FLORIDA DEP LOGO

Department of Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

APPLICATION FOR AIR PERMIT - SHORT FORM

See Instructions for Form No. 62-210.900(2)

I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope of this application and the purpose for which this application is being submitted. This section also includes information on the owner or authorized representative of the facility 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 using ELSA, 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 site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: **City of Key West**	
2. Site Name: **Southern Most Waste to Energy Facility**	
3. Facility Identification Number: **0870047**	[ ] Unknown
4. Facility Location: **5701 W. Junior College Rd.** Street Address or Other Locator: City: **Key West** County: **Monroe** Zip Code: **33040**	
5. Relocatable Facility? [ ] Yes [**X**] No	6. Existing Permitted Facility? [**X**] Yes [ ] No

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	04-SEP-1998
2. Permit Number:	0870047-002-AC

Owner/Authorized Representative

1. Name and Title of Owner/Authorized Representative:

The City of Key West / E. David Fernandez

2. Owner/Authorized Representative Mailing Address:

Organization/Firm: **Southern Most Waste to Energy Facility**
Street Address: **5701 W. Junior College Rd.**
City: **Key West** State: **Florida** Zip Code: **33040**

3. Owner/Authorized Representative Telephone Numbers:
Telephone: (**305**) **294 - 6409** Fax: (**305**) **293 - 6415**

4. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the facility addressed in this Application for Air Permit. 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. 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.*

E David Fernandez
Signature

8-24-98
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. 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	Permit Type
001	Municipal Solid Waste Combustor, Resource Recovery	AF2A
002	Municipal Solid Waste Combustor, Resource Recovery	AF2A

Purpose of Application

This Application for Air Permit is submitted to obtain (check one):

[ ] Initial air operation permit for one or more existing, but previously unpermitted, emissions units.

[ ] Initial air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number: _____

[X] Air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number: _____

Operation permit to be revised. **AO44207781 (Unit 1)**
AO44207778 (Unit 2)

[ ] Air operation permit renewal.

Operation permit to be renewed: _____

Application Processing Fee

Check one:

[**X**] Attached - Amount: $ **250.00** [ ] Not Applicable.

Construction/Modification Information

1. Description of Alterations: **The additional soot port holes were already in place on the inboard side of furnace #1 & #2, but unauthorized to use without approval from F.D.E.P. which we have now received. The following procedure was tentatively F.D.E.P. approved and implemented on July 8, 1998 and is attached for your review.**

2. Date of Commencement of Construction:

Professional Engineer Certification

1. Professional Engineer Name: **Rolland Flowers**

   Registration Number: **47644**

2. Professional Engineer Mailing Address:

   Organization/Firm: **City of Key West**
   Street Address: **P.O. Box 1409**
   City: **Key West** State: **Florida** Zip Code: **33041-1409**

3. Professional Engineer Telephone Numbers:
   Telephone: **(305) 292 - 8195** Fax: **(305) 292 - 8278**

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 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; and

   (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.

   If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ] if so), I further 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.

   Signature 9/28/98 Date 9/28/98

   (seal)

* Attach any exception to certification statement.

Application Contact

1. Name and Title of Application Contact: **E. David Fernandez, Utilities Director**
2. Application Contact Mailing Address: Organization/Firm: **Southern Most Waste to Energy Facility** Street Address: **5701 W. Junior College Rd.** City: **Key West** State: **Florida** Zip Code: **33040**
3. Application Contact Telephone Numbers: Telephone: **(305) 293 - 6409** Fax: **(305) 293 - 6415**

Application Comment

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone:	East (km):	North (km):	
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): **24/34/42**	Longitude (DD/MM/SS): **81/44/49**		
3. Governmental Facility Code: **4**	4. Facility Status Code: **A**	5. Facility Major Group SIC Code: **49**	6. Facility SIC(s): **4953**
7. Facility Comment (limit to 500 characters):			

Facility Contact

1. Name and Title of Facility Contact: **E. David Fernandez, Utilities Director**		
2. Facility Contact Mailing Address: Organization/Firm: **Southern Most Waste to Energy Facility** Street Address: **5701 W. Junior College Rd.**		
City: **Key West**	State: **Florida**	Zip Code: **33040**
3. Facility Contact Telephone Numbers: Telephone: **(305) 293 - 6409**	Fax: **(305) 293 - 6415**	

Facility Regulatory Classifications

1. Small Business Stationary Source? [ ] Yes [X] No [ ] Unknown
2. Title V Source? [ ] No
3. Synthetic Non-Title V Source by Virtue of Previous Air Construction Permit? [ ] Yes [X] No Construction Permit Number/Issue Date: _____
4. One or More Emission Units Subject to NSPS? [ ] Yes [X] No
5. Facility Regulatory Classifications Comment (limit to 200 characters)

B. FACILITY SUPPLEMENTAL INFORMATION

This subsection of the Application for Air Permit form provides supplemental information related to the facility as a whole. (Supplemental information related to individual emissions units within the facility is provided in Subsection III-B of the form.) 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. Area Map Showing Facility Location: [X] Attached, Document ID: **Figure #1** [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID: **Figure #2** [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID: **Figure #3** [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID: **Att#1.Doc.** [ ] Not Applicable [ ] Waiver Requested

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A and B) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Type of Emissions Unit Addressed in This Section

Check one:

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Municipal Solid Waste Combustor – Unit #1**	
2. Emissions Unit Identification Number: **001**	[ ] No Corresponding ID [ ] Unknown
3. Emissions Unit Status Code: **A**	4. Emissions Unit Major Group SIC Code: **49**
5. Emissions Unit Comment (limit to 500 characters):	

