioning Building, including two 20-ton capacity flyash surge bins, to treat MWC flyash. Emissions from Ash Conditioning Building activities will be controlled by a high-energy wet venturi scrubber. The Ash Conditioning Building and wet scrubber will replace the previously permitted flyash storage silo dust collector.

2. ARMS Identification Number: [**X**] No Corresponding ID [ ] Unknown

3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**

6. Initial Startup Date (DD-MON-YYYY): **xx-August-1998**

7. Long-term Reserve Shutdown Date (DD-MON-YYYY): **Not Applicable**

8. Package Unit: **To Be Provided Later**
Manufacturer: Model Number:

9. Generator Nameplate Rating: **Not Applicable** MW

10. Incinerator Information: **Not Applicable**
Dwell Temperature: °F
Dwell Time: seconds
Incinerator Afterburner Temperature : °F

11. Emissions Unit Comment:

Emissions Unit Information Section 4 of 11

Emissions Unit Control Equipment

A.

1. Description: Wet Scrubber
2. Control Device or Method Code: 001

B.

1. Description:
2. Control Device or Method Code:

C.

1. Description:
2. Control Device or Method Code:

D.

1. Description:
2. Control Device or Method Code:

E.

1. Description:
2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **Not Applicable** mmbtu/hr
2. Maximum Incineration Rate: **Not Applicable** lb/hr tons/day
3. Maximum Process or Throughput Rate: **240 tons/day flyash conveying rates**
4. Maximum Production Rate: **Not Applicable**
5. Operating Capacity Comment:

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-210.300 FAC	**Stationary Sources-General Requirements Permits Required**
62-212.300 FAC	**Stationary Sources-Preconstruction Review General Preconstruction Review Requirements**
62-296.320 FAC	**Stationary Sources-Emission Standards General Pollutant Emission Limiting Standards**
62-296.700 FAC	**Stationary Sources-Emission Standards Particulate Matter RACT**
62-269.711 FAC	**Stationary Sources-Emission Standards PM RACT - Material Handling...Operations**
For further information on Applicable Regulations, please see Section 3.0-Regulatory Requirements in August 1997 Report	

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the Application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Wet Scrubber in Ash Conditioning Building**	
2. Emission Point Type Code: [X] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit: **Not Applicable**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Not Applicable**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**To be determined** feet
7. Exit Diameter:	**To be determined** feet
8. Exit Temperature:	**77°F**
9. Actual Volumetric Flow Rate:	**~5,000** acfm

10. Percent Water Vapor :	**Not Applicable** %
11. Maximum Dry Standard Flow Rate:	**5,000** dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **335.25** North (km): **3084.10**	
14. Emission Point Comment:	

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **General Process (emissions related to tons processed)**	
2. Source Classification Code (SCC): **50400201**	
3. SCC Units: **Tons processed (flyash conveying rates)**	
4. Maximum Hourly Rate: **10**	5. Maximum Annual Rate: **87,600**
6. Estimated Annual Activity Factor: **Not Applicable**	
7. Maximum Percent Sulfur: **Not Applicable**	8. Maximum Percent Ash: **Not Applicable**
9. Million Btu per SCC Unit: **Not Applicable**	
10. Segment Comment: **Maximum hourly rate is the greater of the material charge rate or discharge rate.**	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 1

1. Pollutant Emitted: **PM/PM_{10}**

2. Total Percent Efficiency of Control: **98** %

3. Primary Control Device Code: **001**

4. Secondary Control Device Code:

5. Potential Emissions: **1.3** lb/hour **5.7** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **0.03 grains/dscf**
   Reference: **Engineering Estimate (FAC 62-296.711(2)(b))**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**X**] 5

10. Calculation of Emissions:

$$\frac{\mathbf{0.03}\ grains}{dscf} \times \frac{\mathbf{5000}\ dscf}{minute} \times \frac{1\ lb}{7000\ grains} \times \frac{60\ minutes}{hour} = \frac{\mathbf{1.3}\ lb}{hour}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

I. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the emissions unit addressed in this Emissions Unit Information Section. Supplemental information must be submitted as an attachment to each copy of the form, in hard-copy or computer-readable form.

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **See August 1997 Report** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID: ____ [X] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: ____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: ____ [X] Not Applicable

Emissions Unit Information Section 9 of 11

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

Auxiliary Burners for Mass Burn Incinerator #1.

2. ARMS Identification Number: [X] No Corresponding ID [ ] Unknown

3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**

6. Initial Startup Date (DD-MON-YYYY): **xx-May-2000**

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit: **Auxiliary Burner**
Manufacturer: **To Be Determined** Model Number: **To Be Determined**

9. Generator Nameplate Rating: **Not Applicable** MW

10. Incinerator Information: **Not Applicable**
Dwell Temperature: °F
Dwell Time: seconds
Incinerator Afterburner Temperature : °F

11. Emissions Unit Comment:

Two natural gas-fired auxiliary burners totalling 130 MMBTU/hr for firing the combustor during warm-ups, start-ups, and shutdowns and to maintain required furnace temperatures when sustained low-BTU wastes are encountered.

Emissions Unit Control Equipment

A.

1. Description:
2. Control Device or Method Code:

B.

1. Description:
2. Control Device or Method Code:

C.

1. Description:
2. Control Device or Method Code:

D.

1. Description:
2. Control Device or Method Code:

E.

1. Description:
2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **130** mmbtu/hr

2. Maximum Incineration Rate: **Not Applicable** lb/hr tons/day

3. Maximum Process or Throughput Rate: **Natural Gas Usage = 97.76 MM cu ft/yr**

4. Maximum Production Rate: **Not Applicable**

5. Operating Capacity Comment:

$$\frac{\mathbf{130}\ MMBTU}{hour} \times \frac{\mathbf{752}\ hours}{year} \times \frac{cu\ ft}{\mathbf{1000}\ BTU} = \frac{\mathbf{97.76}\ MM\ cu\ ft}{year}$$

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:

8* hours/day * days/week

* weeks/year **752** hours/year

*

$$\frac{8\ hrs}{startup/shutdown\ episode} \times \frac{47\ episodes}{year} = \frac{376\ hrs}{year}$$

$$+ \frac{\mathbf{376}\ hrs}{year}\ for\ low\ BTU\ waste = \frac{\mathbf{752}\ hrs}{year}$$

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-210.300 FAC	**Stationary Sources-General Requirements Permits Required**
62-212.300 FAC	**Stationary Sources-Preconstruction Review General Preconstruction Review Requirements**
62-296.320 FAC	**Stationary Sources-Emission Standards General Pollutant Emission Limiting Standards**
62-296.406 FAC	**Stationary Sources-Emission Standards Fossil fuel steam generators < 250 MMBTU/hr**
40 CFR 60.58b(a)(1) from NSPS Subpart Eb	**EG/NSPS Provisions and Exceptions for startup, shutdown, and malfunction periods**
For further information on Applicable Regulations, please see Section 3.0-Regulatory Requirements in August 1997 Report	

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the Application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Volume I, Figure 2-2**	
2. Emission Point Type Code: [ ] 1 [X] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit: **Each incinerator has two auxiliary burners. Burner emissions will exhaust along with the flue gas through a common stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Mass Burn Incinerator Units #1, #2, and #3 will all exhaust to a common stack consisting of three separate flues.**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**165** feet
7. Exit Diameter:	**8.5** feet
8. Exit Temperature:	**270°F**
9. Actual Volumetric Flow Rate:	**243,117*** acfm

10. Percent Water Vapor :	**13.40*** %
11. Maximum Dry Standard Flow Rate:	**152,280** dscfm
12. Nonstack Emission Point Height:	**Not Applicable** feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **335.25** North (km): **3084.10**	
14. Emission Point Comment:	

*** Data for flue gas from incinerator at worst-case conditions (110% thermal load and 5000 BTU/lb MSW). The volume of flue gas from the auxiliary burners is considerably lower than the volume of flue gas from MSW combustion.**

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Not Available**	
2. Source Classification Code (SCC): **Not Available**	
3. SCC Units: **MMcu ft of gas burned**	
4. Maximum Hourly Rate: **0.130**	5. Maximum Annual Rate: **97.76**
6. Estimated Annual Activity Factor: **Not Applicable**	
7. Maximum Percent Sulfur: **Negligible**	8. Maximum Percent Ash: **Negligible**
9. Million Btu per SCC Unit: **1000**	
10. Segment Comment:	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 6

1. Pollutant Emitted: **PM**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.650** lb/hour **0.24** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **5 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{5\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{0.650}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 6

1. Pollutant Emitted: **PM_{10}**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.650** lb/hour **0.24** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **5 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{5\ lb}{MM\ cu\ ft} \times \frac{0.130\ MM\ cu\ ft}{hr} = \frac{0.650\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 3 of 6

1. Pollutant Emitted: **CO**
2. Total Percent Efficiency of Control: **Not Applicable** %
3. Primary Control Device Code: **Not Applicable**
4. Secondary Control Device Code: **Not Applicable**
5. Potential Emissions: **5.20** lb/hour **1.96** tons/year
6. Synthetically Limited? [ ] Yes [**X**] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year
8. Emission Factor: **40 lb/MM cu ft** Reference: **AP-42**
9. Emissions Method Code: [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5
10. Calculation of Emissions: $\frac{40\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{5.20}\ lbs}{hr}$
11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 4 of 6

1. Pollutant Emitted: **SO_2**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.078** lb/hour **0.029** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **0.6 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{0.6\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{0.078}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 9 of 11

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 5 of 6

1. Pollutant Emitted: **NO_x**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **39.00** lb/hour **14.66** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **300 lb/MM cu ft**
   Reference: **Engineering Estimate (40 CFR 60.44b(d))**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**X**] 5

10. Calculation of Emissions:

$$\frac{\mathbf{300}\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{39.00}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 6 of 6

1. Pollutant Emitted: **VOC**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.221** lb/hour **0.083** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **1.7 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{1.7\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{0.221}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 10 of 11

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

Auxiliary Burners for Mass Burn Incinerator #2.

2. ARMS Identification Number: [X] No Corresponding ID [ ] Unknown

3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**

6. Initial Startup Date (DD-MON-YYYY): **xx-June-1999**

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit: **Auxiliary Burner**
Manufacturer: **To Be Determined** Model Number: **To Be Determined**

9. Generator Nameplate Rating: **Not Applicable** MW

10. Incinerator Information: **Not Applicable**
Dwell Temperature: °F
Dwell Time: seconds
Incinerator Afterburner Temperature : °F

11. Emissions Unit Comment:

Two natural gas-fired auxiliary burners totalling 130 MMBTU/hr for firing the combustor during warm-ups, start-ups, and shutdowns and to maintain required furnace temperatures when sustained low-BTU wastes are encountered.

Emissions Unit Control Equipment

A.

1. Description:
2. Control Device or Method Code:

B.

1. Description:
2. Control Device or Method Code:

C.

1. Description:
2. Control Device or Method Code:

D.

1. Description:
2. Control Device or Method Code:

E.

1. Description:
2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **130** mmbtu/hr

2. Maximum Incineration Rate: **Not Applicable** lb/hr tons/day

3. Maximum Process or Throughput Rate: **Natural Gas Usage = 97.76 MM cu ft/yr**

4. Maximum Production Rate: **Not Applicable**

5. Operating Capacity Comment:

$$\frac{\mathbf{130}\ MMBTU}{hour} \times \frac{\mathbf{752}\ hours}{year} \times \frac{cu\ ft}{\mathbf{1000}\ BTU} = \frac{\mathbf{97.76}\ MM\ cu\ ft}{year}$$

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:

8* hours/day	* days/week
* weeks/year	**752** hours/year

*

$$\frac{8\ hrs}{startup/shutdown\ episode} \times \frac{47\ episodes}{year} = \frac{376\ hrs}{year}$$

$$+ \frac{\mathbf{376}\ hrs}{year}\ for\ low\ BTU\ waste = \frac{\mathbf{752}\ hrs}{year}$$

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-210.300 FAC	**Stationary Sources-General Requirements Permits Required**
62-212.300 FAC	**Stationary Sources-Preconstruction Review General Preconstruction Review Requirements**
62-296.320 FAC	**Stationary Sources-Emission Standards General Pollutant Emission Limiting Standards**
62-296.406 FAC	**Stationary Sources-Emission Standards Fossil fuel steam generators < 250 MMBTU/hr**
40 CFR 60.58b(a)(1) from NSPS Subpart Eb	**EG/NSPS Provisions and Exceptions for startup, shutdown, and malfunction periods**
For further information on Applicable Regulations, please see Section 3.0-Regulatory Requirements in August 1997 Report	

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the Application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Volume I, Figure 2-2**	
2. Emission Point Type Code: [ ] 1 [X] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit: **Each incinerator has two auxiliary burners. Burner emissions will exhaust along with the flue gas through a common stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Mass Burn Incinerator Units #1, #2, and #3 will all exhaust to a common stack consisting of three separate flues.**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**165** feet
7. Exit Diameter:	**8.5** feet
8. Exit Temperature:	**270**°F
9. Actual Volumetric Flow Rate:	**243,117*** acfm

10. Percent Water Vapor :	**13.40*** %
11. Maximum Dry Standard Flow Rate:	**152,280** dscfm
12. Nonstack Emission Point Height:	**Not Applicable** feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **335.25** North (km): **3084.10**	
14. Emission Point Comment:	

*** Data for flue gas from incinerator at worst-case conditions (110% thermal load and 5000 BTU/lb MSW). The volume of flue gas from the auxiliary burners is considerably lower than the volume of flue gas from MSW combustion.**

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Not Available**	
2. Source Classification Code (SCC): **Not Available**	
3. SCC Units: **MMcu ft of gas burned**	
4. Maximum Hourly Rate: **0.130**	5. Maximum Annual Rate: **97.76**
6. Estimated Annual Activity Factor: **Not Applicable**	
7. Maximum Percent Sulfur: **Negligible**	8. Maximum Percent Ash: **Negligible**
9. Million Btu per SCC Unit: **1000**	
10. Segment Comment:	

Emissions Unit Information Section 10 of 11

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 6

1. Pollutant Emitted: **PM**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.650** lb/hour **0.24** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **5 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{5\ lb}{MM\ cu\ ft} \times \frac{0.130\ MM\ cu\ ft}{hr} = \frac{0.650\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 6

1. Pollutant Emitted: **PM_{10}**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.650** lb/hour **0.24** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **5 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{5\ lb}{MM\ cu\ ft} \times \frac{0.130\ MM\ cu\ ft}{hr} = \frac{0.650\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 10 of 11

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 3 of 6

1. Pollutant Emitted: **CO**
2. Total Percent Efficiency of Control: **Not Applicable** %
3. Primary Control Device Code: **Not Applicable**
4. Secondary Control Device Code: **Not Applicable**
5. Potential Emissions: **5.20** lb/hour **1.96** tons/year
6. Synthetically Limited? [ ] Yes [X] No
7. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year
8. Emission Factor: **40 lb/MM cu ft** Reference: **AP-42**
9. Emissions Method Code: [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5
10. Calculation of Emissions: $\frac{40\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{5.20}\ lbs}{hr}$
11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 4 of 6

1. Pollutant Emitted: **SO_2**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.078** lb/hour **0.029** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **0.6 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{0.6\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{0.078}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 10 of 11

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 5 of 6

1. Pollutant Emitted: **NO_x**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **39.00** lb/hour **14.66** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **300 lb/MM cu ft**
   Reference: **Engineering Estimate (40 CFR 60.44b(d))**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [ ] 3 [ ] 4 [**X**] 5

10. Calculation of Emissions:

$$\frac{\mathbf{300}\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{39.00}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 10 of 11

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 6 of 6

1. Pollutant Emitted: **VOC**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.221** lb/hour **0.083** tons/year

6. Synthetically Limited?
   [ ] Yes [X] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **1.7 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{1.7\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{0.221}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 11 of 11

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section:

Auxiliary Burners for Mass Burn Incinerator #3.

2. ARMS Identification Number: [X] No Corresponding ID [ ] Unknown

3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**

6. Initial Startup Date (DD-MON-YYYY): **xx-August-1998**

7. Long-term Reserve Shutdown Date (DD-MON-YYYY):

8. Package Unit: **Auxiliary Burner**
Manufacturer: **To Be Determined** Model Number: **To Be Determined**

9. Generator Nameplate Rating: **Not Applicable** MW

10. Incinerator Information: **Not Applicable**
Dwell Temperature: °F
Dwell Time: seconds
Incinerator Afterburner Temperature : °F

11. Emissions Unit Comment:

Two natural gas-fired auxiliary burners totalling 130 MMBTU/hr for firing the combustor during warm-ups, start-ups, and shutdowns and to maintain required furnace temperatures when sustained low-BTU wastes are encountered.

Emissions Unit Information Section 11 of 11

Emissions Unit Control Equipment

A.

1. Description:
2. Control Device or Method Code:

B.

1. Description:
2. Control Device or Method Code:

C.

1. Description:
2. Control Device or Method Code:

D.

1. Description:
2. Control Device or Method Code:

E.

1. Description:
2. Control Device or Method Code:

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **130** mmbtu/hr

2. Maximum Incineration Rate: **Not Applicable** lb/hr tons/day

3. Maximum Process or Throughput Rate: **Natural Gas Usage = 97.76 MM cu ft/yr**

4. Maximum Production Rate: **Not Applicable**

5. Operating Capacity Comment:

$$\frac{\mathbf{130}\ MMBTU}{hour} \times \frac{\mathbf{752}\ hours}{year} \times \frac{cu\ ft}{\mathbf{1000}\ BTU} = \frac{\mathbf{97.76}\ MM\ cu\ ft}{year}$$

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:

8* hours/day	* days/week
* weeks/year	**752** hours/year

*

$$\frac{8\ hrs}{startup/shutdown\ episode} \times \frac{47\ episodes}{year} = \frac{376\ hrs}{year}$$

$$+ \frac{\mathbf{376}\ hrs}{year}\ for\ low\ BTU\ waste = \frac{\mathbf{752}\ hrs}{year}$$

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

62-210.300 FAC	Stationary Sources-General Requirements Permits Required
62-212.300 FAC	Stationary Sources-Preconstruction Review General Preconstruction Review Requirements
62-296.320 FAC	Stationary Sources-Emission Standards General Pollutant Emission Limiting Standards
62-296.406 FAC	Stationary Sources-Emission Standards Fossil fuel steam generators < 250 MMBTU/hr
40 CFR 60.58b(a)(1) from NSPS Subpart Eb	EG/NSPS Provisions and Exceptions for startup, shutdown, and malfunction periods
For further information on Applicable Regulations, please see Section 3.0-Regulatory Requirements in August 1997 Report	

C. EMISSION POINT (STACK/VENT) INFORMATION

This subsection of the Application for Air Permit form provides information about the emission point associated with the emissions unit addressed in this Emissions Unit Information Section. An emission point is typically a stack or vent but can be any identifiable location at which air pollutants, including fugitive emissions, are discharged into the atmosphere.

