

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

November 7, 1986

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Nancy McCann  
Urban Environmental Coordinator  
Office of Environmental Coordination  
City Hall Plaza, 5N  
Tampa, Florida 33602

Dear Ms. McCann:

Re: Amendment to Construction Permit AC 29-47277 *McKay Bay Reduce-to-Energy*

The department is in receipt of your request to amend the above referenced state construction permit to reflect the "as built" construction of the facility. The amendment to the permit allows for the construction of a flyash storage silo. Particulate matter emissions will be controlled by use of a baghouse filter and are in accordance with the department's determination of Lowest Achievable Emission Rate for particulate matter. The department is in agreement with the request and the following shall be added or changed:

Expiration Date:

From: April 30, 1986  
To: December 31, 1986

Specific Conditions:

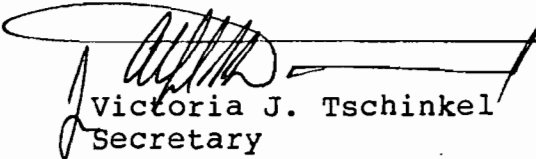
9. Particulate matter emissions from the flyash storage silo shall not exceed 0.025 grains per dry standard cubic foot or 0.36 pound per hour based on a maximum flow rate of 2109 acfm.
10. Visible emissions from the flyash storage silo shall not exceed 5% opacity. Compliance with this limit shall be demonstrated by DER Method 9 in accordance with the requirements of section 17-2.700, FAC.
11. The permittee shall provide HCEPC and SWFDER at least 30 days advanced written notice of the startup date of the flyash storage silo.

Ms. Nancy McCann  
Page Two  
November 7, 1986

12. The visible emissions tests for the flyash storage silo must be accomplished within 5 days of startup of the silo.
13. Should HCEPC or the Department have reason to believe the particulate emission standard is not being met, HCEPC or the Department may require that compliance with the particulate emission standards be demonstrated by testing in accordance with EPA Methods 1, 2, 3, 4, and 5.
14. Within 45 days of initial compliance testing of the source, test results along with 4 copies of a completed Certificate of Completion of Construction form shall be submitted to the HCEPC.

This letter must be attached to your construction permit, AC 29-47277, and shall become a part of that permit.

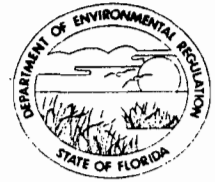
Sincerely,

  
Victoria J. Tschinkel  
Secretary

VJT/ks

cc: Bill Thomas, SW District  
Victor San Augustin, HCEPC

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION



# Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: \_\_\_\_\_ LOCTN: \_\_\_\_\_  
To: \_\_\_\_\_ LOCTN: \_\_\_\_\_  
To: \_\_\_\_\_ LOCTN: \_\_\_\_\_  
FROM: \_\_\_\_\_ DATE: \_\_\_\_\_

TO: Victoria J. Tschinkel  
FROM: Clair Fancy *John Brown for*  
DATE: November 7, 1986  
SUBJ: Amendment to Construction Permit AC 29-47277

Attached for your approval and signature is a letter amending the above referenced air construction permit to the City of Tampa. The bureau recommends your approval and signature.

CF/pa

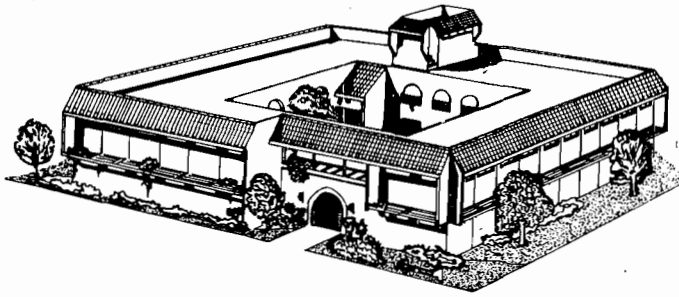
Attachment

BEST AVAILABLE COPY

HILLSBOROUGH COUNTY  
ENVIRONMENTAL PROTECTION

COMMISSION

RODNEY COLSON  
RON GLICKMAN  
PAM IORIO  
RUBIN E. PADGETT  
JAN KAMINS PLATT  
JAMES D. SELVEY  
PICKENS C. TALLEY II



ROGER P. STEWART  
DIRECTOR

1900 - 9th AVE  
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

Date October 22, 1986

To Clair Fancy, BAQM

From Victor San Agustin thru Jerry Campbell *VSA Jc*

Subject: Amendment to McKay Bay RTE Permit AC29-4277

This memo is in reference to an application from the City of Tampa requesting that the above construction permit be amended to include a flyash silo. The recommendations below are for your consideration.