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Electrostatic Precipitator – High Efficiency**
2. Control Device or Method Code: **010**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

Emissions Unit Details

1. Initial Startup Date: **January 13, 1987**			
2. Long-term Reserve Shutdown Date: **N/A**			
3. Package Unit: **N/A** Manufacturer:		Model Number:	
4. Generator Nameplate Rating:	**3.5**	MW	
5. Incinerator Information: Dwell Temperature: **1650** Dwell Time: **1** Incinerator Afterburner Temperature: **N/A**			°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	**6250** lb/hr	**75** tons/day
3. Maximum Process or Throughput Rate: **6250**		
4. Maximum Production Rate: **N/A**		
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:			
	24 hours/day	**7**	days/week
	52 weeks/year	**8760**	hours/year

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A and B) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Type of Emissions Unit Addressed in This Section

Check one:

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a collectively-regulated group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Municipal Solid Waste Combustor – Unit #2**	
2. Emissions Unit Identification Number: **002**	[ ] No Corresponding ID [ ] Unknown
3. Emissions Unit Status Code: **A**	4. Emissions Unit Major Group SIC Code: **49**
5. Emissions Unit Comment (limit to 500 characters):	

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Electrostatic Precipitator – High Efficiency**
2. Control Device or Method Code: **010**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

Emissions Unit Details

1. Initial Startup Date: **January 13, 1987**			
2. Long-term Reserve Shutdown Date: **N/A**			
3. Package Unit: **N/A** Manufacturer:		Model Number:	
4. Generator Nameplate Rating:	**3.5**	MW	
5. Incinerator Information: Dwell Temperature: **1650** Dwell Time: **1** Incinerator Afterburner Temperature: **N/A**			°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	**6250** lb/hr	**75** tons/day
3. Maximum Process or Throughput Rate: **6250**		
4. Maximum Production Rate: **N/A**		
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:			
	24 hours/day	**7**	days/week
	52 weeks/year	**8760**	hours/year

B. 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 [X] Attached, Document ID: **Figure#4** [ ] 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: **Att#7.Doc.** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID: **Att#8.Doc.** [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [X] Previously submitted, Date: _____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: **Att#10.Doc.** [ ] Not Applicable
7. Operation and Maintenance Plan [X] Attached, Document ID: **Att#11.Doc.** [ ] Not Applicable
8. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [X] Not Applicable

BASEMAP SOURCE: USGS "KEY WEST, FLA." & "BOCA CHICA KEY, FLA." 7.5 MINUTE QUADRANGLE - 1971, PHOTO DATE 4/4/1970.

CITY OF KEY WEST, FLORIDA

FACILITY LOCATION MAP

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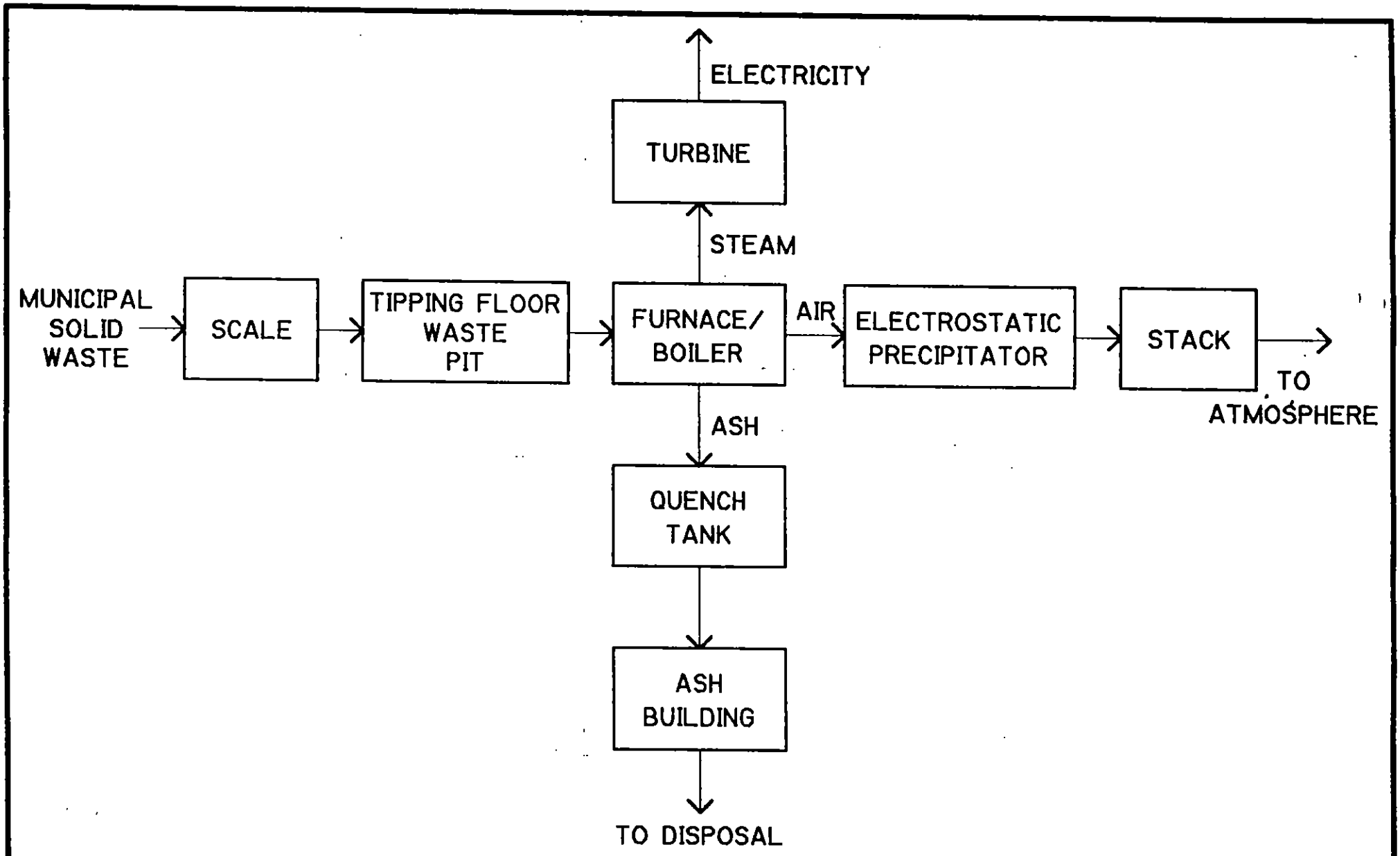
Figure No. 1