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **Volume I, Figure 2-2**	
2. Emission Point Type Code: [ ] 1 [X] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit: **Each incinerator has two auxiliary burners. Burner emissions will exhaust along with the flue gas through a common stack.**	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: **Mass Burn Incinerator Units #1, #2, and #3 will all exhaust to a common stack consisting of three separate flues.**	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [X] V [ ] W	
6. Stack Height:	**165** feet
7. Exit Diameter:	**8.5** feet
8. Exit Temperature:	**270**°F
9. Actual Volumetric Flow Rate:	**243,117*** acfm

10. Percent Water Vapor :	**13.40*** %
11. Maximum Dry Standard Flow Rate:	**152,280** dscfm
12. Nonstack Emission Point Height:	**Not Applicable** feet
13. Emission Point UTM Coordinates: Zone: **17** East (km): **335.25** North (km): **3084.10**	
14. Emission Point Comment:	

*** Data for flue gas from incinerator at worst-case conditions (110% thermal load and 5000 BTU/lb MSW). The volume of flue gas from the auxiliary burners is considerably lower than the volume of flue gas from MSW combustion.**

D. SEGMENT (PROCESS/FUEL) INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of segment data (Fields 1-10) must be completed for each segment required to be reported and for each alternative operating method or mode (emissions trading scenario) under Chapter 62-213, F.A.C., for which the maximum hourly or annual segment-related rate would vary. A segment is a material handling, process, fuel burning, volatile organic liquid storage, production, or other such operation to which emissions of the unit are directly related. See instructions for further details on this subsection of the Application for Air Permit.

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode): **Not Available**	
2. Source Classification Code (SCC): **Not Available**	
3. SCC Units: **MMcu ft of gas burned**	
4. Maximum Hourly Rate: **0.130**	5. Maximum Annual Rate: **97.76**
6. Estimated Annual Activity Factor: **Not Applicable**	
7. Maximum Percent Sulfur: **Negligible**	8. Maximum Percent Ash: **Negligible**
9. Million Btu per SCC Unit: **1000**	
10. Segment Comment:	

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 1 of 6

1. Pollutant Emitted: **PM**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.650** lb/hour **0.24** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **5 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{5\ lb}{MM\ cu\ ft} \times \frac{0.130\ MM\ cu\ ft}{hr} = \frac{0.650\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: See August 1997 **Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 2 of 6

1. Pollutant Emitted: **PM_{10}**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.650** lb/hour **0.24** tons/year

6. Synthetically Limited?
   [ ] Yes [X] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **5 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{5\ lb}{MM\ cu\ ft} \times \frac{0.130\ MM\ cu\ ft}{hr} = \frac{0.650\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 11 of 11

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 3 of 6

1. Pollutant Emitted: **CO**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **5.20** lb/hour **1.96** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **40 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{40\ lb}{MM\ cu\ ft} \times \frac{0.130\ MM\ cu\ ft}{hr} = \frac{5.20\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

Emissions Unit Information Section 11 of 11

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 4 of 6

1. Pollutant Emitted: **SO_2**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.078** lb/hour **0.029** tons/year

6. Synthetically Limited?
   [ ] Yes [X] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **0.6 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [X] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{0.6\ lb}{MM\ cu\ ft} \times \frac{0.130\ MM\ cu\ ft}{hr} = \frac{0.078\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 5 of 6

1. Pollutant Emitted: **NO_x**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **39.00** lb/hour **14.66** tons/year

6. Synthetically Limited?
   [ ] Yes [X] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **300 lb/MM cu ft**
   Reference: **Engineering Estimate (40 CFR 60.44b(d))**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [ ] 3 [ ] 4 [X] 5

10. Calculation of Emissions:

$$\frac{\mathbf{300}\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{39.00}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

E. POLLUTANT INFORMATION

For the emissions unit addressed in this Emissions Unit Information Section, a separate set of pollutant information must be completed for each pollutant required to be reported. See instructions for further details on this subsection of the Application for Air Permit.

Pollutant Potential/Estimated Emissions: Pollutant 6 of 6

1. Pollutant Emitted: **VOC**

2. Total Percent Efficiency of Control: **Not Applicable** %

3. Primary Control Device Code: **Not Applicable**

4. Secondary Control Device Code: **Not Applicable**

5. Potential Emissions: **0.221** lb/hour **0.083** tons/year

6. Synthetically Limited?
   [ ] Yes [**X**] No

7. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

8. Emission Factor: **1.7 lb/MM cu ft**
   Reference: **AP-42**

9. Emissions Method Code:
   [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

10. Calculation of Emissions:

$$\frac{1.7\ lb}{MM\ cu\ ft} \times \frac{\mathbf{0.130}\ MM\ cu\ ft}{hr} = \frac{\mathbf{0.221}\ lbs}{hr}$$

11. Pollutant Potential/Estimated Emissions Comment: **See August 1997 Report**

APPENDIX B

PROPOSED REVISIONS TO THE
PPSA CONDITIONS OF CERTIFICATION

Attached are proposed revisions to the PPSA Conditions of Certification for the Pinellas County Resource Recovery Facility (PCRRF). As described in Section 1.0 of the enclosed August 1997 permit application, an application to revise the PPSA Conditions of Certification and PSD permits was originally submitted in May 1995 for proposed improvements to the PCRRF to meet the USEPA MWC Emission Guidelines. Accordingly, FDEP issued a permit amendment to the PSD permits on October 11, 1995 and a Final Order modifying the PPSA Conditions of Certification on July 29, 1996.

At this time, two minor revisions to the permitted improvements are needed, based on project requirements. First, the flyash storage silo is being replaced in the improved facility design with two flyash surge bins, to be located in the new Ash Conditioning Building. Emissions from Ash Conditioning Building activities will be controlled by a wet scrubber. Second, the size of the MWC auxiliary burners is being increased to 130 MMBTU/hr/unit, the NO_x emission factor increased to 300 lb/$(10^6)ft^3$, and the permitted annual natural gas consumption rate increased to 97.76$(10^6)ft^3$/year/unit.

Revisions to the PPSA Conditions of Certification are required to replace the flyash silo with the Ash Conditioning Building wet scrubber. Proposed revisions are given here in Appendix B to Condition XIV.A.2.b which describes the minor sources after the PCRRF improvements. In addition, one other minor revision to the PPSA Conditions of Certification is proposed at Condition XIV.A.2.d(7) to allow Method 26A, in addition to Method 26, for annual HCl compliance tests.

(6) MWC Organics

The polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzo-furans (PCDF) emissions shall not exceed 30 nanograms per dry standard cubic meter (ng/dscm) total mass corrected to 7% O_2; 3.44×10^{-8} lbs total mass/MMBTU, 1.6×10^{-5} lbs/hr/unit and 6.9×10^{-5} tons/yr/unit.

(7) Nitrogen oxides emissions (measured as NO_2) shall not exceed 200 ppmdv corrected to 7% O_2; or 0.439 lb/MMBTU, 200.3 lb/hr/unit, and 877.3 tons/yr/unit. The permittee may request authorization from the Department to conduct nitrogen oxides emissions averaging pursuant to 40 CFR 60.33b.

(8) The opacity level in the stack shall not exceed 10% (six minute block average).

(9) The emission limitations for the modified Facility are based on the compliance methods specified for each pollutant. Any change in the specified compliance method for any pollutant may result in appropriate changes to the emission limitation for the pollutant.

b. Emissions Limitations for Minor Sources, after the retrofit is complete, are as follows:

(1) Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) shall not occur in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period). This visible emissions limitation shall not apply during maintenance and repair of the ash conveying system.

(2) The particulate matter emissions shall not exceed 0.005 gr/dscf from the outlets of the baghouses at the lime storage silo, and two activated carbon storage silos ~~and the fly ash storage silo~~. Pursuant to Section 62-297.620(4), FAC, the particulate matter compliance test requirements are waived for these minor sources and an alternate standard of 5% opacity shall apply. A visible emission reading

Revisions to delete flyash silo

greater than 5% opacity does not create a presumption that the emission limit (i.e., in gr/dscf) is being violated, but would require the permittee to perform a particulate stack test in accordance with EPA Methods contained in 40 CFR 60, Appendix A.

(3) The particulate matter emissions shall not exceed 0.0102 gr/dscf from the outlet of the cyclone/wet scrubber system at the metals recovery system. Pursuant to Section 62-297.620(4), FAC, the particulate matter compliance test requirements are waived for this minor source and an alternate standard of 5% opacity shall apply. A visible emission reading greater than 5% opacity does not create a presumption that the emission limit (i.e., in gr/dscf) is being violated, but would require the permittee to perform a particulate stack test in accordance with EPA Methods contained in 40 CFR 60, Appendix A.

(4) The particulate matter emissions shall not exceed 0.03 gr/dscf from the outlet of the wet scrubber system at the ash conditioning building. Pursuant to Section 62-297.620(4), FAC, the particulate matter compliance test requirements are waived for this minor source and an alternative standard of 5% opacity shall apply. A visible emission reading greater than 5% opacity does not create a presumption that the emission limit (i.e., in gr/dscf) is being violated, but would require the permittee to perform a particulate stack test in accordance with EPA Methods contained in 40 CFR 60, Appendix A.

c. Operating Standards

(1) After the modifications to the Resource Recovery Facility are complete, the height of the boiler stack shall not be less than 165 feet above the ground level at the base of the stack.

(2) Each MWC unit shall be allowed to operate up to 110% of the unit's maximum demonstrated load capacity, as achieved during the most recent dioxin/furan compliance test. Maximum capacity shall be based on the steam (or feedwater) flow rate, which shall be continuously monitored according to the American Society of Mechanical Engineers (ASME) Power Test Code (PTC) for Steam Generating Units (PTC 4.1 and PTC 19.5) or as required by USEPA and/or FDEP regulations.

(3) 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.

(4) A Facility-specific maximum flue gas temperature at

emission concentration with the CEM system during each 24-hour daily period corrected to 7% O_2, measured between 12:00 midnight and the following midnight. At least two data points shall be used to calculate the one-hour arithmetic average. The CEM installation, evaluation, and operation shall follow the procedures set forth in 40 CFR 60.13. The CEM shall be operated according to Performance Specification 2 in 40 CFR 60, Appendix B. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 in 40 CFR 60, Appendix F. The initial evaluation shall be completed within 180 days of the initial start-up

(7) Hydrogen Chloride

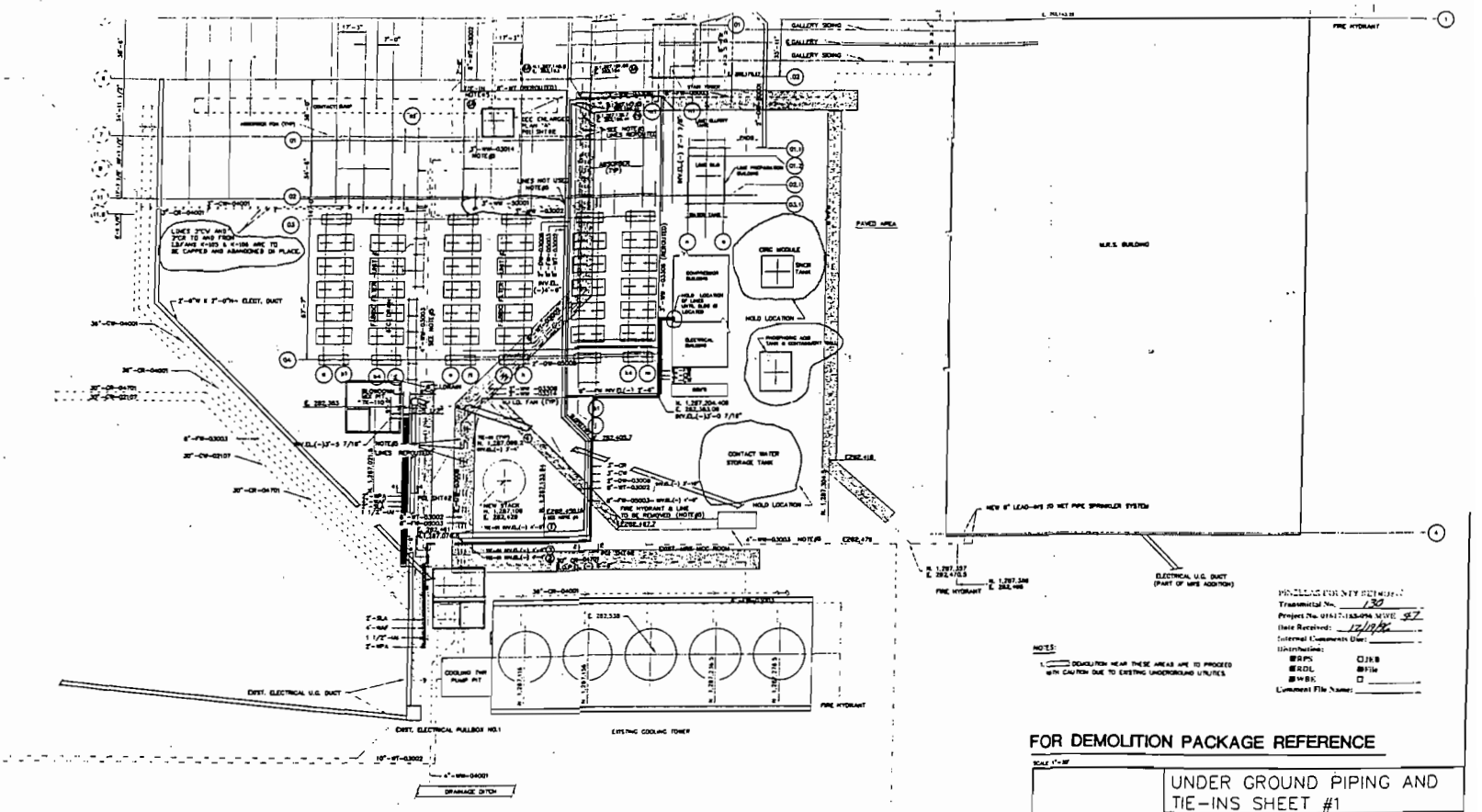
Revision for HCl test method

Compliance with hydrogen chloride (HCl) emission limits shall be determined by USEPA Method 26 or 26A. The minimum sampling time shall be one hour. A minimum of three test runs shall be conducted under representative full load operating conditions. The average of these test runs shall be used to determine compliance. Oxygen measurement shall be obtained simultaneously with each test run. Initial compliance tests shall be conducted within 60 days after achieving maximum operating capacity, but no later than 180 days after start-up. Thereafter, annual performance tests shall be conducted to verify compliance.

(8) Dioxins/Furans

Compliance with emission limits for dioxin/furan shall be determined by USEPA Method 23. The minimum sample time for each test run shall be four hours. Oxygen measurement shall be obtained simultaneously with each test run. A minimum of three test runs shall be conducted under representative full load operating conditions. The average of these test runs shall be used to determine compliance. The initial compliance test shall be conducted within 60 days after achieving maximum operating capacity, but no later than 180 days after

BEST AVAILABLE COPY



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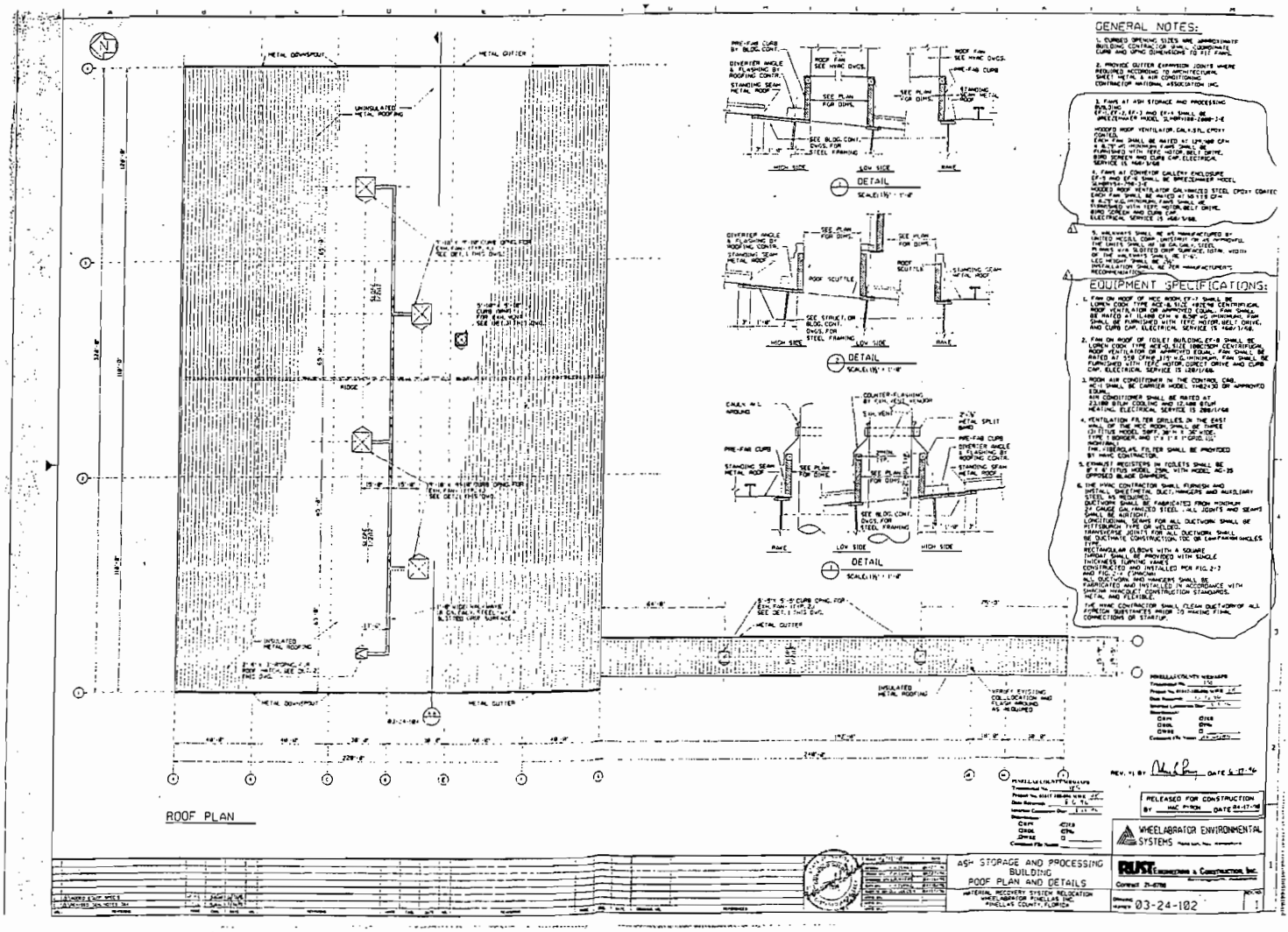

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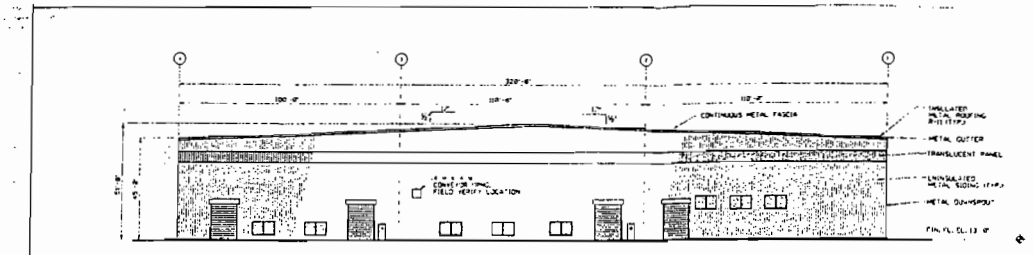
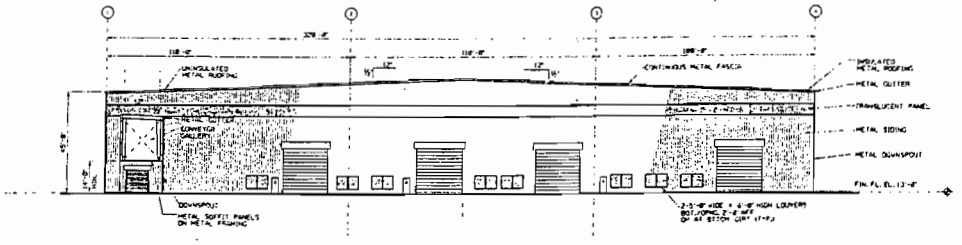


NORTH ELEVATION



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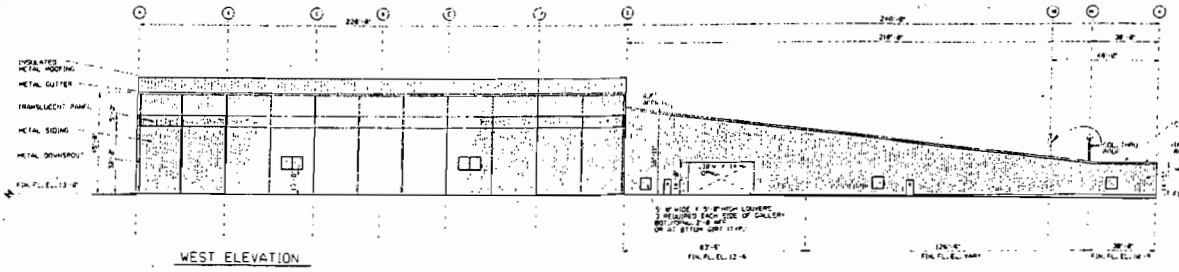

WEST ELEVATION

GENERAL NOTES:

1. LOUVERS FOR MSW STORAGE & PROCESS BUILDING SHALL BE 6' DEEP, OPERABLE BLADE, WEATHERPROOF, 14 SQFT. FREE AREA PER LOUVER FOR 9 VIDE x 6 HIGH MANUAL OPERATION, WITH BIRD SCREEN. TWO LOUVERS SIDE BY SIDE EACH LOCATION SHOWN TOTAL 28 LOUVERS.
2. ALL DOWNSPOUTS TO DRAIN INTO AN UNDERGROUND STORM SYSTEM OR AS SHOWN ON CIVIL DRAWINGS
3. GUTTERS TO SLOPE MINIMUM 1/8" PER FOOT TO DOWNSPOUTS
4. SEE STRUCT. DWGS. FOR FOUNDATION PLAN AND DETAILS
5. BUILDING CONTRACTOR SHALL DETERMINE THE SIZE AND QUANTITY OF GUTTERS AND DOWNSPOUTS

RELEASED FOR CONSTRUCTION
BY Bridges DATE 1/7/94

WHEELABRATOR ENVIRONMENTAL SYSTEMS

RUST ENGINEERING & CONSTRUCTION, INC.