We have no objections to the amendment request. The following recommendations are offered for your consideration.

1. The particulate emission standard shall be 0.02 gr/acf or 0.36 lbs/hr based on a maximum flow rate of 2109 acfm. (See footnote \* below)
2. Visible emissions shall not exceed 5% opacity. [Section 17-2.510, FAC]
3. The permittee shall provide HCEPC and SWFDER at least 30 days advanced written notice of the date of restart of the silo. (Flyash is currently conveyed to the wet quench pit.)
4. Within 5 days after restart of the silo, test the silo baghouse exhaust for visible emissions in accordance with the requirements of Section 17-2.700, F.A.C.
5. Should HCEPC or the Department have reason to believe the particulate emission standard is not being met, HCEPC or the Department may require that compliance with the particulate emission standards be demonstrated by testing in accordance with EPA Methods 1, 2, 3, 4, and 5.
6. Within 45 days of initial compliance testing of the source, test results along with 4 copies of a completed Certificate of Completion of Construction form shall be submitted to the HCEPC.

APIS will be updated for this point when we process operating permits for the four units.

If you have any questions regarding the implementation of the above conditions, please call me at SC 571-5960.

\*0.02 gr/acf was recommended as a requested LAER by the applicant. Baghouse manufacturer guarantees this value will not be exceeded.

cc: Bill Thomas, SWFDER

VSA/ch

DEF  
OCT 27 1986  
BAQM

PS Form 3811, July 1983 447-845

**SENDER: Complete items 1, 2, 3 and 4.**

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1.  Show to whom, date and address of delivery.

2.  Restricted Delivery.

3. Article Addressed to:  
 Ms. Nancy McCann  
 Urban Environmental Coord.  
 City Hall Plaza, 5N  
 Tampa, Florida 33602

4. Type of Service:  Registered  Insured  
 Certified  COD  Express Mail

Article Number: P 408 532 060

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee  
 X

6. Signature - Agent  
 X *[Signature]*

7. Date of Delivery: NOV 14 1986

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

DOMESTIC RETURN RECEIPT

P 408 532 060  
 RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Ms. Nancy McCann	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
11/12/86	

PS Form 3800, Feb. 1982



# CITY OF TAMPA

Sandra W. Freedman, Mayor

Office of Environmental Coordination  
McKay Bay Refuse-to-Energy Project

July 31, 1986

Mr. C.H. Fancy  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

DER  
AUG 6 1986  
BAQM

Dear Mr. Fancy:

This letter is in response to your incompleteness letter of February 26, 1986, concerning our request to amend construction permit AC29-47277 to include a flyash silo. A copy of that letter is attached for your convenience. Enclosed, please find a completed application, a manufacturer's guarantee of efficiency and a recommended lowest achievable emission rate.

Our suggested lowest achievable emission rate is 0.02 grains per actual cubic foot. This is the manufacturer's guaranteed outlet grain loading. This translates to 0.025 grains per dry standard cubic foot for our source. The following outlet conditions were assumed for this conversion; a temperature of 200°F; atmospheric pressure and a 2% moisture content. The air entering the silo has the moisture content of ambient air, it is not flue gas from the incinerator.

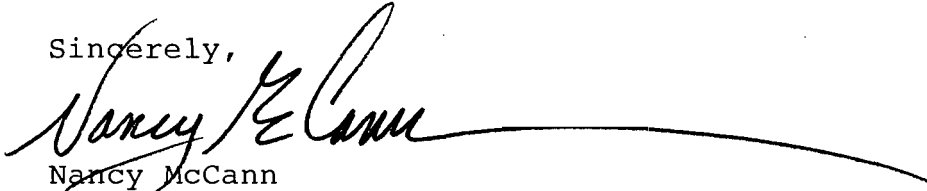
The City of Tampa is also requesting an extension of construction permit AC29-47277 to December 31, 1986. We submitted an application for an operations permit on January 31, 1986 to the Hillsborough County Environmental Protection Commission. They decided the permit would not be issued until the City of Tampa installed certified opacity monitors and repeated the beryllium emissions test. We hope to complete both requirements by September 30, 1986.

Mr. C.H. Fancy  
July 29, 1986  
Page Two

There is a letter of authorization attached naming Nancy McCann as the authorized representative of the McKay Bay Refuse-to-Energy Facility. Joseph Murdoch is now employed with HDR Techserv.

If you have any questions or require additional information, please call.

Sincerely,

A handwritten signature in black ink, appearing to read "Nancy McCann", with a long horizontal flourish extending to the right.