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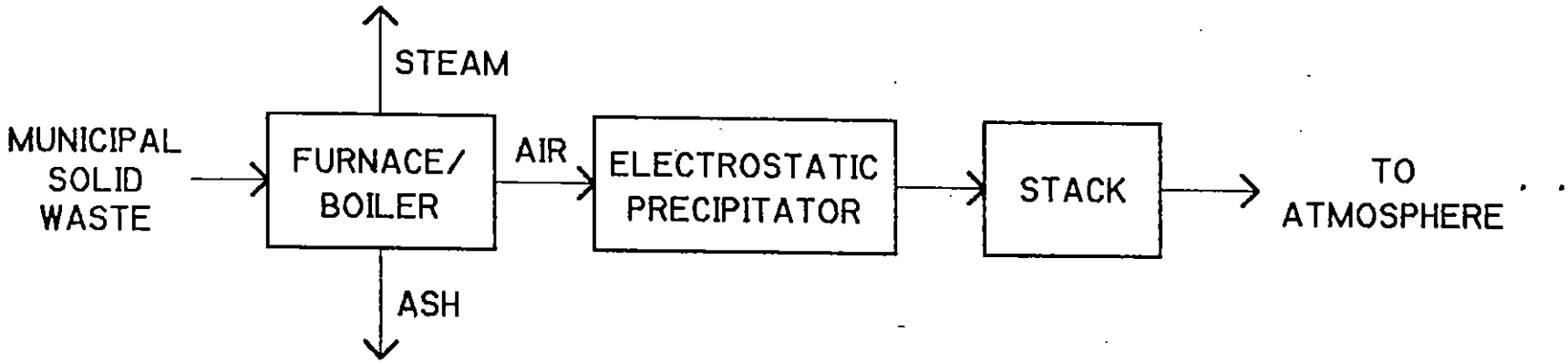
CITY OF KEY WEST
PROCESS FLOW DIAGRAM

FIGURE 3

SOUTHERNMOST WASTE TO ENERGY
SOOT BLOWING PROCEDURE

1. Notify operator, before starting, and receive permission to begin.
2. Verify that both air compressors are in service.
3. If both air compressors are not in service request that the operator turn them on using the proper procedure.
4. Make sure all required personal protection safety equipment is used (back belt, safety glasses, gloves, dust mask, hard hat etc.).
5. Inspect air hose and lances for damage or other problems.
6. Slowly pressurize the air hose and check that the fittings are not leaking, also that they are wired together for safety.
7. Report any problems to your supervisor so he can see that it gets fixed.
8. No more than six ports should be open at any given time during this procedure.
9. Start with the bottom row.
10. Open the first few ports on the bottom section closest to the pit and work toward the stack.
11. Place the air lance in the port before turning air on to prevent ash blow out.
12. While moving lance in and out, it should be rotated back and forth as well as moved up and down in order to loosen up and clear out as much ash as possible.
13. Each port should require at least 2 minutes to clean it properly.
14. As each port is completed it should be closed, making sure that the arms of the cam-lock are pushed all the way to the locked position, before other ports are opened.
15. This procedure should be repeated across the entire bottom row of ports.
16. To set up for doing the top row, get the stairway from the sight glass station and bring it over to the soot blowing area, taking care to keep the hose and lance out of the way. Face the steps toward the stack for easy access to the ports.
17. Position the stairs to allow unencumbered access to the first set of ports.
18. Again, open first set of ports on the top section closest to the pit and work your way toward the stack, following the procedures outlined in steps 11 through 15, taking special care while working up on the stairs.
19. This should be done all the way across the top row of ports.
20. Upon completion of the top row move to the mud drum deck, where there are two ports on either side of the mud drum to be air lanced.
21. Starting with the outside port, remove the cap and place the end of the lance inside the port about 10 inches.
22. Turn the air supply for the outside lance on slowly checking for leaks.



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CITY OF KEY WEST
PROCESS FLOW DIAGRAM

FIGURE 4

ATTACHMENT 1

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

The following activities at the Southernmost Waste to Energy Facility (SWTE) have the potential to emit unconfined particulate matter:

- municipal solid waste (MSW) handling
- ash handling

Precautions to prevent emissions of unconfined particulate matter are described below:

Municipal Solid Waste Handling

MSW handling activities which generate unconfined particulate matter include unloading garbage trucks, moving MSW from the tipping area into the waste pit and loading MSW into the furnace feed chute.

The waste pit and tipping area are enclosed which minimizes emission of unconfined particulate matter. Combustion air is drawn from the waste pit and tipping area. Thus, unconfined particulate matter in the waste pit and tipping area would be drawn into the furnace.