25H STORAGE AND PROCESSING BUILDING ELEVATIONS

MATERIAL RECOVERY SYSTEM RELOCATION
WHEELABRATOR PINELLAS INC.
PINELLAS COUNTY, FLORIDA

Contract 21-6788

Drawing No. 03-24-103

Sheet 10

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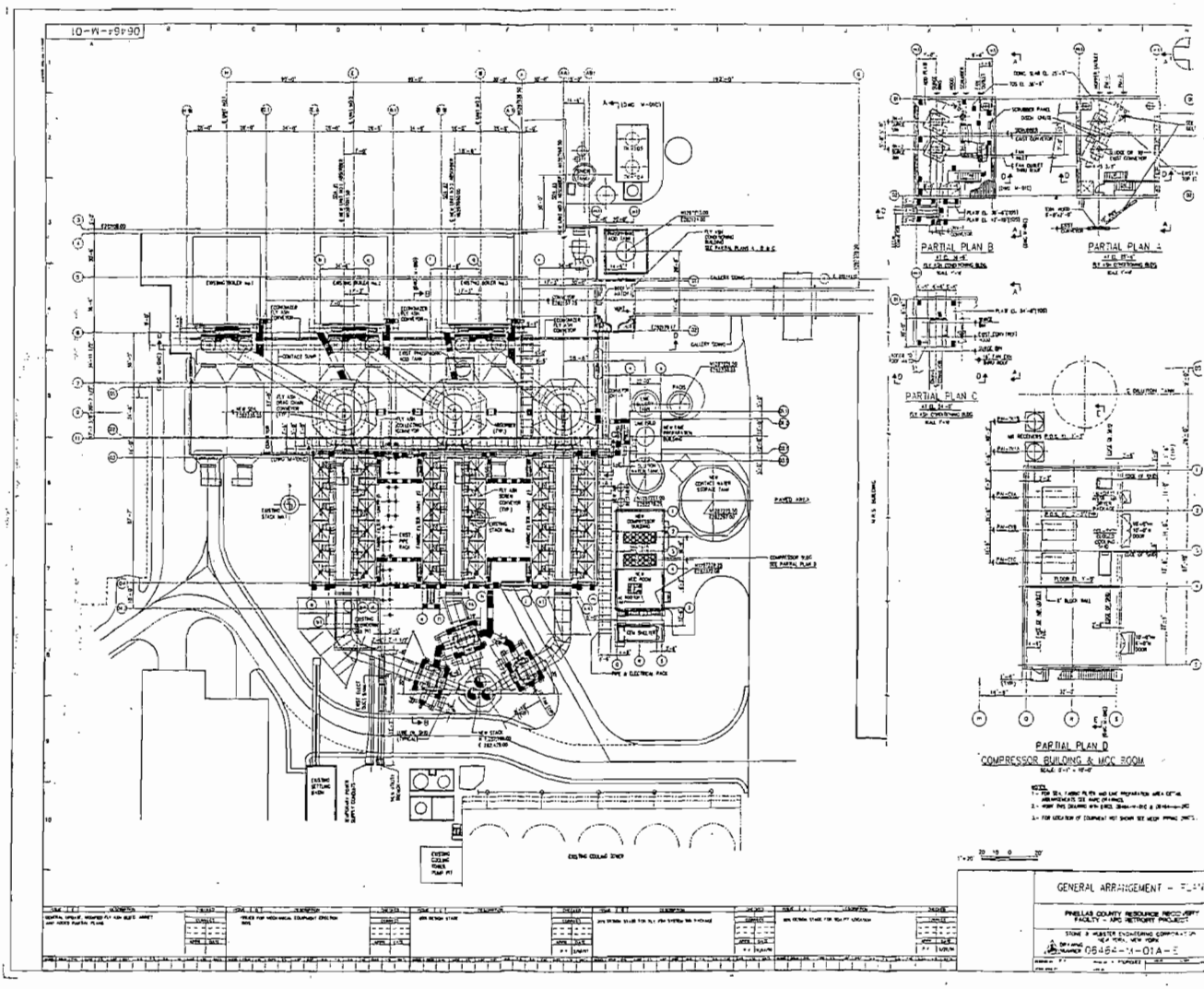

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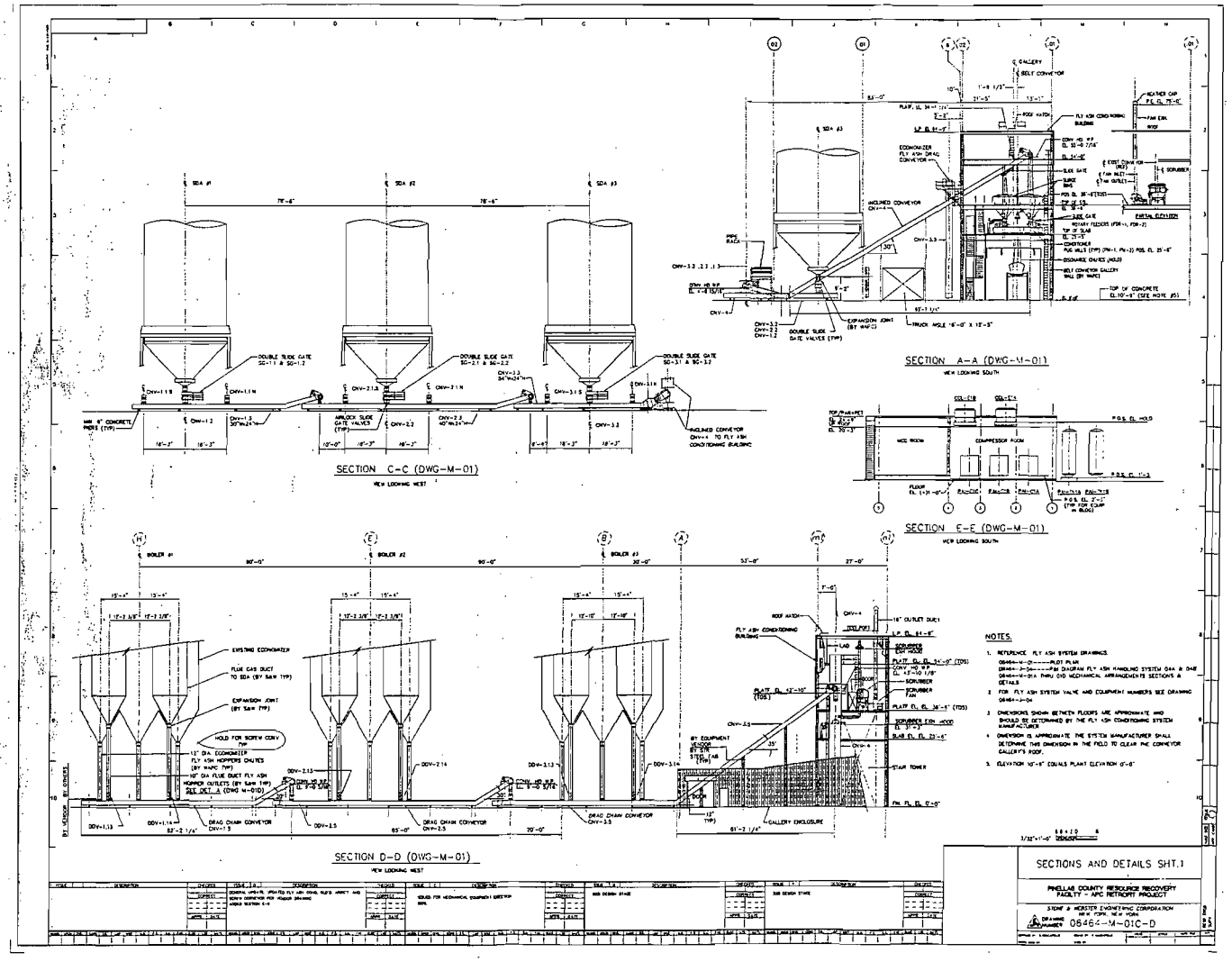

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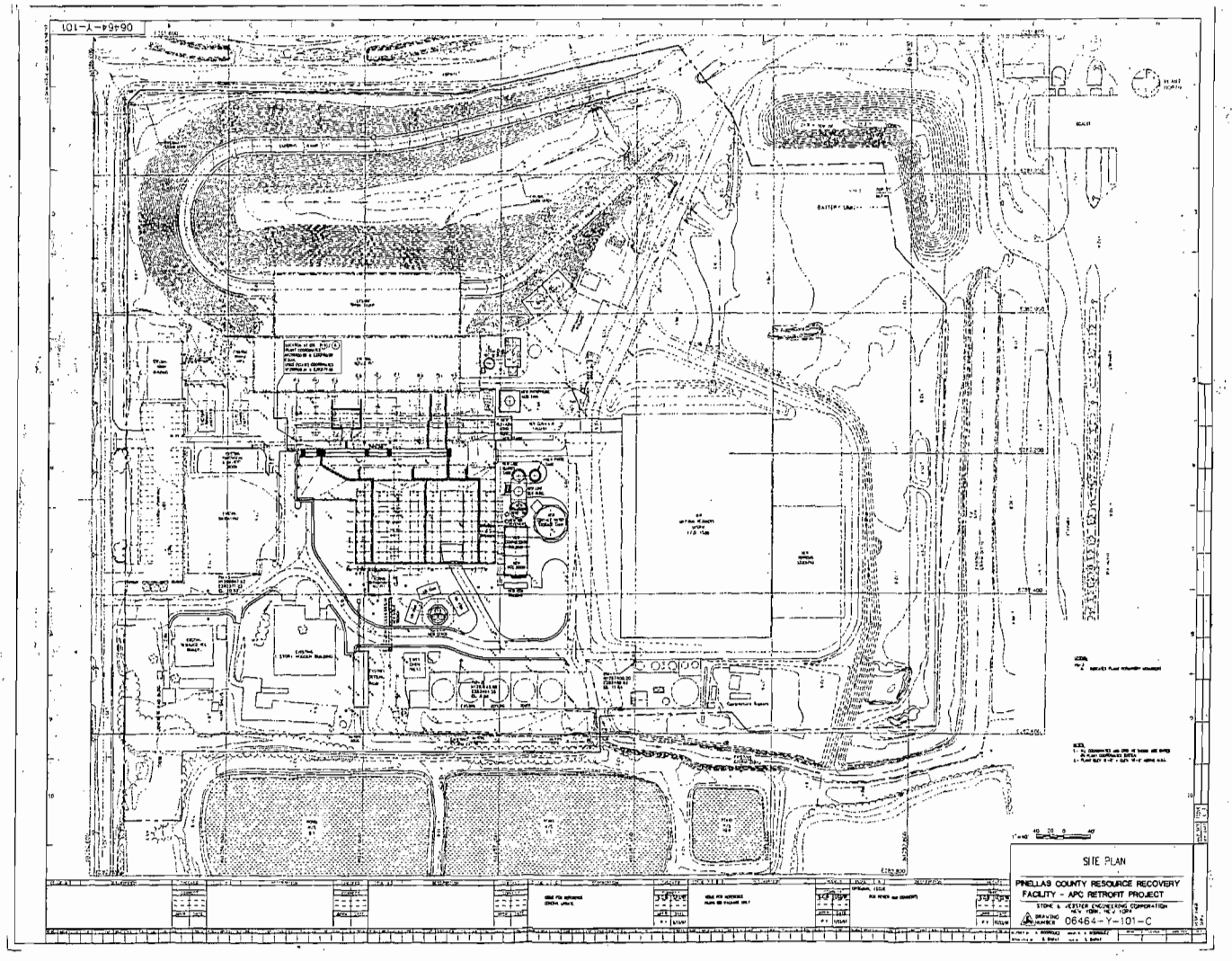

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14 SOUTH FORT HARRISON AVENUE
CLEARWATER, FLORIDA 33756
PHONE: (727) 464-3588
FAX: (727) 464-3595

July 26, 2000

Mr. Hamilton Oven, Jr., P.E.
Power Plant Siting Section
State of Florida
Department of Environmental Protection
Division of Environmental Permitting
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

1030117

RE: Initial Compliance Testing of Pinellas County Resource Recovery Facility-Unit No. 1
Modification of Power Plant Site Certification (OGC No. 95-1442, July 25, 1996)
Request for Extension of Report Submittal

Dear Mr. Oven:

Pinellas County respectfully requests a 30-day extension be granted by the Department for submittal of the "Report on Initial Compliance Testing for Unit No. 1" at the Pinellas County Resource Recovery Facility.

Article XIV.A.3 a. of Exhibit AB@ to the "Final Order Modifying Conditions of Certification" for the Pinellas County Resource Recovery Facility (OGC No. 95-1442) , requires that "the results of the stack tests shall be submitted within sixty days of testing" to the Department. Compliance testing of Unit No. 1 was completed on June 1, 2000; with the submittal date thereby being set for July 30, 2000. Due to delays in the issue of the final report by the testing Contractor, Pinellas County will not be able to comply with this submittal date.

Therefore, it is requested that a revised submittal date be **August 29, 2000**.

PINELLAS COUNTY UTILITIES "Serving You Every Day"

Should you require any further discussion regarding this request, please contact me at your earliest convenience.

Sincerely,

R. Peter Stasis, P.E.
Director of Utilities Engineering

cc: Distribution

DISTRIBUTION LIST (Page 1 of 3)

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WILLIAM RIES
DEPARTMENT OF SOLID WASTE OPERATIONS
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ROBERT HENSON
PLANT MANAGER
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LUKE KOON
PROJECT MANAGER
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DONALD ELIAS
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PCRRF AIR POLLUTION CONTROL RETROFIT PROJECT
3095 - 114TH AVENUE NORTH
ST. PETERSBURG, FL 33716
PHONE: (727) 464-7565
FAX: (727) 464-7713

October 13, 1999

Winston Smith
Director, Division of Air, Pesticides and Toxics Management
United States Environmental Protection Agency
61 Forsyth Street SW
Atlanta, Georgia 30303

RE: Pinellas County Resource Recovery Facility

Dear Mr. Smith:

Enclosed for your information is a Quarterly Report on project progress. Should you desire any additional information, please contact me at your convenience.

Sincerely,

Russell Menke
Project Administrator

Enclosure

CC:
Brian Beals, USEPA
Scott Davis, USEPA
Fred Porter, USEPA
Walt Stevenson, USEPA
Clair Fancy, FDEP
Andrew Nguyen, FDEP
Bill Thomas, FDEP
Pick Talley, Utilities Admin.
Chris Staubus, Utilities Admin.
Warren Smith, Solid Waste Operations
Pete Stasis, Utilities Engineering
Julie Yard, Senior Assistant County Attorney
David Dee, Landers & Parsons
Ron Larson, HDR Engineering
Stu Broom, Verner, Liipfert et al
Luke Koon, Wheelabrator Pinellas Inc.
Pete Bender, Stone & Webster

cc: Syed Arif, BAR

Pinellas County Resource Recovery Facility
Air Pollution Control Retrofit Project

Quarterly Report on Project Progress for the Third Quarter, 1999
Submitted October 13, 1999

Overview

This Quarterly Report for the retrofit of the Pinellas County Resource Recovery Facility covers the County's activities during the third calendar quarter of 1999 on the retrofit project. In general, the County' overall progress with the retrofit activities have been in accordance with the schedule. The retrofit of Unit #2 has been substantially completed and acceptance tested, and the retrofit of Unit #1 is underway. Detailed descriptions of the efforts completed, underway and scheduled for the next quarter are presented in the following paragraphs.

Actions Taken During Reporting Period

Cleaning of Boilers - Historically, water washing of boilers had been done on approximately a ten week schedule. From August of 1995 until recently, these washes have been done on approximately an eight week schedule. The facility operator has recently changed the method of cleaning the boilers by using a dry, concussive boiler cleaning method in lieu of water washing. This cleaning is being done on approximately an eight week schedule.

Stack Testing of Dioxin Emissions - Dioxin testing has been performed on an annual basis for the past few years in conjunction with annual compliance tests. In addition, dioxin testing is being performed as part of the acceptance testing for each of the retrofitted units. Acceptance testing for the newly-retrofitted Unit #2, which resumed operation on July 19, 1999 was completed on September 18, 1999 and the final test results will be submitted as soon as they are available. As part of its annual compliance test, dioxin testing was also performed on Unit #3 during September, and these test results will be submitted as soon as they are available.

Design of the Retrofit - Design work on the retrofit had previously been substantially completed. During the reporting period, design activities were limited to completion of "punch list" items, and design modifications to accommodate field conditions and interferences.

Procurement of Equipment and Construction Contracts - During the reporting period, no new purchase orders were issued, and only minor adjustments were made to existing purchase orders. Only two substantial additional purchase orders are currently planned during the remainder of the retrofit: Roadways and Site Preparation. Purchase order commitments for balance of plant materials, equipment and services total approximately $22.7 million.

On-Site Construction of the Retrofit - Phase II (Unit #2)- During the reporting period, the construction of Unit #2 was substantially completed and acceptance testing was performed. Remaining efforts on this phase include receipt of the final test results, and completion of punch list items. The following specific activities were completed on Unit #2:

Installation of economizer tie-in ductwork
Installation of auxiliary burners
Completion of insulation and lagging of economizer tie-in ductwork
Completion of tie-in
Startup, Checkout and Acceptance Testing of Unit #2

On-Site Construction of the Retrofit - Phase III (Unit #1) - During the reporting period, construction of the new air pollution control train for Unit #1 continued. The following specific construction activities were completed on the air pollution control train for Unit #1:

Demolition

Demolition of old Unit #2 ESP, ID fan and ductwork completed.