Ash Handling

Ash is removed from the quench tank and conveyed into a dump truck. The moisture in the ash prevents emission of unconfined particulate matter. The moist ash is then stored in the enclosed ash handling building. A front end loader is used to deposit the ash in a transfer truck. This activity is conducted in a covered loading bay adjacent to the ash building.

Additional Precautions

Additional precautions to prevent emissions of unconfined particulate matter at the facility include:

- Roads, parking areas and yards are paved.
- A street sweeper is used to remove particulate matter from roads and other paved areas.
- The unpaved areas of the facility are maintained and either sodded, seeded or landscaped.

ATTACHMENT 7

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Control Device:	Electrostatic Precipitator
Manufacturer:	Belco Pollution Control Corporation
Model:	RE19
Primary Voltage:	480 Volts
Primary Current:	25 Amps
Secondary Voltage:	55 KVDC
Secondary Current:	150 MADC
Design Flow Rate:	23,000 ACFM
Control Efficiency:	97.7%

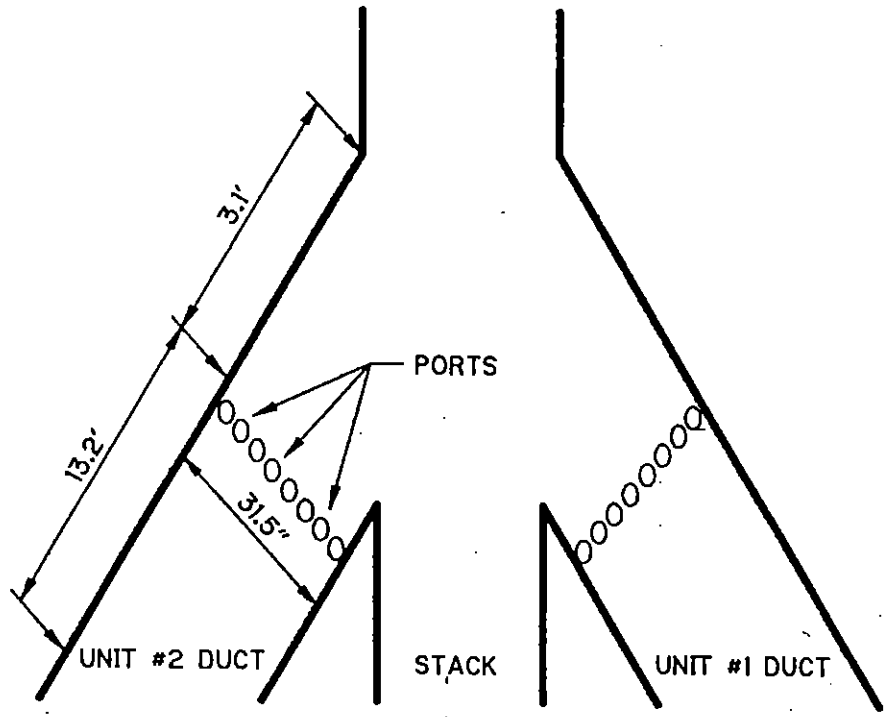
ATTACHMENT 8

DESCRIPTION OF STACK SAMPLING FACILITIES

The primary stack sampling facilities are shown on the attached drawing. These stack sampling facilities allow sampling of emissions for each train. Additional stack sampling facilities include:

- A walk around work platform and four, 8-inch stainless steel sample parts are also provided at the 95' level.

- Access is by means of an external ladder with Saf-t-Klimb rail. Safety slides and belts are kept in the control room.



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CITY OF KEY WEST

STACK SAMPLING FACILITIES

FIGURE 5

ATTACHMENT 10

PROCEDURES FOR STARTUP AND SHUTDOWN

Excess emissions are possible during periods of startup or shutdown of the emission unit. General procedures to minimize emissions are provided below.

FUEL AND AIR

Fuel for light-off should be as homogenous as possible and is therefore segregated, pre-processed and thoroughly mixed. Yard waste, wet waste and non-combustibles are removed allowing for maximum distribution of the underfire air, but not great enough to cause fouling and particulate carry-over. The air flow must not be too great or too low, but enough for good combustion.

PRECIPITATOR AND ASH SYSTEM

The units are batch-fed until sufficient temperatures are reached for efficiently utilizing the precipitators. This ensures the removal of fly-ash from the emissions systems. The rotary airlocks are also put into service for the removal of regular ash from the system.

STOKER GRATES

The fires are kept small and sufficiently back in the unit until such time as the temperatures and pressure are sufficient for regular operating procedures. This requires that the stoker grates be manually operated during light-off.

ATTACHMENT 11

OPERATION AND MAINTENANCE PLAN

An Operation and Maintenance Manual is kept onsite. This document includes information on the facility's equipment and procedures for operating and maintaining the equipment. The Table of Contents is provided below.

SECTION	DESCRIPTION
1	Glossaries
2	Fundamentals
3	Instructions
4	Boilers & Economizers
5	Precipitators
6	Turbine/Generator
7	Cooling Tower
8	Cranes
9	Water Conditioning Equipment
10	Water Tests Procedure
11	Exercises
12	Turbine/Generator Start-up
13	Fans
14	Lufkin Reducing Gear
15	Terry Turbine
16	Crane Scale Computer
17	Crane Scale Printer
18	Crane Scale Commands
19	Miscellaneous
20	Rotaries
21	Stokers
22	Soot Lance Inspection & Replacement
23	Automatic Controllers
24	Alpha Programming
25	Electrostatic Precipitator Fundamentals
26	Lubrication Recommendations
27	Right to Know & Material Safety Data Sheets
28	Var/Power Factor Controller
29	
30	
31	

SOUTHERNMOST WASTE TO ENERGY
SOOT BLOWING PROCEDURE

1. Notify operator, before starting, and receive permission to begin.
2. Verify that both air compressors are in service.
3. If both air compressors are not in service request that the operator turn them on using the proper procedure.
4. Make sure all required personal protection safety equipment is used (back belt, safety glasses, gloves, dust mask, hard hat etc.).
5. Inspect air hose and lances for damage or other problems.
6. Slowly pressurize the air hose and check that the fittings are not leaking, also that they are wired together for safety.
7. Report any problems to your supervisor so he can see that it gets fixed.
8. No more than six ports should be open at any given time during this procedure.
9. Start with the bottom row.
10. Open the first few ports on the bottom section closest to the pit and work toward the stack.
11. Place the air lance in the port before turning air on to prevent ash blow out.
12. While moving lance in and out, it should be rotated back and forth as well as moved up and down in order to loosen up and clear out as much ash as possible.
13. Each port should require at least 2 minutes to clean it properly.
14. As each port is completed it should be closed, making sure that the arms of the cam-lock are pushed all the way to the locked position, before other ports are opened.
15. This procedure should be repeated across the entire bottom row of ports.
16. To set up for doing the top row, get the stairway from the sight glass station and bring it over to the soot blowing area, taking care to keep the hose and lance out of the way. Face the steps toward the stack for easy access to the ports.
17. Position the stairs to allow unencumbered access to the first set of ports.
18. Again, open first set of ports on the top section closest to the pit and work your way toward the stack, following the procedures outlined in steps 11 through 15, taking special care while working up on the stairs.
19. This should be done all the way across the top row of ports.
20. Upon completion of the top row move to the mud drum deck, where there are two ports on either side of the mud drum to be air lanced.
21. Starting with the outside port, remove the cap and place the end of the lance inside the port about 10 inches.
22. Turn the air supply for the outside lance on slowly checking for leaks.

23. The lance should be run in and out two or three times while rotating it back and forth. Upon completion turn the air off for the outside lance, remove the lance from the port and replace the cap.
24. Using the inside air lance and air supply repeat steps 21 through 23 for the inside port.
25. Return to the side of the unit and once again do the bottom row of ports following steps 11 through 15.
26. That completes the soot blowing procedure for a single unit.
27. Shut off the air supply to the hose and bleed off the pressure.
28. Move hose, lance and stairs to the second unit and repeat this procedure at the designated time.
29. The times to blow soot are as follows:

Day Shift

10:00 AM for the first unit on day shift
14:00 PM for the second unit on day shift

Night Shift

22:00 PM for the first unit on night shift.
02:00 AM for the second unit on night shift

Log the start and completion times of the soot blowing procedure in the supervisor, operator and aux. logbooks. If for some reason you are delayed or unable to blow soot at scheduled times log the reason why in those same logbooks.

Note

Remember safety first, use equipment that you have been issued, if you need help ask for it, and if your not sure how to do the job, ask for instructions before you start.

Warning

Lances will be hot during and right after blowing soot and may cause burns if safety equipment such as gloves are not used!

23. The lance should be run in and out two or three times while rotating it back and forth. Upon completion turn the air off for the outside lance, remove the lance from the port and replace the cap.
24. Using the inside air lance and air supply repeat steps 21 through 23 for the inside port.
25. Return to the side of the unit and once again do the bottom row of ports following steps 11 through 15.
26. That completes the soot blowing procedure for a single unit.
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10:00 AM for the first unit on day shift
14:00 PM for the second unit on day shift

Night Shift

22:00 PM for the first unit on night shift.
02:00 AM for the second unit on night shift

Log the start and completion times of the soot blowing procedure in the supervisor, operator and aux. logbooks. If for some reason you are delayed or unable to blow soot at scheduled times log the reason why in those same logbooks.