Piling

All Phase III piling installed, including SDA, fabric filter, ductwork supports, ID fan and windwall.

Foundations

Contractor mobilized, pile caps installed for SDA, fabric filter and windwall.

Actions Scheduled During the Reporting Period, But Not Completed

During the reporting period, all major activities that had been scheduled to be completed have been completed.

Actions Scheduled During the Next Reporting Period

During the next reporting period, efforts will be concentrated on completion of punch list items for the new APC equipment for Unit #2, and continuation of construction of the retrofit of Unit #1. Monthly meetings are being held to monitor progress and resolve design issues. Weekly on-site construction meetings are being held with contractors to monitor and coordinate activities.

The following activities related to Phase III (Unit #1) are expected to be completed during the next reporting period:

Installation of ID fan and outlet duct support pilecaps
Completion of Unit #1 underground grounding
Completion of foundations and footings for Unit #1
Erection of SDA support steel and SDA vessel
Erection of inlet duct riser and support steel
Erection and weldout of crossover duct

The following activities related to Phase III (Unit #1) are expected to be initiated during the next reporting period:

SDA and fabric filter floor slabs and u-drains
Insulation and lagging of inlet riser duct and SDA vessel
Ground insulation of fabric filter to ID fan ductwork
Fabrication of SDA piping
Erection of fabric filter support steel

Site Progress Photograph

Because the construction during the reporting period consisted primarily of demolition, dewatering, piling and foundation work, no site progress photograph is being included with this progress report.

Respectfully Submitted,

Russell Menke
Retrofit Project Administrator

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UTILITIES ENGINEERING
14 SOUTH FORT HARRISON AVENUE
CLEARWATER, FLORIDA 33756
PHONE: (727) 464-3588
FAX: (727) 464-3595

July 20, 1999

Mr. Hamilton Oven, Jr., P.E.
Power Plant Siting Section
State of Florida
Department of Environmental Protection
Division of Environmental Permitting
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Reporting of Start-Up of Pinellas County Resource Recovery Facility - Unit No. 2 Modification of Power Plant Site Certification (OGC No. 95-1442, July 25, 1996)

Dear Mr. Oven:

In accordance with 40 CFR 60.7(a)(3), this is to provide formal notification that the actual date for initial startup of the retrofitted Unit No. 2 at the Pinellas County Resource Recovery Facility (PCRRF) occurred July 17, 1999.

The FDEP will be notified not less than 30 days prior to the commencement of continuous emissions monitoring system (CEMS) performance tests and initial compliance tests of Unit No. 2, in accordance with 40 CFR 60.7(a)(5) and 60.8(d).

Sincerely,
PINELLAS COUNTY UTILITIES ENGINEERING

RPStasis

R. Peter Stasis, P.E.
Director of Utilities Engineering

cc: Distribution

PINELLAS COUNTY UTILITIES "Serving You Every Day"

PCRRF AIR POLLUTION CONTROL RETROFIT PROJECT
3095 - 114TH AVENUE NORTH
ST. PETERSBURG, FL 33716
PHONE: (727) 464-7565
FAX: (727) 464-7713

April 15, 1999

Winston Smith
Director, Division of Air, Pesticides and Toxics Management
United States Environmental Protection Agency
61 Forsyth Street SW
Atlanta, Georgia 30303

RE: Pinellas County Resource Recovery Facility

Dear Mr. Smith:

Enclosed for your information is a Quarterly Report on project progress. Should you desire any additional information, please contact me at your convenience.

Sincerely,

Russell Menke
Project Administrator

Enclosure

CC:
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Andrew Nguyen, FDEP
Bill Thomas, FDEP
Pick Talley, Utilities Admin.
Chris Staubus, Utilities Admin.
Mike Rudd, Solid Waste Operations
Warren Smith, Solid Waste Operations
Pete Stasis, Utilities Engineering
Julie Yard, Senior Assistant County Attorney
David Dee, Landers & Parsons
Ron Larson, HDR Engineering
Stu Broom, Verner, Liipfert et al
Luke Koon, Wheelabrator Pinellas Inc.
Pete Bender, Stone & Webster

Pinellas County Resource Recovery Facility
Air Pollution Control Retrofit Project

Quarterly Report on Project Progress for the First Quarter, 1999
Submitted April 15, 1999

Overview

This Quarterly Report for the retrofit of the Pinellas County Resource Recovery Facility covers the County's activities during the first calendar quarter of 1999 on the retrofit project. In general, the County' overall progress with the retrofit activities have been in accordance with the schedule. Detailed descriptions of the efforts completed, underway and scheduled for the next quarter are presented in the following paragraphs.

Actions Taken During Reporting Period

Water Washing of Boilers - Historically, water washing of boilers had been done on approximately a ten week schedule. Since August of 1995, these washes have been done on approximately an eight week schedule.

Stack Testing of Dioxin Emissions - Dioxin testing has been performed on an annual basis for the past few years in conjunction with annual compliance tests. In addition, dioxin testing is being performed as part of the acceptance testing for each of the retrofitted units. Acceptance testing for the newly-retrofitted Unit #3, which resumed operation on September 24, 1998 was completed on December 4, 1998 and the final test results were submitted on January 29, 1999. As part of its annual compliance test, dioxin testing was performed on Unit #1 during the last week of March, 1999. Results of this testing will be submitted when available.

Design of the Retrofit - Design work on the retrofit had previously been substantially completed. During the reporting period, design activities were limited to completion of "punch list" items, and design modifications to accommodate field conditions and interferences.

Procurement of Equipment and Construction Contracts - During the reporting period, no new purchase orders were issued, and only minor adjustments were made to existing purchase orders. Only two substantial additional purchase orders are currently planned during the remainder of the retrofit: Roadways and Site Preparation. Purchase order commitments for balance of plant materials, equipment and services total approximately $22.4 million.

On-Site Construction of the Retrofit - During the reporting period, the following construction activities were completed:

Foundations:

ID fan foundation
Fabric filter floor slab
Fabric filter trench drains

Structural/Mechanical Erection

Ground fabrication of SDA
Installation and welding of SDA vessel and penthouse
Installation of Fabric filter support steel and modules
Setting and welding of Fabric filter inlet plenum
Setting of Fabric filter outlet plenum
Completion of inlet ductwork, except tie-in

Piping Installation

Installation of instrument air, plant air and service water lines on pipe rack

Ram Ash Expellers and Riddlings Conveyors

Installation of new ram ash expellers and riddlings conveyors for Unit #1

Electrical and Controls

Electrical work for Unit #1 Ram Ash Expeller and riddling conveyors

Insulation and Lagging

Insulation of SDA vessel and cone

Painting

Miscellaneous steel on ground and in lay down area, and SDA internal hopper lining

Startup and Compliance Testing - The retrofitted Unit #3 was restarted on September 24, and compliance testing was completed in the field on December 4. The final test results were submitted on January 29. Final acceptance of Unit #3 occurred on March 18, 1999.

Actions Scheduled During the Reporting Period, But Not Completed

During the reporting period, all major activities that had been scheduled to be completed have been completed.

Actions Scheduled During the Next Reporting Period

During the next reporting period, efforts will be concentrated on completion of Phase 1 punch list items, completion of mechanical erection of the new APC equipment for Unit #2, completion of electrical and control work for Unit #2, insulation and lagging, and initiation of the tie-in of the new APC equipment to Unit #2. Monthly meetings are being held to monitor progress and resolve design issues. Weekly on-site construction meetings are being held with contractors to monitor and coordinate activities.

The following activities are expected to be completed during the next reporting period:

Structural/Mechanical Erection

SDA
Fabric filter
ID fan
Ductwork

Piping

All Unit #2 piping

Electrical and Controls

All Unit #2 electrical and controls

The following activities will be ongoing during the next reporting period:

Insulation and lagging
Painting
Tie-in of Unit #2

Site Progress Photograph

Attached is a site construction photograph taken on March 19, 1999, looking toward the northwest. The Unit #2 SDA and fabric filter are shown near the center of the photo, in the foreground. Behind the Unit #2 SDA and fabric filter are the Unit #3 SDA and fabric filter, which are now in operation. Near the base of the stack can be seen the new ID fan for Unit #2.

Respectfully Submitted,

Russell Menke
Retrofit Project Administrator

Attachment: March 19, 1999 photo


BUEY

AE

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June 1, 1999

Mr. Hamilton Oven, Jr., P.E.
Power Plant Siting Section
State of Florida
Department of Environmental Protection
Division of Environmental Permitting
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Reporting of Start-Up of Pinellas County Resource Recovery Facility - Unit No. 2 Modification of Power Plant Site Certification (OGC No. 95-1442, July 25, 1996)

Dear Mr. Oven:

In accordance with Section XIII.C.2 of Exhibit B to the Modification of Power Plant Site Certification approved on July 25, 1996 (OGC No. 95-1442), and as required by 40 CFR 60.7(a)(2), this is to provide formal notification that the anticipated date for initial startup of the retrofitted Unit No. 2 at the Pinellas County Resource Recovery Facility will be July 28, 1999.

Pursuant to the actual date of initial startup being confirmed , the FDEP will be notified within 15 days, in accordance with 40 CFR 60.7(a)(3).

Sincerely,

RPStasis

R. Peter Stasis, P.E.
Director of Utilities Engineering

cc: Distribution

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September 30, 1998

Clair Fancy
State of Florida
Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Reporting of Start-Up of Pinellas County Resource Recovery Facility - Unit No. 3
Modification of Power Plant Site Certification (OGC No. 95-1442, July 25, 1996)

Dear Ms. Fancy:

In accordance with 40 CFR 60.7(a)(3), this is to provide formal notification that the actual date for initial startup of the retrofitted Unit No. 3 at the Pinellas County Resource Recovery Facility (PCRRF) occurred September 24, 1998.

The FDEP will be notified not less than 30 days prior to the commencement of continuous emissions monitoring system (CEMS) performance tests and initial compliance tests of Unit No. 3, in accordance with 40 CFR 60.7(a)(5) and 60.8(d).

Sincerely,
PINELLAS COUNTY UTILITIES

RPStasis

R. Peter Stasis, P.E.
Director of Utilities Engineering

xc: Distribution List attached

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Syed

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October 14, 1998

Mr. Hamilton Oven, Jr., P.E.
Power Plant Siting Section
State of Florida
Department of Environmental Protection
Division of Environmental Permitting
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Notification of Performance Testing of Pinellas County Resource Recovery Facility (PCRRF) APC Retrofit- Unit No. 3
Modification of Power Plant Site Certification (OGC No. 95-1442, July 25, 1996)

Dear Mr. Oven:

Pursuant to the requirements defined in 40 CFR 60.7(a)(5) and 40 CFR 60.8(a) and (d), this letter will serve as notification to the FDEP of the PCRRF Unit No. 3 Continuous Emissions Monitoring System (CEMS) Performance Testing scheduled for November 23, 1998 and the Compliance Performance Testing scheduled for November 30, 1998 respectively.

Should you need further information regarding the scheduling aspects of the project, please feel free to call me at (727) 464-3588.

Sincerely,

R. Peter Stasis, P.E.
Director of Utilities Engineering

cc: Distribution

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RONALD LARSON
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TAMPA, FL 33609

Florida Department of
Environmental Protection

Memorandum

RECEIVED
AUG 26 1998
BUREAU OF
AIR REGULATION

TO: ~~Al Linero~~ ✓
Mike Harley

FROM: Buck Oven BHO

DATE: August 25, 1998

SUBJECT: Dade County Resource Recovery PA 77-08
Pinellas County RRF PA 83-18

Please review the attached information. Respond directly to the Permittee if appropriate and send me a copy.

Attch: ~~(1) Joe MACT retrofit is operating!~~
~~(2) Syed~~
(3) Kim - to Pinellas RRF file

BOARD OF COUNTY COMMISSIONERS
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August 19, 1998

Mr. Hamilton Oven, Jr., P.E.
Power Plant Siting Section
State of Florida
Department of Environmental Protection
Division of Environmental Permitting
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

RE: Reporting of Start-Up of Pinellas County Resource Recovery Facility - Unit No. 3 Modification of Power Plant Site Certification (OGC No. 95-1442, July 25, 1996)

Dear Mr. Oven:

In accordance with Section XIII.C.2 of Exhibit B to the Modification of Power Plant Site Certification approved on July 25, 1996 (OGC No. 95-1442), and as required by 40 CFR 60.7(a)(2), this is to provide formal notification that the anticipated date for initial startup of the retrofitted Unit No. 3 at the Pinellas County Resource Recovery Facility will be September 27, 1998.

Pursuant to the actual date of initial startup being confirmed , the FDEP will be notified within 15 days, in accordance with 40 CFR 60.7(a)(3).

Sincerely,
PINELLAS COUNTY UTILITIES

RPStasis

R. Peter Stasis, P.E.
Director of Utilities Engineering

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PHONE: (813) 464-7565
FAX: (813) 464-7713

~~Joe~~ ~~Jr~~ AC
~~Teresa~~
~~Syed~~
Kim (Pinellas Files)

July 15, 1998

Winston Smith
Director, Division of Air, Pesticides and Toxics Management
United States Environmental Protection Agency
61 Forsyth Street SW
Atlanta, Georgia 30303

RE: Pinellas County Resource Recovery Facility

Dear Mr. Smith:

Enclosed for your information is a Quarterly Report on project progress. Should you desire any additional information, please contact me at your convenience.

Sincerely,

Russell Menke
Project Administrator

Enclosure

cc: Brian Beals, USEPA
Scott Davis, USEPA
Fred Porter, USEPA
Walt Stevenson, USEPA
Clair Fancy, FDEP
Andrew Nguyen, FDEP
Bill Thomas, FDEP
Pick Talley, Utilities Administration
Chris Staubus, Utilities Administration
Mike Rudd, Solid Waste Operations
Pete Stasis, Utilities Engineering
Julie Yard, Senior Assistant County Attorney
David Dee, Landers & Parsons
Ron Larson, HDR Engineering
Stu Broom, Verner, Liipfert et al
Luke Koon, Wheelabrator Pinellas Inc.
Phil Castellano, Stone & Webster

Pinellas County Resource Recovery Facility
Air Pollution Control Retrofit Project

Quarterly Report on Project Progress for the Second Quarter, 1998
Submitted July 15, 1998

Overview

This Quarterly Report for the retrofit of the Pinellas County Resource Recovery Facility covers the County's activities during the second calendar quarter of 1998 on the retrofit project. In general, the County' overall progress with the retrofit activities have been in accordance with the schedule. Detailed descriptions of the efforts completed, underway and scheduled for the next quarter are presented in the following paragraphs.

Actions Taken During Reporting Period

Water Washing of Boilers - Historically, water washing of boilers had been done on approximately a ten week schedule. Since August of 1995, these washes have been done on approximately an eight week schedule.

Stack Testing of Dioxin Emissions - Dioxin testing has been performed on an annual basis for the past few years in conjunction with annual compliance tests. During the week of March 9, dioxin testing was performed on Unit #1. This unit was chosen because it recently underwent major modifications as a part of the retrofit project. The results of this testing were submitted on May 12. The measured emissions were significantly lower than those previously measured on this unit, and were comparable to last year's measurements on unit #3.

Design of the Retrofit - Design work on the retrofit had previously been substantially completed. During the reporting period, design activities were limited to completion of the electrical and controls system design, completion of "punch list" items, and design modifications to accommodate field conditions and interferences.

Procurement of Equipment and Construction Contracts - During the reporting period, purchase orders were issued for 10 packages, for a cumulative of 77 purchase orders through the end of June. Purchase orders were issued during the reporting period for the following: lighting and communication equipment installation; fire protection system; steam pressure switches; boiler drum level switches; electrical demolition; submersible sump pump; boiler floor slab replacement; time and materials painting; field finish painting; and demolition of Unit #3 ESP. Purchase order commitments for balance of plant materials, equipment and services total approximately $20.7 million.

On-Site Construction of the Retrofit - During the reporting period, the following construction activities were completed:

Concrete:

All remaining Unit #3 foundations
Sump under boiler area
Elevated slab in Flyash Conditioning Building
Replacement of floor slabs under boilers for Unit #3 and Unit #2

Structural/Mechanical Erection:

Set conveyors
Set SDA double slide gates
Erected outlet ductwork and supports
Erected I.D. fan
Set SNCR modules
Installed Unit #3 hydraulic skid and containment
Set potable, tertiary and service water pumps
Set I.D. fan lube skid
Erected Flyash Conditioning Building
Set flyash conditioning equipment
Installed fabric filter shaker drives
Set CEMS shelter
Erected windskirt steel
Installed outlet duct support guides
Installed grating and handrail in Flyash Conditioning Building
Set A/C unit on MCC/Compressor Building
Set louvers on MCC/Compressor Building

Piping:

Installation of an additional 10,901 lineal feet of piping on various systems, for a cumulative total of 11,940 lineal feet. Specific activities included:

Supports and piping to SNCR and phosphoric acid tanks
Set and piped pump alley sump pumps
Installed underground piping between contact water tank and lime preparation building
Installed instrument air lines to impactors
Completed 8" line to sump pumps
Installed underground piping for tertiary, service, dilution and contact water pumps
Contact water piping and supports
2" and 2 ½" underground connections to contact sump

Piping up SDA and within penthouse
SDA penthouse instrumentation and PACIS piping
Underground piping to I.D. fan
Erected supports for pipe and tray up boiler building

Electrical/Controls:

Installation of cable trays in MCC Rooms #1, #2 and #3 and in Compressor Building
Installation of conduit in MCC Rooms #2 and #3, and to I.D. fan
Set MCCs in MCC Room #3
Set DCS cabinets
Installed power feeds to pump alley sump pumps
Pulled fabric filter cable into MCC Room #3
Completed SDA penthouse electrical
Pulled high voltage cables

Lighting/Communications Systems:

Installed Lighting conduit in SDA and fabric filter
Installed power and distribution panels
Received light fixtures

Insulation/Lagging:

SDA sidewalls
SDA outlet duct to fabric filter
Man doors and equipment doors in MCC/Compressor Building

Masonry/Architectural:

Completed MCC/Compressor Building, including block work, roof decking and slab, EPDM roofing and painting

Fire Protection:

Obtained design drawing approval and permits

Painting:

Completed internal coatings of SDA
Mobilized field painting subcontractor

Actions Scheduled During the Reporting Period, But Not Completed

During the reporting period, all major activities that had been scheduled to be completed had been completed. Some insulation and lagging work remains to be done on the SDA and fabric filter, and siding and roofing have not yet been installed on the SDA penthouse and the flyash conditioning building.

Actions Scheduled During the Next Reporting Period

During the next reporting period, efforts will be concentrated on completion of Phase 1 construction, interconnection of the new APC train for Unit #3, startup of Unit #3, demolition of the old APC train for Unit #3, mobilization of foundation and piling subcontractors for Phase 2, and initiation of ground fabrication of Phase 2 components. Monthly meetings are being held to monitor progress and resolve design issues. Weekly on-site construction meetings are being held with contractors to monitor and coordinate activities.