Note

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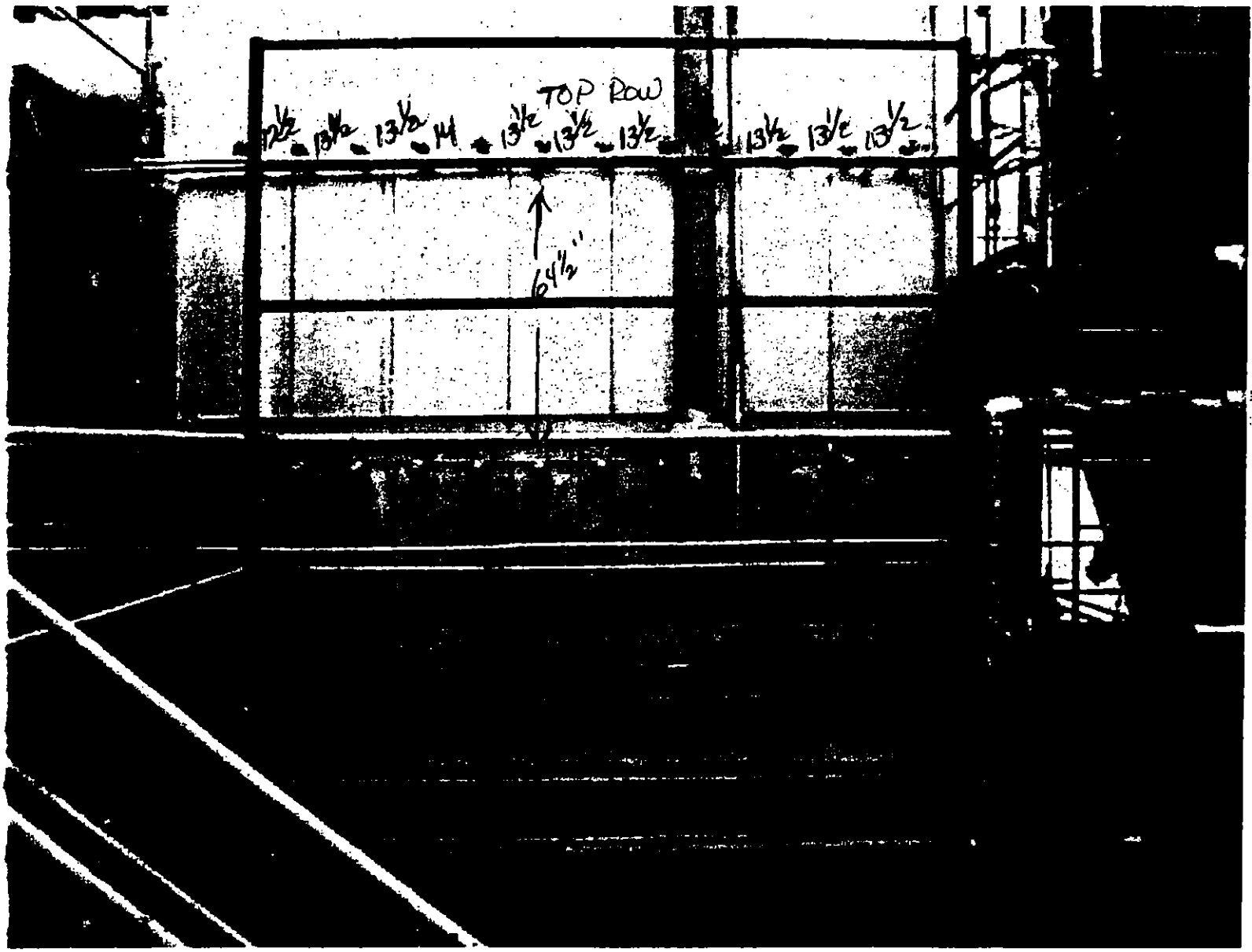
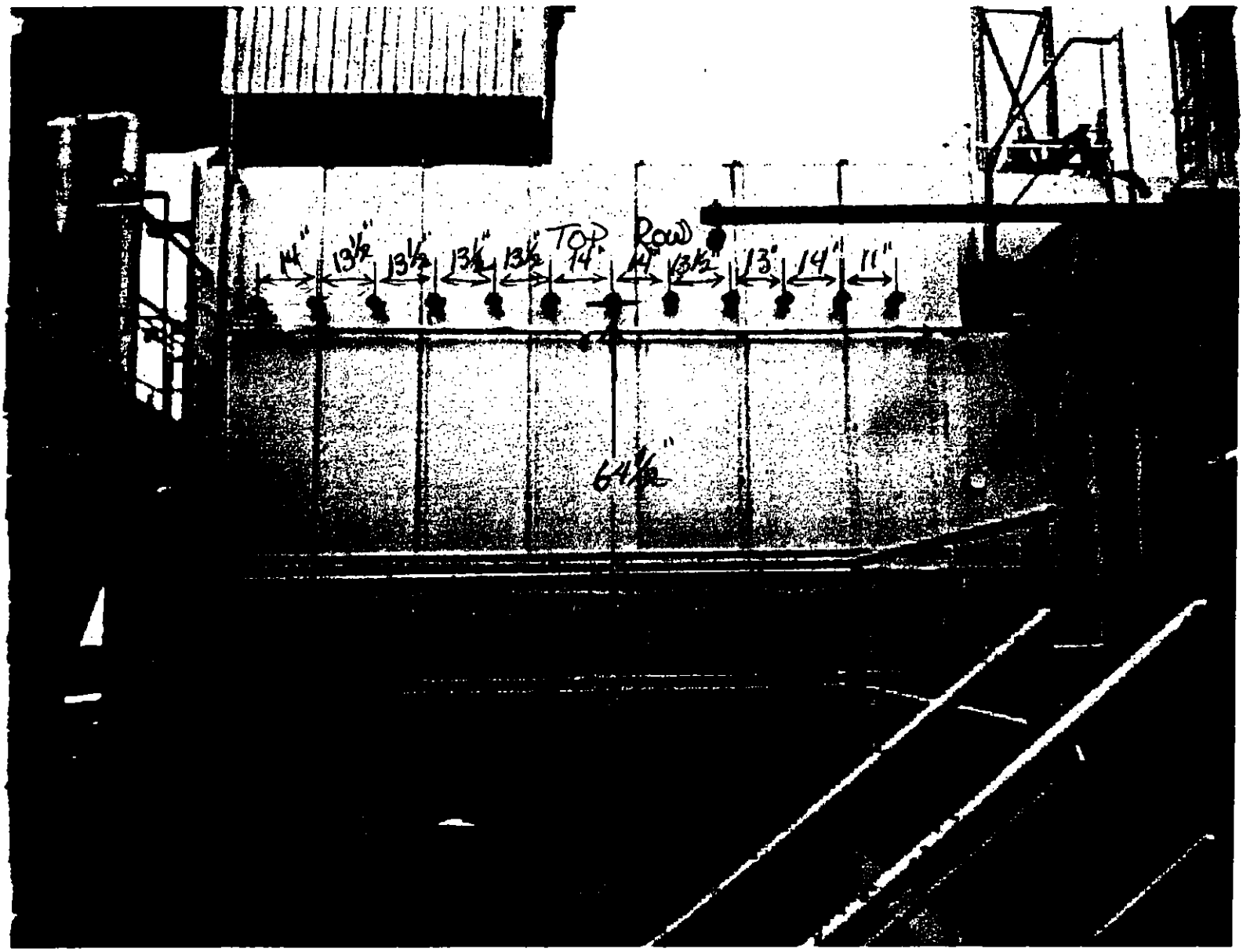
Warning

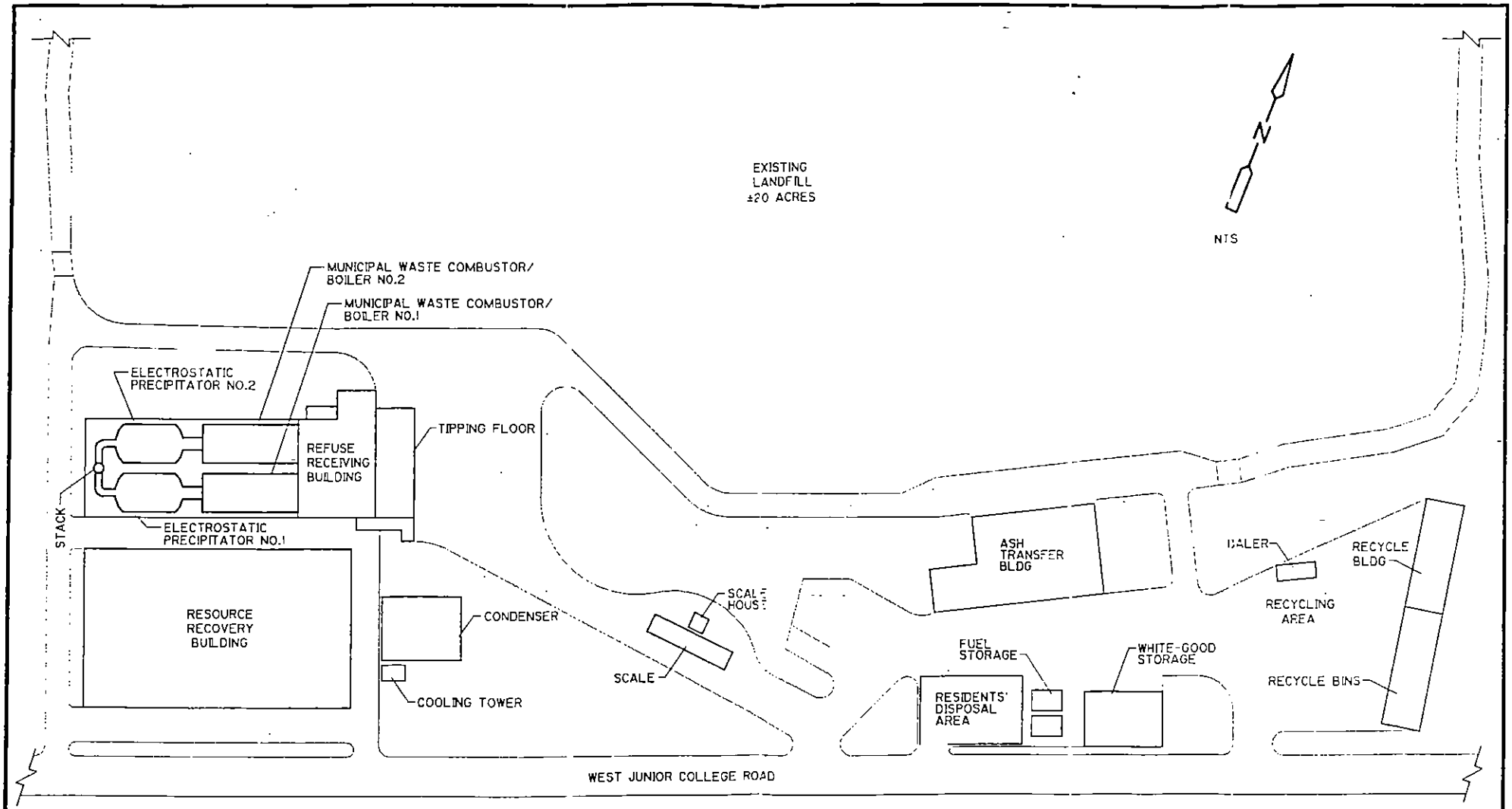
Lances will be hot during and right after blowing soot and may cause burns if safety equipment such as gloves are not used!