The following activities are expected to be completed during the next reporting period:

Concrete:

Floor slab replacement under boiler for Unit #1
Remaining Phase 1 slabs and U-drains

Structural/Mechanical Erection:

Installation of all remaining Phase 1 mechanical and HVAC equipment
Final alignment and checkout of mechanical equipment
Tie-in new APC flue gas train to Unit #3
Initiate ground fabrication of Phase 2 components

Piping:

Complete installation of all remaining Phase 1 piping systems

Electrical/Controls:

Complete installation of all remaining Phase 1 electrical and controls

Insulation/Lagging:

Complete insulation and lagging, siding and roofing

Fire Protection System:

Complete fire protection system

Field Painting:

Complete Phase 1 field painting

Demolition:

Initiate and complete demolition of Unit #3 ESP, Foundations and Stack

Site Progress Photograph

The previous progress report included an aerial photo of construction progress as of March 23, 1998. No aerial photos have been taken since that time because the previous photo showed all major structures and equipment included in the Phase 1 construction. After Phase 1 is completed (startup of Unit #3 and common equipment) and Phase 2 is underway (demolition of the old Unit #3 stack and ESP, and construction of the new APC train for Unit #2), additional photos will be taken.

Respectfully Submitted,

Russell Menke
Retrofit Project Administrator

Florida Department of
Environmental Protection

Memorandum

TO: Syed Arif
Scott Goorland

FROM: Buck Oven BO

DATE: March 26, 1998

SUBJECT: Pinellas County RRF, PA 78-11/PA 83-18
Draft Order Modifying Conditions

Please review the attached draft Order, mark corrections and return to me.

Attch:

cc: Al Linero

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re: Pinellas County Resource Recovery Facility (Units 1-3) Modification of Conditions of Certification Pinellas County, Florida	)	DEP CASE NO.s PA 78-11C PA 83-18

FINAL ORDER MODIFYING CONDITIONS OF CERTIFICATION

On July 20, 1979 and March 20, 1984, the Governor and Cabinet, sitting as the Siting Board, issued a final orders approving certification of Units 1 & 2 and Unit 3 of the Pinellas County Resource Recovery Facility. Those certification order approved the construction and operation of a municipal solid waste-fired, resource recovery power plant and associated facilities located in Pinellas County, Florida. The certification has been previously modified by Department order on July 28, 1986, and July 29, 1996.

On September 15, and December 1, 1997, Pinellas County filed a request to amend the conditions of certification pursuant to Section 403.516(1)(b), Florida Statutes. Pinellas County requested that the conditions be modified to allow replacement of the flyash storage silo with two flyash surge bins; by adding EPA Method 26A for testing of hydrochloric acid emissions; by increasing the allowable size, NO_x emission factor, and permitted annual consumption of natural gas; and allowing construction of ventilation fans in ash handling and storage areas.

Copies of Pinellas County's proposed modifications were made available for public review on October 3, 1997, on which date a Proposed Modification of Power Plant Certification was also published in the Florida Administrative Weekly. On September 15, and December 8, 1997, all parties to the original proceeding were served by mail with copies of the intents to modify. The notice specified that a hearing would be held if a party to the original certification hearing objected within 45 days from receipt of the proposed modifications or if any other person, whose interests would be substantially affected, objected in writing within 30 days after issuance of the

public notice. No written objection to the proposed modifications has been received by the Department. Accordingly, in the absence of any timely objection,

IT IS ORDERED:

The proposed changes to the Pinellas County Resource Recovery Facility as described in its September 15, and December 1, 1997, requests for modification are APPROVED. Pursuant to Section 403.516(1)(b), F.S., the conditions of certification for the Pinellas County Resource Recovery Facility are **MODIFIED** as follows:

XIV.A.1. ~~The emissions limitations and other requirements contained in this subsection shall apply until the electrostatic precipitators in the Resource Recovery Facility are replaced with new air pollution control (APC) systems and compliance testing is completed. Thereafter, the emissions limitations and other requirements contained in subsection 2., below, shall apply.~~

~~a. Stack emissions from Units 1 or 2 shall not exceed the following:~~

~~(1) Particulate matter: in grains per dry standard cubic foot corrected to 12% CO_2 - 0.08.~~

~~(2) SO_2 - 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 Section 62-210.700, FAC, shall apply.~~

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

~~(1) Particulate matter: in grains per dry standard cubic foot corrected to 12% CO_2 - 0.03.~~

~~(2) SO_2 - 170 lbs/hr~~

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

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

~~(5) Lead - 4.4 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 - stack opacity shall be no greater than 20% except as provided for during start-up, shutdown or malfunctions when the provisions of Section 62-210.700, FAC, shall apply.

c. The height of the boiler exhaust stacks 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, opacity, sulfur oxides, nitrogen oxides, carbon monoxide, and lead shall be determined in accordance with Florida Administrative Code Rule 62-297, DEP Methods 1, 2, 3, 5, 6, 9, or 40 CFR Part 60, Appendix A, Methods 1-7, 9, 10, and 12. The stack test shall be performed at + 10% of the maximum steam rate of 250,000 pounds per hour.

g. Electrostatic Precipitator

(1) For Unit 3 the three-field electrostatic precipitator shall be designed and constructed to achieve a maximum emission rate of 0.03 grains per dscf or 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.

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

h. Air Monitoring Program

(1) The permittee shall install and operate continuously stack monitoring devices for oxygen and stack opacity. The monitoring devices shall meet the applicable requirements of Chapter 62-297, F.A.C., and 40 CFR 60.45, and 40 CFR 60.13, including certification of each device.

~~(2) The permittee shall provide sampling ports into the stack and shall provide access to the sampling ports in accordance with Chapter 62-297, FAC.~~

~~(3) 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 new boilers and annually from the date of testing thereafter.~~

~~(4) The permittee shall operate two continuous SO_2 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 DEP and shall conform to 40 CFR 53. Monitoring shall begin upon commencement of operation.~~

~~2.~~ The emissions limitations and other requirements contained in this subsection shall apply after the electrostatic precipitators in the Resource Recovery Facility are replaced with new air pollution control (APC) systems and compliance testing is completed.

a. Emission limits for each boiler are as follows:

(1) Particulate matter (PM) emissions shall not exceed 0.012 grains/dry standard cubic feet (gr/dscf) corrected to 7% O_2, 14.4 lbs/hr/unit, and 63.1 tons/yr/unit.

(2) PM emissions less than 10 microns in diameter (PM10) shall not exceed 0.012 gr/dscf corrected to 7% O_2, 14.4 lbs/hr/unit, and 63.1 tons/yr/unit.

(3) MWC Acid Gases

(a) Sulfur dioxide (SO_2) emissions shall not exceed <u>29</u> ~~31~~ parts per million by dry volume (ppmdv) corrected to 7% O_2 (24-hour daily geometric mean) or achieve 75% removal efficiency as a geometric mean value, whichever is less restrictive, with a not-to-exceed cap of 122 ppmdv corrected to 7% O_2; 0.372 lbs/MMBTU, 170.0 lbs/hr/unit, and 744.6 tons/yr/unit.

(b) Hydrogen chloride (HCl) emissions shall not exceed <u>29</u> ~~31~~ ppmdv corrected to 7% O_2, or achieve 95% removal efficiency, whichever is less restrictive, with a not-to-exceed cap of 100 ppmdv corrected to 7% O_2; 0.174 lbs/MMBTU, 79.8 lbs/hr/unit, and 349.5 tons/yr/unit.

(4) Carbon monoxide (CO) emissions shall not exceed 100 ppmdv corrected to 7% O_2 (4-hour arithmetic block average); 0.133 lbs/MMBTU, 61.0 lbs/hr/unit, and 267.2 tons/yr/unit.

(5) MWC Metals

(a) No Change.

(b) Lead (Pb) emissions shall not exceed 440 ~~490~~ μg/dscm corrected to 7% O_2; 5.0 ~~5.6~~ x 10^{-4} lbs/MMBTU, 0.230 ~~0.257~~ lbs/hr/unit, and 1.01 ~~1.13~~ tons/yr/unit.

(c) No Change.

(6) MWC Organics - No Change

(7) Nitrogen oxides emissions (measured as NO_2) shall not exceed 205 ~~200~~ ppmdv corrected to 7% O_2; or 0.450 ~~0.439~~ lb/MMBTU, 205.3 ~~200.3~~ lb/hr/unit, and 899.2 ~~877.3~~ tons/yr/unit. The permittee may request authorization from the Department to conduct nitrogen oxides emissions averaging pursuant to 40 CFR 60.33b.

(8) & (9) No Change.

b. Emissions Limitations for Minor Sources, after the retrofit is complete, are as follows:

(1) No Change

(2) The particulate matter emissions shall not exceed 0.005 gr/dscf from the outlets of the baghouses at the lime storage silos~~;~~ and two activated carbon storage silos ~~and the flyash storage silo~~. Pursuant to Section 62-297.620(4), F.A.C., the ---

(3) No Change

(4) The particulate matter emissions shall not exceed 0.03 gr.dscf from the outlet of the wet scrubber system at the ash conditioning building. Pursuant to Section 62-297.620(4), F.A.C., the particulate matter compliance test requirements are waived for this minor source and an alternative standard of 5% opacity shall apply. A visible emission reading greater than 5% does not create a presumption that the emission limit (i.e., in gr/dscf) is being violated, but would require the permittee to perform a stack test in accordance with EPA Methods contained in 40 CFR 60, Appendix A.

d. Operating Standards - No Change.

d. Compliance Requirements

(1-6) No Change.

(7) Hydrogen Chloride

Compliance with the hydrogen chloride (HCL) emission limits shall be determined

by USEPA Method 26 or 26A. The minimum sampling ---

(8) & (9) No change.

Any party to this Notice has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, M.S.35, Office of General Counsel, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the Notice of Appeal accompanied by the applicable filing fee with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date that this Final Order is filed with the Department of Environmental Protection.

DONE AND ENTERED this _____ day of _____, 1998 in Tallahassee, Florida.

STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION

_____

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

RECEIVED
DEC 11 1997
BUREAU OF
AIR REGULATION

HDR

December 1, 1997

Mr. Hamilton S. Oven, Jr., Administrator
Florida DEP Office of Siting Coordination, Mail Station 48
2600 Blair Stone Road, Twin Towers Office Building
Tallahassee, FL 32399-2400

RE: Site Certification, Pinellas County Resource Recovery Facility Units 1-3
Certification No. PA 78-11 and PA 83-18

Dear Mr. Oven:

In our September 15th letter to you concerning modifications to the Pinellas County Resource Recovery Facility (PCRRF) retrofit project, we mentioned that we would also be applying to modify the PPSA Conditions of Certification in accordance with the U.S. EPA Direct Final Rule (DFR) published in the August 25, 1997 Federal Register (62 FR 45115) for large Municipal Waste Combustor (MWC) units. The August 25, 1997 publication amends and revises the 40 CFR 60 Subpart Cb Emission Guidelines (EG) consistent with the March 1997 remand by the United States Court of Appeals for the District of Columbia (see Davis County Solid Waste Management and Energy Recovery Special Service District, et al. v. U.S. EPA, Case 95-1611). With the following exceptions, nearly all of the requirements in the original December 19, 1995 Subpart Cb EG (60 FR 65387) for large MWC plants were retained in the August 25, 1997 DFR for large MWC units.

Pollutant	December 19, 1995 Emission Limitation	August 25, 1997 Emission Limitation
Lead (Pb)	490 ug/dscm at 7% O_2	440 ug/dscm at 7% O_2
Sulfur dioxide (SO_2)	31 ppmdv at 7% O_2 or 75% control	29 ppmdv at 7% O_2 or 75% control
Hydrogen chloride (HCl)	31 ppmdv at 7% O_2 or 95% control	29 ppmdv at 7% O_2 or 95% control
Nitrogen Oxides (NO_x)	200 ppmdv at 7% O_2	205 ppmdv at 7% O_2[a]

As can be seen, the new EG emission limits are more stringent for Pb, SO_2, and HCl and less stringent (for mass burn waterwall combustors) for NO_x.

[a]For mass burn waterwall combustors like the PCRRF units.

HDR Engineering, Inc.
Suite 300
5100 W. Kennedy Boulevard
Tampa, Florida
33609-1840
Telephone
813 287-1960

Compliance with the August 25, 1997 Pb, SO_2, and HCl limits based on the U.S. EPA schedule must be achieved by August 26, 2002 or three years after approval of a State plan implementing these revised limits, whichever occurs first. For NO_x, U.S. EPA will approve State plans that include the less restrictive NO_x limit prior to the effective date of the August 25, 1997 EG. The Florida State plan revisions for the December 19, 1995 EG emission limits was approved by U.S. EPA on November 13, 1997 (62 FR 60785), so compliance with these EG emission limits for Pb, SO_2, and HCl (as well as all other pollutants) must be achieved by November 14, 2000.

As part of the current permitting action, we are therefore requesting additional revisions to the PPSA Conditions of Certification consistent with the August 25, 1997 DFR. Attached are these additional requested revisions to the PPSA Conditions of Certification, as well as the revisions requested in our September 15th letter. We are proposing to retain the originally promulgated December 19, 1995 EG emission limits for Pb, SO_2, and HCl until the effective date of the August 25, 1997 EG emission limits for these pollutants.

In addition, we would like to respond to the outstanding agency comment concerning this permit application (see October 15, 1997 memorandum to Buck Oven from Syed Arif through A. A. Linero). In that memo, it noted that contemporaneous emissions increases from the auxiliary boiler, together with the proposed increase in auxiliary burner emissions, would exceed 40 tons/year for NO_x. However, this calculation fails to recognize the substantial contemporaneous decrease in facility NO_x emissions which will occur as a result of adding selective non-catalytic reduction (SNCR) systems to the main facility combustors. Stack tests[b] for the two most recent years averaged 260 ppmdv corrected to 7% O_2. The August 25, 1997 EG specify a NO_x emission limit of 205 ppmdv corrected to 7% O_2, which represents a decrease in combustor NO_x emissions of more than 20%. The last two years of facility operating data[c] show the three units average about 7000 hours/unit/year of operation. Thus, the contemporaneous decrease in actual annual NO_x emissions due to installation of SNCR systems are as follows:

$$\frac{(260 - 205)\ parts}{1000000} \times \frac{87396\ dscf}{mins} \times \frac{46\ lbs}{mole} \times \frac{0.0025956\ moles}{dscf}$$

$$\times \frac{60\ mins}{hour} \times \frac{7000\ hours}{unit \cdot year} \times \frac{ton}{2000\ lbs} \times 3\ units = \frac{362\ tons}{year}$$

---

[b]The past two years of stack tests for Unit 3 (the only unit with NO_x compliance tests) showed NO_x emissions of 272 ppmdv at 74,606 dscfm during the March 11-13, 1997 tests and 248 ppmdv at 100,185 dscfm during the March 11-15, 1996 tests (all concentrations and flowrates corrected to 7% O_2). Since Units 1 and 2 are identical to Unit 3, actual average NO_x emissions are expected to be 260 ppmdv for an average flowrate of 87,396 dscfm corrected to 7% O_2 for all three units.

[c]As presented in the annual emission statements, the hours of operations for Units 1, 2, and 3 were 6533, 6888, and 7458 hours in 1996 and 6416, 6983, and 7710 hours in 1995, respectively. Thus, average hours of operation were 6960 and 7036 hours/unit/year in 1996 and 1995, respectively.

The contemporaneous decrease in actual facility NO_x emissions due to installation of the SNCR systems is far greater than any contemporaneous increases due to the addition of the auxiliary boiler and the auxiliary burners. Thus, the overall impact of the PCRRF retrofit project and the auxiliary boiler will be a substantial decrease in actual facility NO_x emissions, which would be expected for a pollution control project.

If you have any questions, please feel free to contact me at 813/464-7527 or William E. Corbin of RTP Environmental Associates at 732/968-9600.

Sincerely,

HDR Engineering, Inc.

RP Stasis

R. Peter Stasis, P.E.
Florida Registration Number 46220
Vice President

Attachments

cc: M.Rudd
R.Menke
P.Talley
D.Dee
L.Koon(2)
D.Elias/W.Corbin
HDR(2)
PINCO Solid Waste(2)
M.Hewitt/S.Arif/A.A.Linero

CERTIFICATE OF SERVICE

I HEREBY CERTIFY this 8th day of December 1997, that a true and correct copy of the foregoing has been sent by Certified Mail to the following listed persons:

Hamilton S. Oven, Jr., P.E., Administrator
FDEP Office of Siting Coordination
Mail Station 48
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, FL 32399-2400

Brian Beals
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, GA 30365

Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, FL 34616

Pinellas County Building Trades Council
c/o G. Wallace
2165 Country Club Court North
St. Petersburg, FL 33710

Paul Darst
Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399

Plumbers and Pipe Fitters Local Union No. 111
c/o Fred Stiles
4020 80th Avenue North
Pinellas Park, FL 33565

Sonny Vergara, Executive Director
SWFWMD
2379 Broad Street
Brooksville, FL 34609-6899

Bob Elias, Esquire
Office of General Council
Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

City of Pinellas Park
Edward Foreman & Associates
City Attorney
100 Second Avenue North
Suite 300
St. Petersburg, FL 33701

Roger Tucker
Tampa Bay Regional Planning Council
9455 Koger Boulevard, Suite 219
St. Petersburg, FL 33702-2491

Mayor Cecil Bradbury
City of Pinellas Park
Post Office Box 1100
Pinellas Park, FL 34664-1100

Jim Antista
FG&FWFC
620 South Meridian Street
Tallahassee, FL 32399

R. Peter Stasis

R. Peter Stasis, P.E.
HDR Engineering Inc.
5100 West Kennedy Blvd., Suite 300
Tampa, FL 33609
(813)464-7527

Revisions for 8/25/97 Direct Final Rule (DFR)

(a) Sulfur dioxide (SO_2) emissions shall not exceed 31 parts per million by dry volume (ppmdv) corrected to 7% O_2 (24-hour daily geometric mean)** or achieve 75% removal efficiency as a geometric mean value, whichever is less restrictive, with a not-to-exceed cap of 122 ppmdv corrected to 7% O_2; 0.372 lbs/MMBTU, 170.0 lbs/hr/unit, and 744.6 tons/yr/unit.

**Insert
[29 ppmdv corrected to 7% O_2 (24-hour daily geometric mean) after the effective date of the August 25, 1997 EG limits]

(b) Hydrogen chloride (HCl) emissions shall not exceed 31 ppmdv corrected to 7% O_2,** or achieve 95% removal efficiency, whichever is less restrictive, with a not-to-exceed cap of 100 ppmdv corrected to 7% O_2; 0.174 lbs/MMBTU, 79.8 lbs/hr/unit, and 349.5 tons/yr/unit.

**Insert
[29 ppmdv corrected to 7% O_2 after the effective date of the August 25, 1997 EG limits]

(4) Carbon monoxide (CO) emissions shall not exceed 100 ppmdv corrected to 7% O_2 (4-hour arithmetic block average); 0.133 lbs/MMBTU, 61.0 lbs/hr/unit, and 267.2 tons/yr/unit.

(5) MWC Metals

(a) Mercury (Hg) emissions shall not exceed 70 micrograms/dry standard cubic meter (g/dscm) corrected to 7% O_2 or achieve 85% control, whichever is less restrictive, with a not-to-exceed cap of 100 μg/dscm corrected to 7% O_2, 1.2×10^{-4} lb/MMBTU, 5.24×10^{-2} lbs/hr/unit, and 0.23 tons/yr/unit.

(b) Lead (Pb) emissions shall not exceed 490 μg/dscm corrected to 7% O_2; 5.6×10^{-4} lbs/MMBTU, 0.257 lbs/hr/unit, and 1.13 tons/yr/unit.**

**Insert
After the effective date of the August 25, 1997 EG limits, Pb emissions shall not exceed 440 ug/dscm correct to 7% O_2, 5.0×10^{-4} lbs/MMBTU, 0.230 lbs/hr/unit, and 1.01 tons/yr/unit.