UNIT #1



UNIT #2





CITY OF KEY WEST
SITE PLAN

FIGURE 2

CDM
environmental engineers, scientists,
planners, & management consultants

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FIG-2
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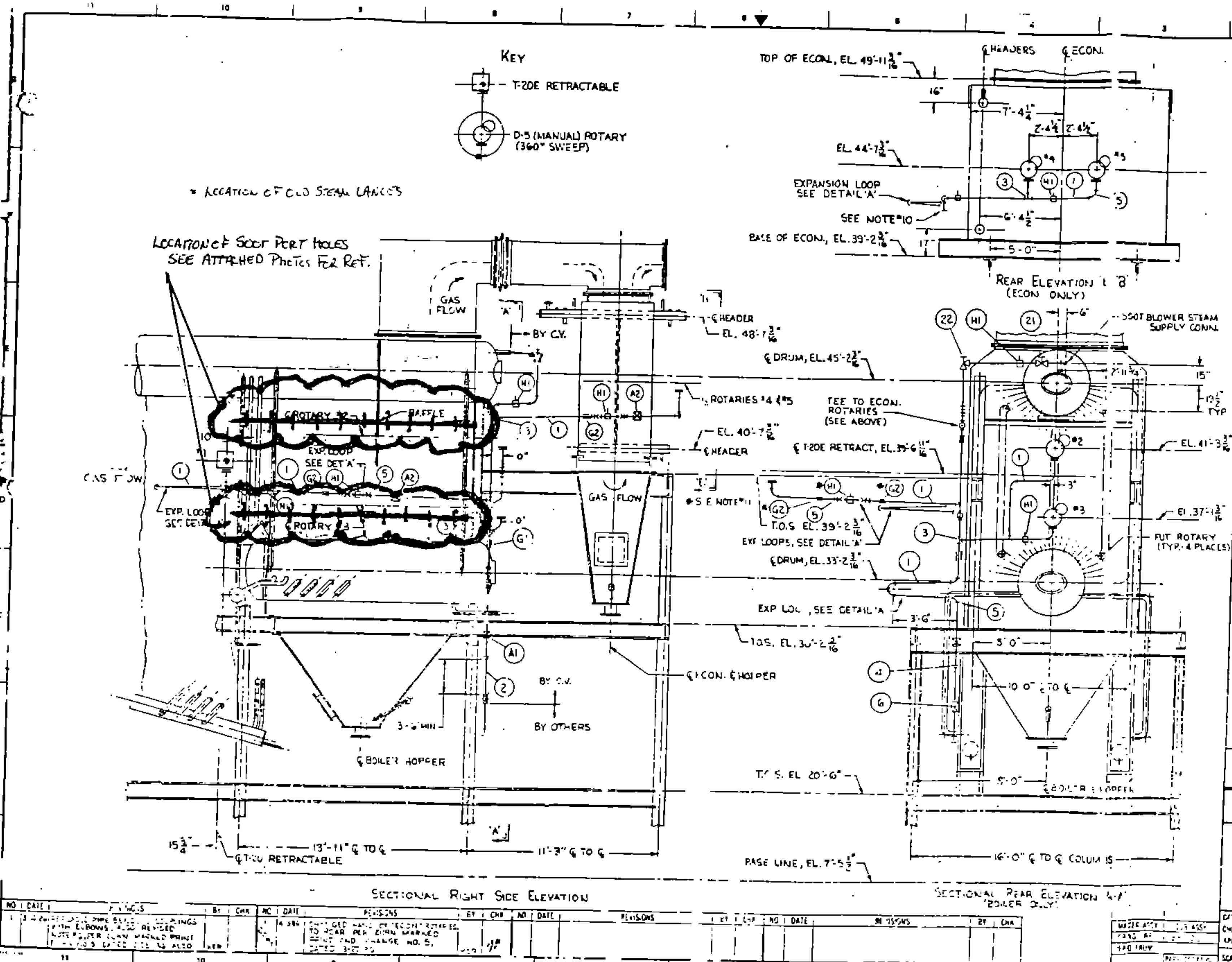
AxB



ZURN IND., INC. REFERENCE DRAWING

VLA-126 GENERAL ARRANGEMENT
SK 6023 ECONOMIZER ASSEMBLY

C.V. COMPLEMENTARY DRAWINGS

B 288425 T-20E SOOT BLOWER VIEWS
L 288426 T-20E SLEEVE VIEWS
B-288427 D-5 SOOT BLOWER VIEWS - BOILER
B-288428 D-5 SOOT BLOWER VIEWS - ECON
L-288432 PIPING NOTES & EXPN LOOP DETAIL
B-288433 HANGER, ANCHOR & GUIDE DETAILS
L-288434 SCHEMATIC PIPING DIAGRAM
S-288603 PIPING BILL OF MATERIALS

BOILER DATA

MFGR & TYPE BOILER: ZURN "VL"
DESIGN PRESSURE: 750 PSIG.
OPER PRESSURE 675 PSIG. @ 501 °F (SAT)
FUEL: REFUSE NO OF BOILERS (2) TWO

SOOT BLOWER INFORMATION

DUCTILE IRON MODEL D 2.50" 600# STD HEAD

1. BLOWING PRESSURE CAN BE REGULATED BY AN EXTERNAL ADJUSTING SCREW ON ALL MODEL "D" HEADS
2. PIPE, VALVES, AND FITTINGS FURNISHED BY COPES-VULCAN EXCEPT AS NOTED
3. ITEMS MARKED "N" NOT FURNISHED BY COPES VULCAN.
4. SOOT BLOWING MEDIUM STEAM@575 PSIG/SAT SOURCE DRUM
5. SLOPE BLOWING MEDIUM PIPING TO DRAIN.
6. HAND OF INSTALLATION: RETRACTS NEAR SIDE - BLR #1, FARSIDE - BLR #2; BOILER ROTARIES REAR - AS SHOWN - BLR #1, REAR - OPP SHOWN - BLR #2; ECON. ROTARIES REAR OPP SHOWN - BLR #1, REAR AS SHOWN - BLR #2
7. ROTARY ELEMENTS CUT TO LENGTH AND THREADED IN THE FIELD
8. ALL DIMENSIONS ARE REFERENCE UNLESS OTHERWISE NOTED
9. SEE DWG L 288432 FOR EXPANSION LOOP DETAIL
10. CONNECTS TO TEE ON BOILER FOR ROTARIES, RETRACTS & SOURCE CONN. SEE REAR & SIDE ELEVATIONS.
11. ATTACH TO BUILDING STEEL

COPES-VULCAN

METRO KEY WEST, INC.
KEY WEST, FLORIDA

SOOT BLOWER ARRANGEMENT AND PHYSICAL PIPING DIAGRAM

SCALE — DWG. NO. B 288424 REV 1