(c) Cadmium (Cd) emissions shall not exceed 40 μg/dscm corrected to 7% O_2; 4.6×10^{-5} lbs/MMBTU, 0.021 lbs/hr/unit, and 0.092 tons/yr/unit.

(6) MWC Organics

The polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzo-furans (PCDF) emissions shall not exceed 30 nanograms per dry standard cubic meter (ng/dscm) total mass corrected to 7% O_2; 3.44×10^{-8} lbs total mass/MMBTU, 1.6×10^{-5} lbs/hr/unit and 6.9×10^{-5} tons/yr/unit.

(7) Nitrogen oxides emissions (measured as NO_2) shall not exceed ~~200~~ 205 ppmdv corrected to 7% O_2; or ~~0.439~~ 0.450 lb/MMBTU, ~~200.3~~ 205.3 lb/hr/unit, and ~~877.3~~ 899.2 tons/yr/unit. The permittee may request authorization from the Department to conduct nitrogen oxides emissions averaging pursuant to 40 CFR 60.33b.

Revision for 8/25/97 DFR

(8) The opacity level in the stack shall not exceed 10% (six minute block average).

(9) The emission limitations for the modified Facility are based on the compliance methods specified for each pollutant. Any change in the specified compliance method for any pollutant may result in appropriate changes to the emission limitation for the pollutant.

b. Emissions Limitations for Minor Sources, after the retrofit is complete, are as follows:

(1) Visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) shall not occur in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period). This visible emissions limitation shall not apply during maintenance and repair of the ash conveying system.

(2) The particulate matter emissions shall not exceed 0.005 gr/dscf from the outlets of the baghouses at the lime storage silo and two activated carbon storage silos ~~and the fly ash storage silo~~. Pursuant to Section 62-297.620(4), FAC, the particulate matter compliance test requirements are waived for these minor sources and an alternate standard of 5% opacity shall apply. A visible emission reading

Revisions to delete flyash silo

greater than 5% opacity does not create a presumption that the emission limit (i.e., in gr/dscf) is being violated, but would require the permittee to perform a particulate stack test in accordance with EPA Methods contained in 40 CFR 60, Appendix A.

(3) The particulate matter emissions shall not exceed 0.0102 gr/dscf from the outlet of the cyclone/wet scrubber system at the metals recovery system. Pursuant to Section 62-297.620(4), FAC, the particulate matter compliance test requirements are waived for this minor source and an alternate standard of 5% opacity shall apply. A visible emission reading greater than 5% opacity does not create a presumption that the emission limit (i.e., in gr/dscf) is being violated, but would require the permittee to perform a particulate stack test in accordance with EPA Methods contained in 40 CFR 60, Appendix A.

(4) The particulate matter emissions shall not exceed 0.03 gr/dscf from the outlet of the wet scrubber system at the ash conditioning building. Pursuant to Section 62-297.620(4), FAC, the particulate matter compliance test requirements are waived for this minor source and an alternative standard of 5% opacity shall apply. A visible emission reading greater than 5% opacity does not create a presumption that the emission limit (i.e., in gr/dscf) is being violated, but would require the permittee to perform a particulate stack test in accordance with EPA Methods contained in 40 CFR 60, Appendix A.

c. Operating Standards

(1) After the modifications to the Resource Recovery Facility are complete, the height of the boiler stack shall not be less than 165 feet above the ground level at the base of the stack.

(2) Each MWC unit shall be allowed to operate up to 110% of the unit's maximum demonstrated load capacity, as achieved during the most recent dioxin/furan compliance test. Maximum capacity shall be based on the steam (or feedwater) flow rate, which shall be continuously monitored according to the American Society of Mechanical Engineers (ASME) Power Test Code (PTC) for Steam Generating Units (PTC 4.1 and PTC 19.5) or as required by USEPA and/or FDEP regulations.

(3) 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.

(4) A Facility-specific maximum flue gas temperature at

emission concentration with the CEM system during each 24-hour daily period corrected to 7% O_2, measured between 12:00 midnight and the following midnight. At least two data points shall be used to calculate the one-hour arithmetic average. The CEM installation, evaluation, and operation shall follow the procedures set forth in 40 CFR 60.13. The CEM shall be operated according to Performance Specification 2 in 40 CFR 60, Appendix B. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 in 40 CFR 60, Appendix F. The initial evaluation shall be completed within 180 days of the initial start-up

(7) Hydrogen Chloride

Revision for HCl test method

Compliance with hydrogen chloride (HCl) emission limits shall be determined by USEPA Method 26 or 26A. The minimum sampling time shall be one hour. A minimum of three test runs shall be conducted under representative full load operating conditions. The average of these test runs shall be used to determine compliance. Oxygen measurement shall be obtained simultaneously with each test run. Initial compliance tests shall be conducted within 60 days after achieving maximum operating capacity, but no later than 180 days after start-up. Thereafter, annual performance tests shall be conducted to verify compliance.

(8) Dioxins/Furans

Compliance with emission limits for dioxin/furan shall be determined by USEPA Method 23. The minimum sample time for each test run shall be four hours. Oxygen measurement shall be obtained simultaneously with each test run. A minimum of three test runs shall be conducted under representative full load operating conditions. The average of these test runs shall be used to determine compliance. The initial compliance test shall be conducted within 60 days after achieving maximum operating capacity, but no later than 180 days after

Florida Department of
Environmental Protection

Memorandum

TO: Buck Oven, Siting Coordination Office

THRU: A. A. Linero, P.E. Administrator A A Linero 10/15

FROM: Syed Arif, Review Engineer SA

DATE: October 15, 1997

SUBJECT: Pinellas County Resource Recovery Facility Units 1-3, PA 78-11 and PA 83-18, Module 8021 Modification

The Bureau of Air Regulation has found the permit application to revise the PPSA Conditions of Certification for the retrofit project as stated in their letter dated September 15, 1997, to be insufficient. The facility needs to explain why the auxiliary boiler's NO_x emissions (39.20 TPY) were not included in the contemporaneous emissions changes, thus making the auxiliary burners for the incinerators PSD significant. This was suggested to the facility in our letter of July 2, 1996 when the auxiliary boiler was being permitted. A copy of the letter is being attached.

The Bureau will review the above request after receiving the response for the above mentioned query.

SA/a

Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

July 2, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

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

Re: Auxiliary Boiler - Pinellas County Resource Recovery Facility
PA 78-11 and PA 83-18

Dear Mr. Menke:

This is to acknowledge that the Department has reviewed your application dated April 1 for the auxiliary boiler and determined that a PSD permit is not necessary and that the existing PSD permits do not need to be revised. This is because the emissions are less than significant with respect to PSD applicability. Additionally the unit is a minor source at a certified site. Therefore preconstruction review can be accomplished during the course of the site certification modification.

At this time, we are reviewing a draft Final Order prepared by the Power Plant Site Certification Office. We are incorporating some conditions in the Final Order to insure the emissions limits for the auxiliary boiler are enforceable to insure PSD does not apply. Approval of the Final Order will constitute issuance of the necessary authorizations with respect to preconstruction review for a minor source.

If there are future increases in emissions due to other projects, the increases from the auxiliary boiler would need to be considered in a netting calculation for contemporaneous emissions changes. At that time, the auxiliary boiler would need to be included in a PSD permit if the net contemporaneous emissions are significant.

If you have any questions regarding this matter, please call Syed Arif at (904)488-1344.

Sincerely,

A. A. Linero, P.E Administrator
New Source review Section

AAL/aal/l

cc: H. Oven, DEP
P. Hessling, PCDEM
D. Dee, L&P

(2) Kim - Pinellas RRF file

PINELLAS COUNTY RESOURCE RECOVERY FACILITY
AIR POLLUTION CONTROL RETROFIT PROJECT
14 S. FORT HARRISON AVE. 5TH FLOOR
CLEARWATER, FL 33756
PHONE: (813) 464-4913
FAX: (813) 464-3020

October 10, 1997

Winston Smith
Director, Division of Air, Pesticides and Toxics Management
United States Environmental Protection Agency
345 Courtland Avenue, NE
Atlanta, Georgia 30365

RE: Pinellas County Resource Recovery Facility

Dear Mr. Smith:

Enclosed for your information is a Quarterly Report on project progress. Should you desire any additional information, please contact me at your convenience.

Sincerely,

Russell Menke
Project Administrator

Enclosure

cc: Brian Beals, USEPA
Scott Davis, USEPA
Fred Porter, USEPA
Walt Stevenson, USEPA
Clair Fancy, FDEP
Andrew Nguyen, FDEP
Bill Thomas, FDEP
Pick Talley, Utilities Administration
Mike Rudd, Solid Waste Operations
Julie Yard, Senior Assistant County Attorney
David Dee, Landers & Parsons
Pete Stasis, HDR Engineering
Stu Broom, Verner, Liipfert et al
Luke Koon, Wheelabrator Pinellas Inc.
Phil Castellano, Stone & Webster

Pinellas County Resource Recovery Facility
Air Pollution Control Retrofit Project

Quarterly Report on Project Progress for the Third Quarter, 1997
Submitted October, 1997

Overview

This Quarterly Report for the retrofit of the Pinellas County Resource Recovery Facility covers the County's activities during the third calendar quarter of 1997 on the retrofit project. In general, the County' overall progress with the retrofit activities have been in accordance with the schedule. Detailed descriptions of the efforts completed, underway and scheduled for the next quarter are presented in the following paragraphs.

Actions Taken During Reporting Period

Water Washing of Boilers - Historically, water washing of boilers had been done on approximately a ten week schedule. Since August of 1995, these washes have been done on approximately an eight week schedule.

Design of the Retrofit - Design work on the air pollution control (APC) equipment by Wheelabrator Air Pollution Control (WAPC) was substantially completed, and design of the balance of plant (BOP) by Stone & Webster Engineering Corporation (SWEC) continued. Significant changes were made to SWEC's scope of work during the reporting period, to reflect changes made to the project since the design contract was negotiated in early 1996. These changes were required by (a) finalization of agreements with Wheelabrator Pinellas Inc. (WPI) for the construction and operation of the retrofit, (b) subsurface conditions and foundation requirements, and (c) design developments to improve the Facility and/or reduce construction costs. SWEC's authorized scope was increased by approximately 30%. By the end of the reporting period, SWEC's design work, including authorized scope additions, was 87% complete.

Procurement of Equipment and Construction Contracts - During the reporting period, bids have been received for a total of 10 packages for Balance of Plant materials, equipment and construction services, for a cumulative of 45 packages bid through the end of September. Following completion of bid evaluations, purchase orders were issued for 15 packages, for a cumulative of 35 packages through the end of September. Purchase orders were issued during the reporting period for the following: field-erected contact water tank; inlet duct expansion joints; fly ash screw conveyors; fly ash drag conveyors; double dump valves and slide gates; fly ash conditioning system; temporary power distribution panels; sump pumps; fly ash scrubber; erection of the inlet duct, outlet duct, MCC/Compressor building, pipe rack and windskirt steel; electrical equipment required for October/November outage; phosphoric acid tank; motor control centers; temporary power installation; and boiler modifications.

On-Site Construction of the Retrofit - During the reporting period, one additional contractor mobilized on site (structural steel erection), and two contractors have demobilized (MRS demolition and augered cast piles).

Relocation of underground utilities has been nearly completed, and the installation of piling for Phase I has been completed (715 piles for the Unit #3 SDA/FF, Unit #3 ID fan, stack, contact water tank, ash conditioning building, MCC/Compressor building and common equipment). Foundations have been completed for the Unit #3 SDA and the stack. Foundation work is underway on the Unit #3 Fabric Filter and the contact water tank. Sheet piling for the contact water sump has been installed, and dewatering is underway.

Structural steel to support the Unit #3 SDA has been erected, and the cone and bottom ring of the Unit #3 SDA has been field assembled.

Actions Scheduled During the Next Reporting Period

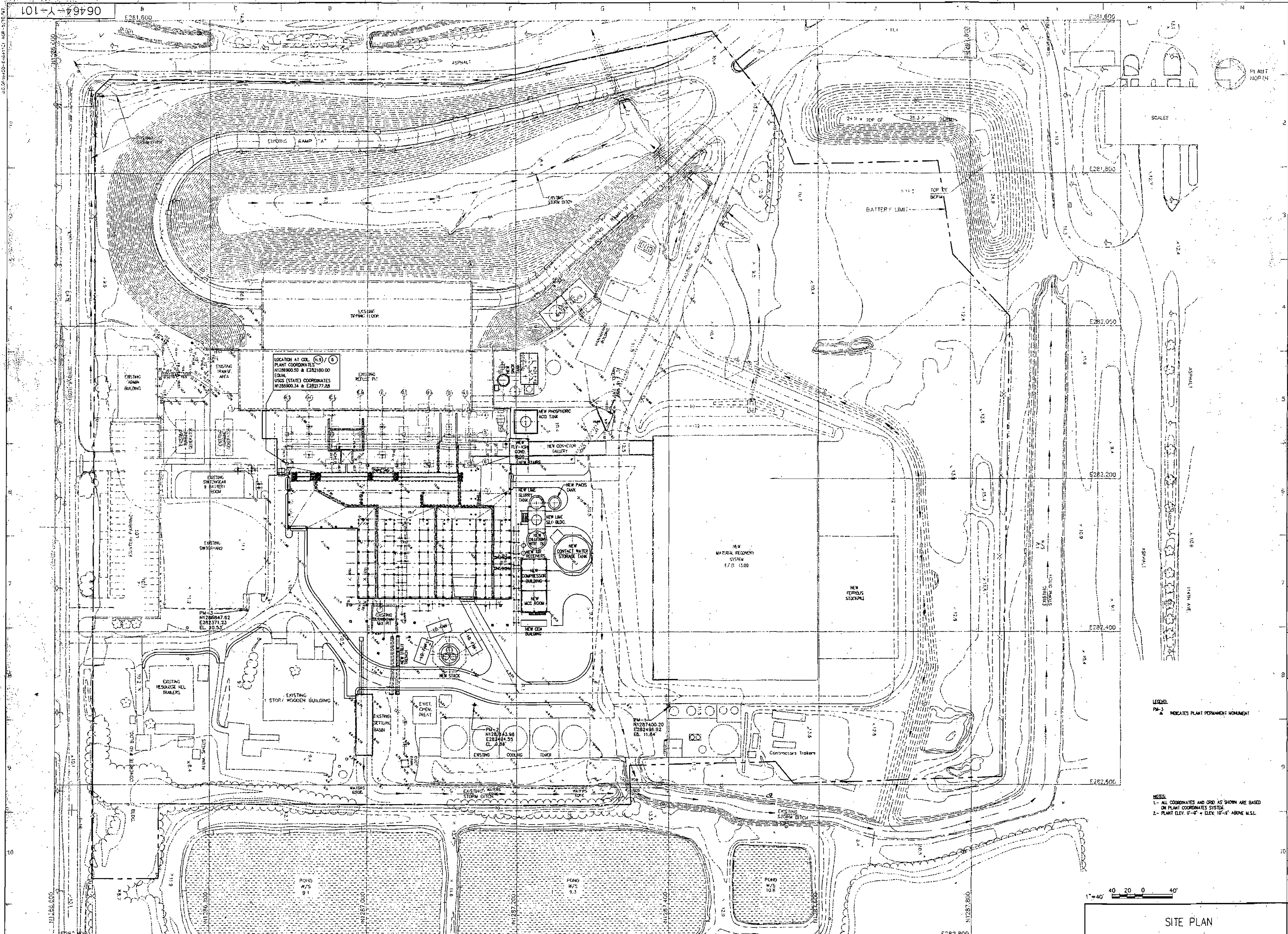
During the next reporting period, efforts will be concentrated on design of the retrofit, fabrication and delivery of air pollution control equipment, modifications to boiler Unit #1, and onsite construction activities. Monthly meetings are being held to monitor progress and review specifications and plans for the Retrofit as those documents are being prepared. Weekly on-site construction meetings are being held with contractors to monitor and coordinate activities.

The following activities are expected to be completed during the next reporting period:

- Construction of contact water sump
- Completion of most concrete work for Unit #3, including pile caps, footings and floor slab under fabric filter area
- Erection of #3 SDA
- Erection of #3 Fabric Filter support steel and modules
- Erection of inlet ductwork from #3 boiler to SDA
- Erection of contact water storage tank
- Completion of Unit #1 boiler modifications
- Installation of new 480V and 4160V transformers.

Respectfully Submitted,

Russell Menke
Retrofit Project Administrator



LEGEND:

PM-3 ▲ INDICATES PLANT PERMANENT MONUMENT

NOTES:

1.- ALL COORDINATES AND GRID AS SHOWN ARE BASED ON PLANT COORDINATES SYSTEM.
2.- PLANT ELEV. 0'-0" = ELEV. 10'-9" ABOVE M.S.L.

ISSUE	DESCRIPTION	CHECKED / CORRECT	APPR / DATE
3 C	ISSUE FOR REFERENCE GENERAL UPDATE	S.C.B. 5/13/97	P.Y 5/13/97
2 B	ISSUE FOR REFERENCE PILING BID PACKAGE ONLY	S.C.B. 1/23/97	P.Y 1/23/97
A	ORIGINAL ISSUE FOR REVIEW AND COMMENTS	S.C.B. 12/23/96	P.Y 12/23/96

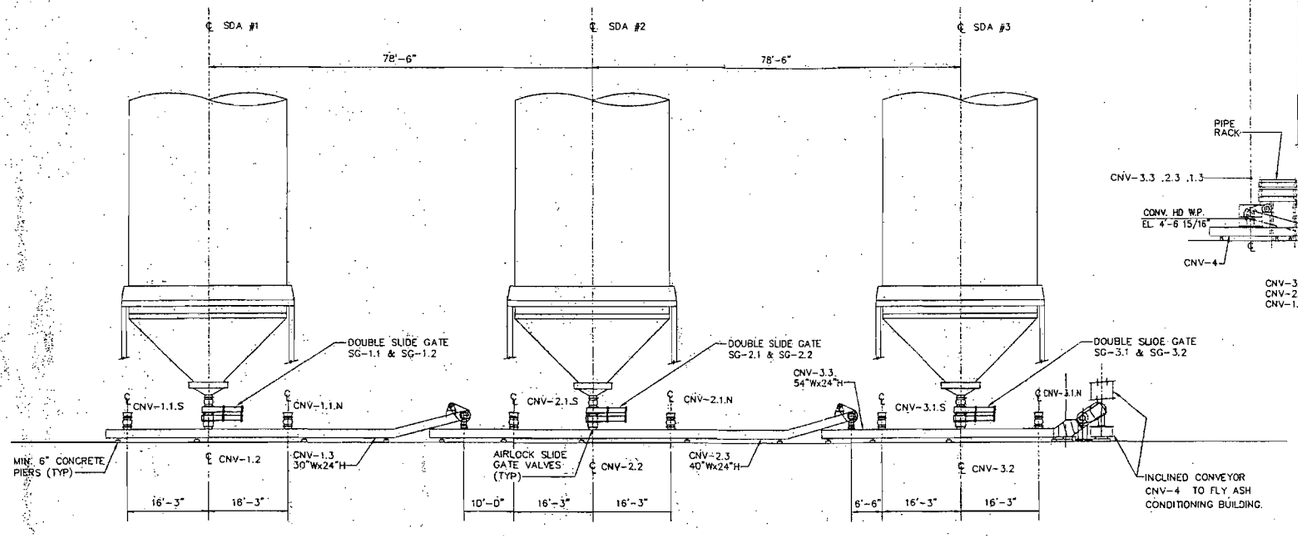
SITE PLAN

PINELLAS COUNTY RESOURCE RECOVERY FACILITY - APC RETROFIT PROJECT

STONE & WEBSTER ENGINEERING CORPORATION
NEW YORK, NEW YORK

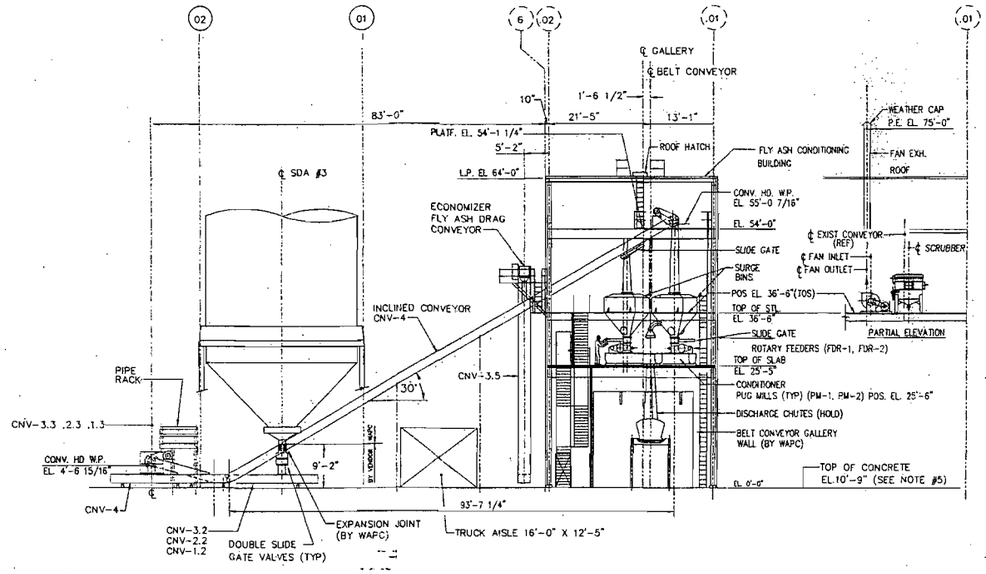
DRAWING NUMBER 06464-Y-101-C

DESIGNED BY A. RODRIGUEZ — DRAWN BY A. RODRIGUEZ
DESIGN CHKD BY S. BAPAT — CHKD BY S. BAPAT



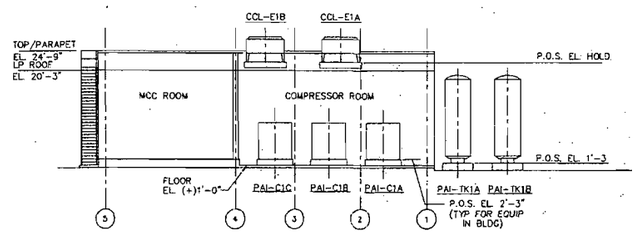
SECTION C-C (DWG-M-01)

VIEW LOOKING WEST



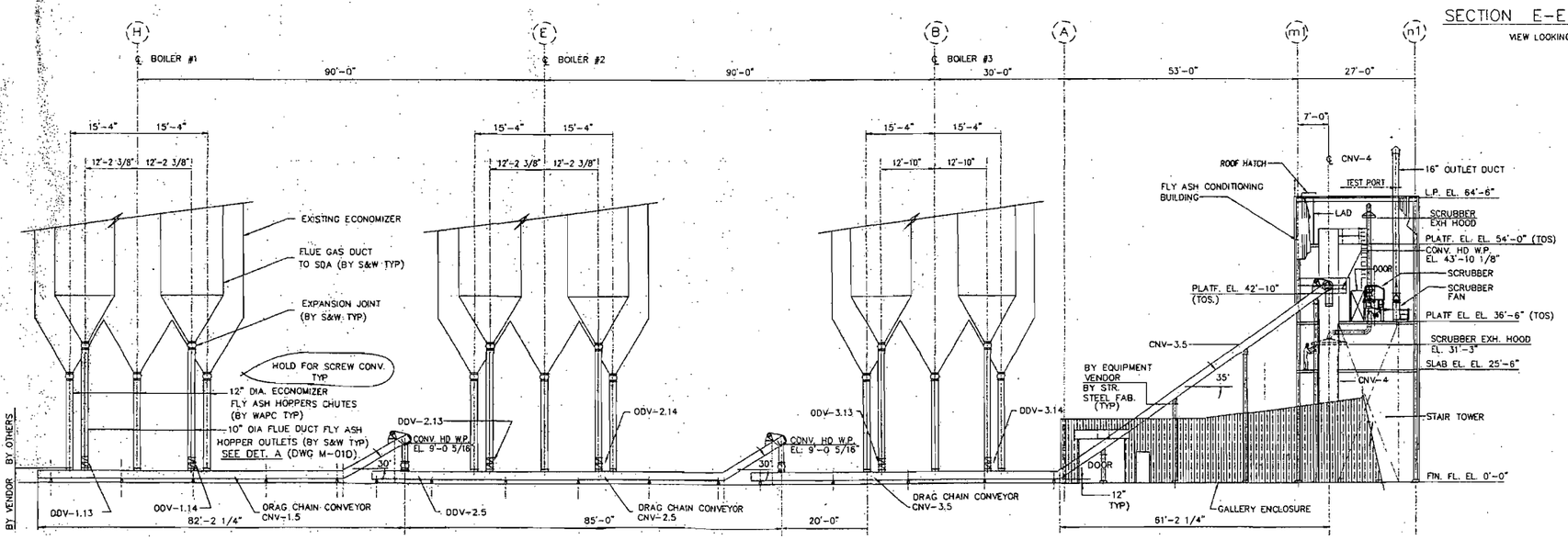
SECTION A-A (DWG-M-01)

VIEW LOOKING SOUTH



SECTION E-E (DWG-M-01)

VIEW LOOKING SOUTH



SECTION D-D (DWG-M-01)

VIEW LOOKING WEST

NOTES.

1. REFERENCE FLY ASH SYSTEM DRAWINGS:
   06464-M-01----PLOT PLAN
   06464-J-04----P&I DIAGRAM FLY ASH HANDLING SYSTEM 04A & 04B
   06464-M-01A THRU 01D MECHANICAL ARRANGEMENTS SECTIONS & DETAILS
2. FOR FLY ASH SYSTEM VALVE AND EQUIPMENT NUMBERS SEE DRAWING 06464-J-04.
3. DIMENSIONS SHOWN BETWEEN FLOORS ARE APPROXIMATE AND SHOULD BE DETERMINED BY THE FLY ASH CONDITIONING SYSTEM MANUFACTURER
4. DIMENSION IS APPROXIMATE. THE SYSTEM MANUFACTURER SHALL DETERMINE THIS DIMENSION IN THE FIELD TO CLEAR THE CONVEYOR GALLERY'S ROOF.
5. ELEVATION 10'-9" EQUALS PLANT ELEVATION 0'-0"

3/32"=1'-0" 8 6 4 2 0 8

ISSUE	DESCRIPTION	CHECKED
		CORRECT
		APPR DATE

ISSUE	DESCRIPTION	CHECKED
D	GENERAL UPDATE. UPDATED FLY ASH COND. BLD'G. ARRGT., AND SCREW CONVEYOR PER VENDOR DRAWING ADDED SECTION E-E	CORRECT
		APPR DATE

ISSUE	DESCRIPTION	CHECKED
C	ISSUED FOR MECHANICAL EQUIPMENT ERECTION 60%	CORRECT
		APPR DATE

ISSUE	DESCRIPTION	CHECKED
B	60% DESIGN STAGE	CORRECT
		APPR DATE

ISSUE	DESCRIPTION	CHECKED
A	30% DESIGN STAGE	CORRECT
		APPR DATE

SECTIONS AND DETAILS SHT.1

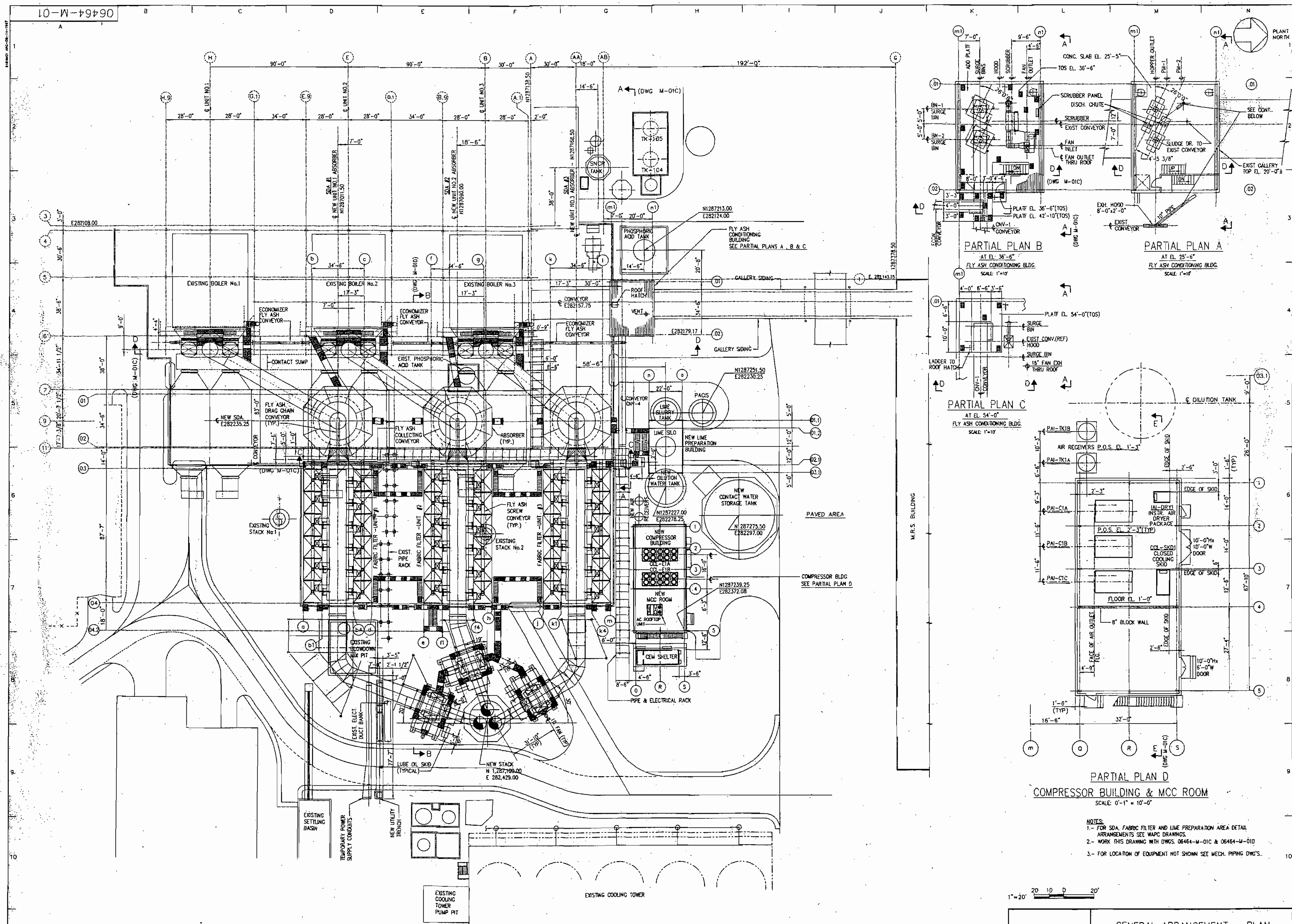
PINELLAS COUNTY RESOURCE RECOVERY FACILTY - APC RETROFIT PROJECT

STONE & WEBSTER ENGINEERING CORPORATION
NEW YORK, NEW YORK

DRAWING NUMBER 06464-M-01C-D

DESIGNED BY R.VIANCAPELLE | DRAWN BY R.VIANCAPELLE | CHKD BY | AREAS | LEVELS | WORK PKG | PCT

ISSUE | HALF SIZE APC CARD | RESP ENGR SUPV



NOTES:

1.- FOR SDA, FABRIC FILTER AND LIME PREPARATION AREA DETAIL ARRANGEMENTS SEE WAPC DRAWINGS.

2.- WORK THIS DRAWING WITH DWGS. 06464-M-01C & 06464-M-010

3.- FOR LOCATION OF EQUIPMENT NOT SHOWN SEE MECH. PIPING DWG'S..

ISSUE	DESCRIPTION	APPR	DATE
E	GENERAL UPDATE, MODIFIED FLY ASH BLD'G. ARRG'T. AND ADDED PARTIAL PLANS		
D	ISSUED FOR MECHANICAL EQUIPMENT ERECTION BIDS.		
C	60% DESIGN STAGE	P.Y.	2/10/97
B	30% DESIGN STAGE FOR FLY ASH SYSTEM BID PACKAGE	P.Y.	11/14/96
A	30% DESIGN STAGE FOR SDA/FF LOCATION	P.Y.	9/27/96

GENERAL ARRANGEMENT - PLAN

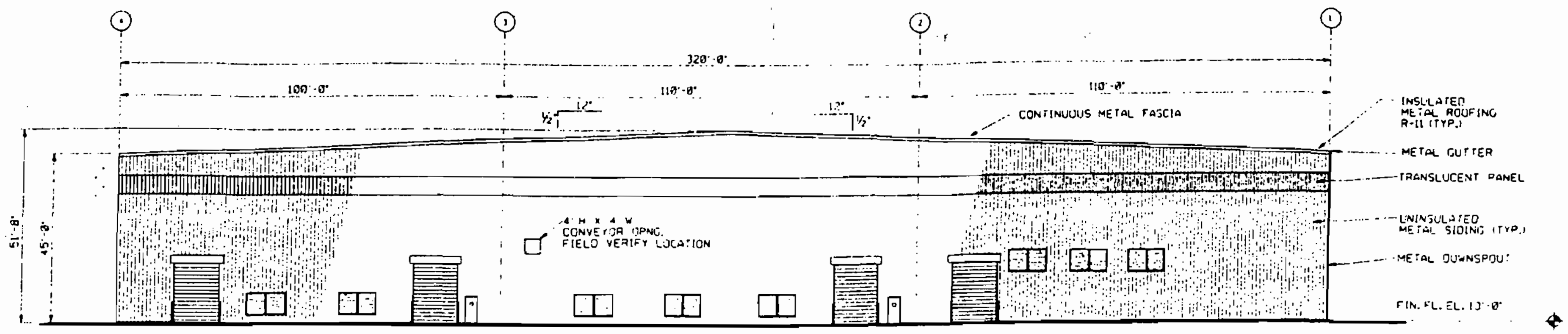
PINELLAS COUNTY RESOURCE RECOVERY FACILTY - APC RETROFIT PROJECT

STONE & WEBSTER ENGINEERING CORPORATION
NEW YORK, NEW YORK

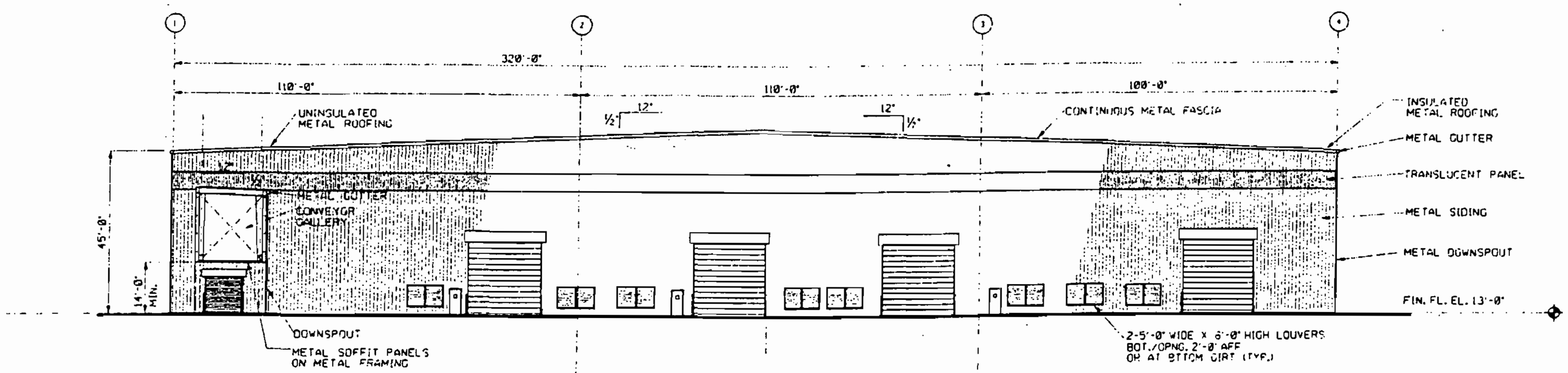
DRAWING NUMBER 06464-M-01A-E

DESIGNED BY P.Y. DRAWN BY A. RODRIGUEZ
DESIGN CHKD BY CHKD BY

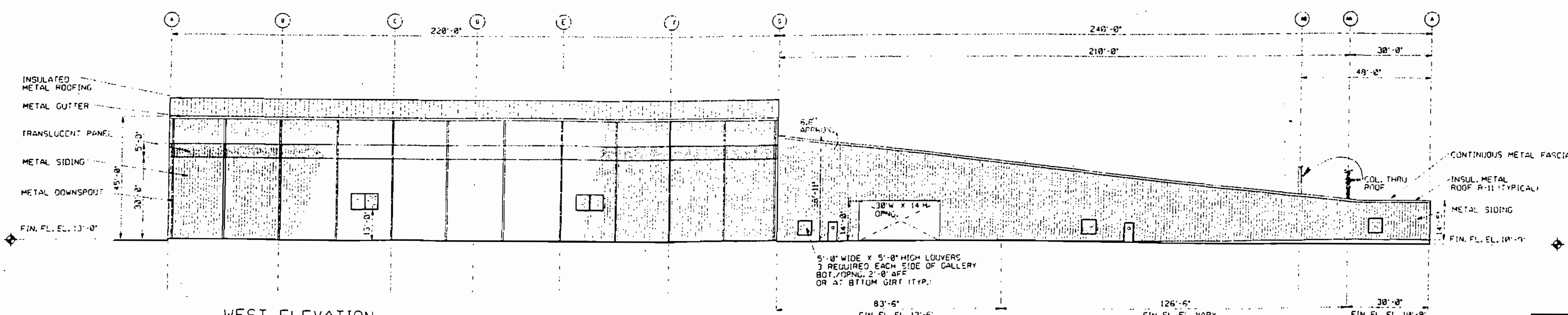
Best Available Copy



NORTH ELEVATION



SOUTH ELEVATION



WEST ELEVATION

GENERAL NOTES:

1. LOUVERS FOR ASH STORAGE & PROCESS BUILDING SHALL BE 6" DEEP, OPERABLE BLADE, WEATHERPROOF 16 SQ.FT. FREE AREA PER LOUVER FOR 5' WIDE x 6' HIGH. MANUAL OPERATION WITH BIRD SCREEN. TWO LOUVERS SIDE BY SIDE EACH LOCATION SHOWN TOTAL 40 LOUVERS.
2. ALL DOWNSPOUTS TO DRAIN INTO AN UNDERGROUND STORM SYSTEM OR AS SHOWN ON CIVIL DRAWINGS
3. GUTTERS TO SLOPE MINIMUM 1/16" PER FOOT TO DOWNSPOUTS
4. SEE STRUCT. DWGS. FOR FOUNDATION PLAN AND DETAILS
5. BUILDING CONTRACTOR SHALL DETERMINE THE SIZE AND QUANITITY OF GUTTERS AND DOWNSPOUTS.

PINELLAS COUNTY MRS/ASPB
Transmittal No. 185
Project No. 01617-188-096 MWE 43
Date Received: 8-6-96
Internal Comments Due:
Distribution:
☐RPS ☐JEB
☐RDL ☐PR
☐WBE ☐
Comment File Name:
See Transmittal #130

RELEASED FOR CONSTRUCTION
BY [signature] DATE 4-17-96

WHEELABRATOR ENVIRONMENTAL SYSTEMS Hampton, New Hampshire

SCALE: 1/16"=1'-0		DATE
DESIGN	[signature]	01/24/96
DRAWN BY	[signature]	01/29/96
CHECKED BY	[signature]	4/6/96
SUP. BY	[signature]	4/16/96
SUBM'TD BY	[signature]	4/17/96
APP'D BY		
APP'D BY		
APP'D BY		

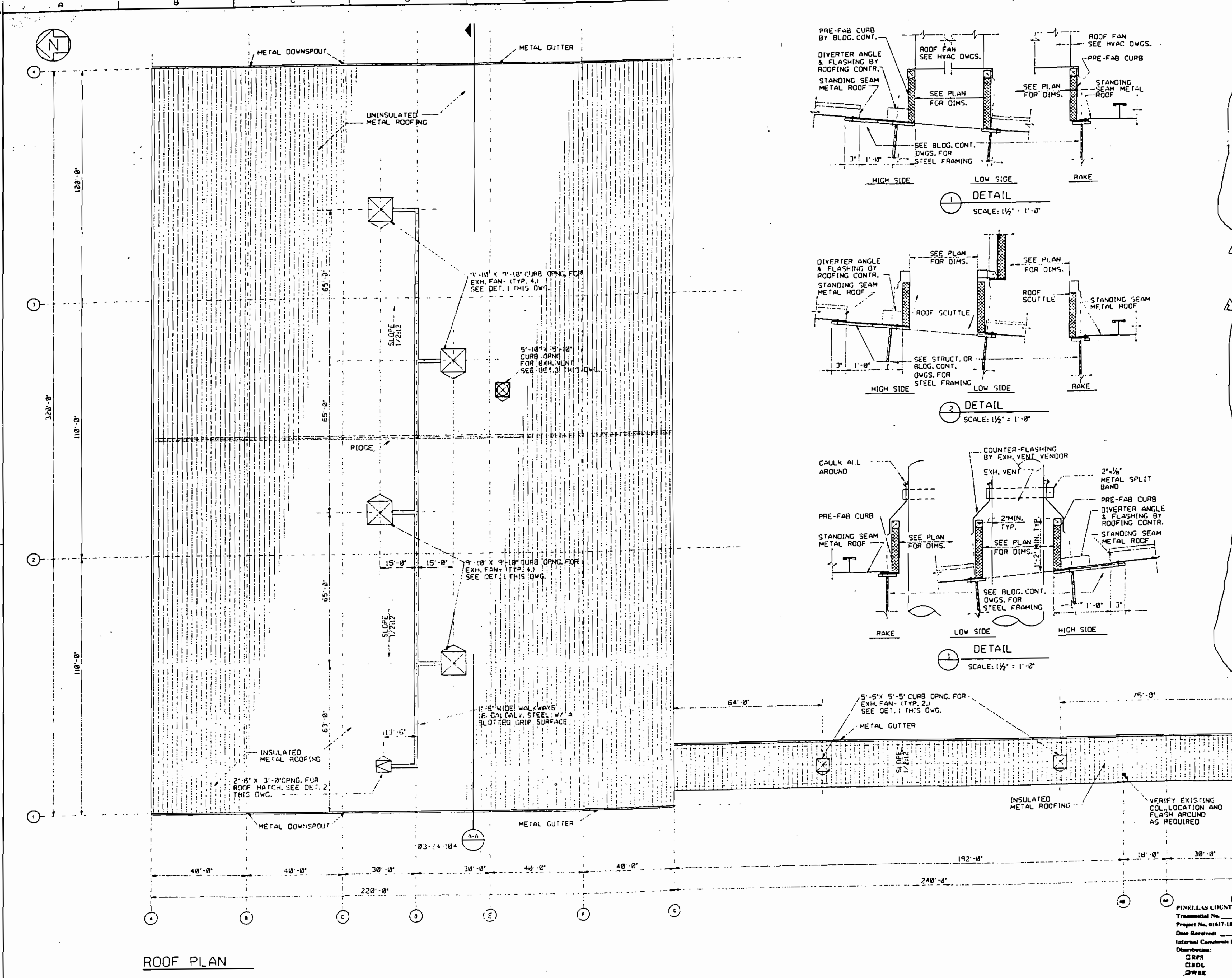
ASH STORAGE AND PROCESSING BUILDING ELEVATIONS

MATERIAL RECOVERY SYSTEM RELOCATION
WHEELABRATOR PINELLAS INC.
PINELLAS COUNTY, FLORIDA

RUST ENGINEERING & CONSTRUCTION Inc. Birmingham, Alabama
Contract 21-6766

DRAWING NUMBER 03-24-103
REV. NO. 0

NO.	REVISIONS	MADE	CKD.	DATE	NO.	REVISIONS	MADE	CKD.	DATE	NO.	REVISIONS	MADE	CKD.	DATE	DRAWING NO.	REFERENCES



GENERAL NOTES:

1. CURBED OPENING SIZES ARE APPROXIMATE BUILDING CONTRACTOR SHALL COORDINATE CURB AND OPNG DIMENSIONS TO FIT FANS.

2. PROVIDE GUTTER EXPANSION JOINTS WHERE REQUIRED ACCORDING TO ARCHITECTURAL SHEET METAL & AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION INC.

3. FANS AT ASH STORAGE AND PROCESSING BUILDING
EF-1, EF-2, EF-3 AND EF-4 SHALL BE BREEZEMAKER MODEL SLHBRV108-2000-3-E
HOODED ROOF VENTILATOR, GALV. STL. EPOXY COATED.
EACH FAN SHALL BE RATED AT 129,100 CFM @ 0.25" WG (MINIMUM) FANS SHALL BE FURNISHED WITH TEFC MOTOR, BELT DRIVE, BIRD SCREEN AND CURB CAP. ELECTRICAL SERVICE IS 460/3/60

4. FANS AT CONVEYOR GALLERY ENCLOSURE EF-5 AND EF-6 SHALL BE BREEZEMAKER MODEL SLHBRV54-750-3-E
HOODED ROOF VENTILATOR GALVANIZED STEEL EPOXY COATED.
EACH FAN SHALL BE RATED AT 30,115 CFM @ 0.25" W.G. (MINIMUM). FANS SHALL BE FURNISHED WITH TEFC MOTOR, BELT DRIVE, BIRD SCREEN AND CURB CAP.
ELECTRICAL SERVICE IS 460/3/60.

5. WALKWAYS SHALL BE AS MANUFACTURED BY UNITED MCGILL CORP., UNISTRUT OR AS APPROVED. THE UNITS SHALL BE 18 GA. GALV. STEEL PLANKS W/A SLOTTED GRIP SURFACE. TOTAL WIDTH OF THE WALKWAYS SHALL BE 1'-6".
LEG HEIGHT SHALL BE 2½"
INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

EQUIPMENT SPECIFICATIONS:

1. FAN ON ROOF OF MCC ROOM, EF-7 SHALL BE LOREN COOK TYPE ACE-B, SIZE 402C98 CENTRIFUGAL ROOF VENTILATOR OR APPROVED EQUAL. FAN SHALL BE RATED AT 11,400 CFM @ 0.50" WG (MINIMUM). FAN SHALL BE FURNISHED WITH TEFC MOTOR, BELT DRIVE, AND CURB CAP. ELECTRICAL SERVICE IS 460/3/60.

2. FAN ON ROOF OF TOILET BUILDING, EF-8 SHALL BE LOREN COOK TYPE ACE-D, SIZE 100C15DM CENTRIFUGAL ROOF VENTILATOR OR APPROVED EQUAL. FAN SHALL BE RATED AT 550 CFM @ .375" W.G. (MINIMUM). FAN SHALL BE FURNISHED WITH TEFC MOTOR, DIRECT DRIVE AND CURB CAP. ELECTRICAL SERVICE IS 120/1/60.

3. ROOM AIR CONDITIONER IN THE CONTROL CAB. AC-1 SHALL BE CARRIER MODEL YH8243D OR APPROVED EQUAL.
AIR CONDITIONER SHALL BE RATED AT 23,100 BTUH COOLING AND 12,400 BTUH HEATING. ELECTRICAL SERVICE IS 208/1/60

4. VENTILATION FILTER GRILLES, IN THE EAST WALL OF THE MCC ROOM, SHALL BE THREE (3) TITUS MODEL 50FF, 30" H X 36" WIDE. TYPE 1 BORDER, AND 1" X 1" X 1" GRID. 1¼" (NOMINAL)
THK. FIBERGLAS. FILTER SHALL BE PROVIDED BY HAVC CONTRACTOR.

5. EXHAUST REGISTERS IN TOILETS SHALL BE 8" X 6" TITUS MODEL 25RL WITH MODEL AG-35 OPPOSED BLADE DAMPERS.

6. THE HVAC CONTRACTOR SHALL FURNISH AND INSTALL SHEETMETAL DUCT, HANGERS AND AUXILIARY STEEL AS REQUIRED.
DUCTWORK SHALL BE FABRICATED FROM MINIMUM 24 GAUGE GALVANIZED STEEL. ALL JOINTS AND SEAMS SHALL BE AIRTIGHT.
LONGITUDINAL SEAMS FOR ALL DUCTWORK SHALL BE PITTSBURGH TYPE OR WELDED.
TRANSVERSE JOINTS FOR ALL DUCTWORK SHALL BE DUCTMATE CONSTRUCTION, TDC OR COMPANION ANGLES TYPE.
RECTANGULAR ELBOWS WITH A SQUARE THROAT SHALL BE PROVIDED WITH SINGLE THICKNESS TURNING VANES CONSTRUCTED AND INSTALLED PER FIG. 2-3 AND FIG. 2-4 (SMACNA)
ALL DUCTWORK AND HANGERS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS. METAL AND FLEXIBLE.
THE HVAC CONTRACTOR SHALL CLEAN DUCTWORK OF ALL FOREIGN SUBSTANCES PRIOR TO MAKING FINAL CONNECTIONS OR STARTUP.

PINELLAS COUNTY MRS/ASPB
Transmittal No. 185
Project No. 01617-188-096 MWE
Date Received: 8-6-96
Internal Comments Due: 8-11-96
Distribution: ☐RPS ☑JEB ☐BDL ☑File ☑WBE ☐
Comment File Name:

REV. #1 BY [signature] DATE 6-27-96

RELEASED FOR CONSTRUCTION
BY MAC PYRON DATE 04-17-96

WHEELABRATOR ENVIRONMENTAL SYSTEMS Hampton, New Hampshire

RUST ENGINEERING & CONSTRUCTION, INC. Birmingham, Alabama
Contract 21-6786

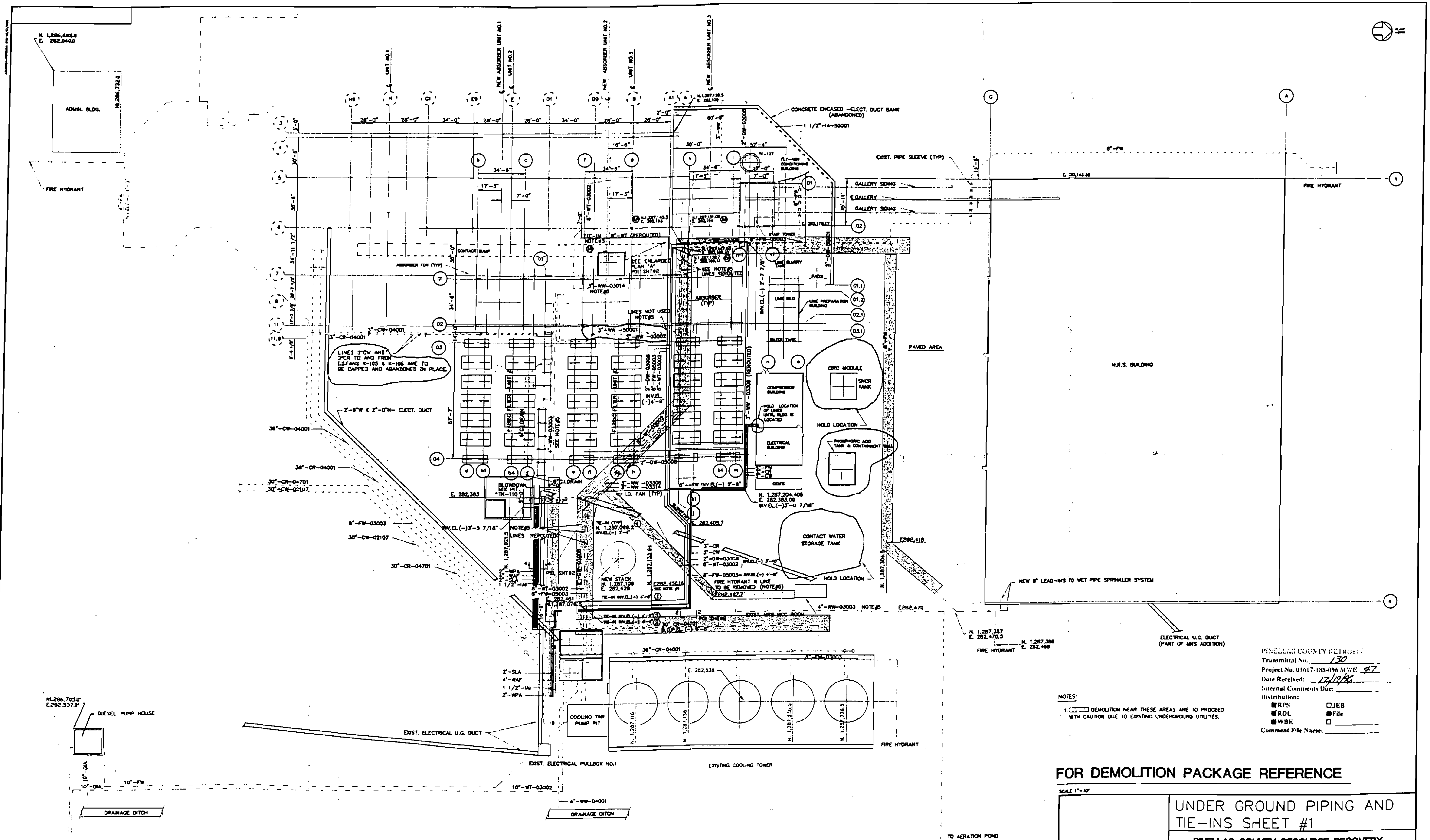
SCALE	1/16" = 1'-0"	DATE
DESIGN	F.H. ISMAIL	01/27/96
DRAWN BY	F.H. ISMAIL	01/27/96
CHECKED BY	S.R. MYERS	04/16/96
SUPV. BY	F.H. ISMAIL	04/16/96
SUBMITTED BY	D.J. GOLDEN	04/17/96

ASH STORAGE AND PROCESSING BUILDING
ROOF PLAN AND DETAILS

MATERIAL RECOVERY SYSTEM RELOCATION
WHEELABRATOR PINELLAS INC.
PINELLAS COUNTY, FLORIDA

DRAWING NUMBER 03-24-102 REV. NO. 1

REV.	REVISIONS
1	ADDED EQUIP. SPEC'S
1	REVISED GEN. NOTES 3&4


ADMIN. BLDG.
FIRE HYDRANT
UNIT NO.1
NEW ABSORBER UNIT NO.1
UNIT NO.2
NEW ABSORBER UNIT NO.2
UNIT NO.3
NEW ABSORBER UNIT NO.3
CONCRETE ENCASED -ELECT. DUCT BANK (ABANDONED)
1 1/2"-IA-50001
EXIST. PIPE SLEEVE (TYP)
6"-FW
GALLERY SIDING
GALLERY
ABSORBER FOR (TYP)
CONTACT SUMP
SEE ENLARGED PLAN "A" P01 SHT#2
SEE NOTE#5 LINES REROUTED
ABSORBER (TYP)
LINES NOT USED NOTE#5
LINES 3"CW AND 3"CR TO AND FROM I.D.FANS K-105 & K-106 ARE TO BE CAPPED AND ABANDONED IN PLACE.
2'-6"W X 2'-0"H- ELECT. DUCT
36"-CW-04001
36"-CR-04001
30"-CR-04701
30"-CW-02107
8"-FW-03003
30"-CW-02107
30"-CR-04701
BLOWDOWN HEX PIT -TK-110
I.D. FAN (TYP)
LIME SILO
LIME PREPARATION BUILDING
WATER TANK
COMPRESSOR BUILDING
HOLD LOCATION OF LINES UNTIL BLDG IS LOCATED
ELECTRICAL BUILDING
CIRC MODULE
SNCR TANK
HOLD LOCATION
PHOSPHORIC ACID TANK & CONTAINMENT WALL
CONTACT WATER STORAGE TANK
PAVED AREA
M.R.S. BUILDING
FIRE HYDRANT
NEW STACK
FIRE HYDRANT & LINE TO BE REMOVED (NOTE#5)
EXIST. MRS MCC ROOM
NEW 8" LEAD-INS TO WET PIPE SPRINKLER SYSTEM
ELECTRICAL U.G. DUCT (PART OF MRS ADDITION)
FIRE HYDRANT
36"-CR-04001
2"-SLA
4"-WAF
1 1/2"-IAI
2"-WPA
DIESEL PUMP HOUSE
EXIST. ELECTRICAL U.G. DUCT
COOLING TWR PUMP PIT
EXIST. ELECTRICAL PULLBOX NO.1
EXISTING COOLING TOWER
FIRE HYDRANT
10"-FW
10"-WT-03002
4"-WW-04001
DRAINAGE DITCH
DRAINAGE DITCH
TO AERATION POND

NOTES:

1. [shaded area] DEMOLITION NEAR THESE AREAS ARE TO PROCEED WITH CAUTION DUE TO EXISTING UNDERGROUND UTILITIES.

PINELLAS COUNTY SETRAC
Transmittal No. 130
Project No. 01617-188-096 MWE 47
Date Received: 12/19/96
Internal Comments Due: ______
Distribution:
■RPS □JEB
■RDL ■File
■WBE □ ______
Comment File Name: ______

FOR DEMOLITION PACKAGE REFERENCE

SCALE 1"=30'

ARCH	ISSUE	DESCRIPTION	CHECKED	ARCH	ISSUE	DESCRIPTION	CHECKED	ARCH	ISSUE	DESCRIPTION	CHECKED	ARCH	ISSUE A	DESCRIPTION	CHECKED
CIV/STR			CORRECT	CIV/STR			CORRECT	CIV/STR			CORRECT	CIV/STR		ISSUED FOR DEMOLITION PACKAGE BID	CORRECT
MECH				MECH				MECH				MECH			
INST/ELEC			APPR DATE	INST/ELEC			APPR DATE	INST/ELEC			APPR DATE	INST/ELEC			APPR DATE
FAC				FAC				FAC				FAC			

UNDER GROUND PIPING AND TIE-INS SHEET #1

PINELLAS COUNTY RESOURCE RECOVERY FACILITY - APC RETROFIT PROJECT

STONE & WEBSTER ENGINEERING CORPORATION
NEW YORK, NEW YORK

DRAWING NUMBER 06464-P-01-A

DESIGNED BY | DRAWN BY | AREAS | LEVELS | WORK PKG | PCT
DESIGN CHKD BY | CHKD BY