Nancy McCann  
Urban Environmental Coordinator

NMc/GG/mlr:17-93

attachment

cc: Mr. Victor San Agustin, E.P.C.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

RICHARD D. GARRITY, PH.D.  
DISTRICT MANAGER

SOUTHWEST DISTRICT

7801 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9844

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: McKay Bay Refuse to Energy Facility ] New<sup>1</sup> [X] Existing<sup>1</sup>

APPLICATION TYPE: [X] Construction [ ] Operation [X] Modification

COMPANY NAME: City of Tampa COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) flyash silo baghouse

SOURCE LOCATION: Street 107 N. 34th St. City Tampa

UTM: East 360.0 km North 3091.9 km

Latitude 27° 56' 51"N Longitude 82° 25' 14"W

APPLICANT NAME AND TITLE: Nancy McCann - Urban Environmental Coordinator

APPLICANT ADDRESS: Office of Environmental Coordination; City Hall Plaza, 5N Tampa, FL 33602

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of City of Tampa

I certify that the statements made in this application for a modification to construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

\*Attach letter of authorization

Signed: Nancy McCann

Nancy McCann, Urban Environmental Coordinator  
Name and Title (Please Type)

Date: 7/23/86 Telephone No. (813) 223-8071

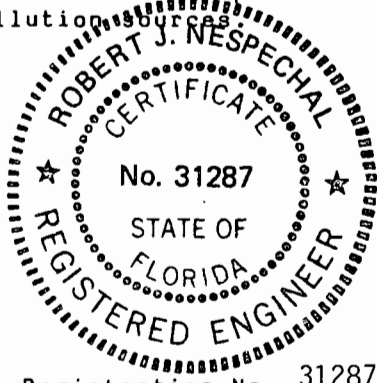
B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

<sup>1</sup> See Florida Administrative Code Rule 17-2.100(57) and (104)



the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution abatement measures.



Signed Robert J. Nespechal

Robert J. Nespechal  
Name (Please Type)

Vølund USA Ltd.

Company Name (Please Type)  
900 Jorie Blvd., Suite 222, Oak Brook, IL 60521

Mailing Address (Please Type)  
312/655-1490

Florida Registration No. 31287

Date: July 23, 1985

Telephone No. 312/655-1490

**SECTION II: GENERAL PROJECT INFORMATION**

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Fly ash collected from the electrostatic precipitators is transported via a pressurized pneumatic conveying system to an ash storage silo. Conveying air is vented from the silo to atmosphere through a bag filter located on top of the silo. Ash from the silo will be loaded into trucks for subsequent disposal in the City's designated sanitary residue disposal site. The expected improvements to the ash storage silo performance will be improved containment of ash in the silo for proper disposal. The discharge of particulate to the atmosphere will be in compliance with the emission limitations for particulate contained in the City of Tampa's Construction Permit AC29-47277.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction November '84 Completion of Construction December '84

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Bag Filter: \$7,150.00

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D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

City of Tampa Construction Permit AC29-47277

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E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;  
if power plant, hrs/yr \_\_\_\_\_ ; if seasonal, describe: \_\_\_\_\_

F. If this is a new source or major modification, answer the following questions.  
(Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? Yes
    - a. If yes, has "offset" been applied? Yes
    - b. If yes, has "Lowest Achievable Emission Rate" been applied? Yes
    - c. If yes, list non-attainment pollutants. Particulate, ozone
  2. Does best available control technology (BACT) apply to this source?  
If yes, see Section VI. No
  3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. No
  4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? Yes
  5. Do "National Emission Standards for Hazardous Air Pollutants"  
(NESHAP) apply to this source? No
- H. Do "Reasonably Available Control Technology" (RACT) requirements apply  
to this source? No
- a. If yes, for what pollutants? \_\_\_\_\_
  - b. If yes, in addition to the information required in this form,  
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-  
cation for any answer of "No" that might be considered questionable.

1.) City of Tampa Construction Permit AC29-47277

2.) Florida Department of Environmental Regulation, Bureau of Air Quality Management,  
Central Air permitting Technical Evaluation and Preliminary Determination for  
Permit AC29-47277.

**SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)**

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Not Applicable				

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): 7,640 (includes entrained fly ash)

2. Product Weight (lbs/hr): 72.3

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission <sup>1</sup>		Allowed Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Fly Ash	0.361	1.58	0.025 gr/dscf	30.4	633,423	316.7	Encl.(1)

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input) Per Construction Permit AC29-47277

<sup>3</sup>Calculated from operating rate and applicable standard. Per Construction Permit AC29-47277

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3).

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
FLEX KLEEN BVBC-36(iIG)/D010996	Fly Ash	99.5%	0.5 And Greater	Lab tests on similar devices

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Not Applicable			

\*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: \_\_\_\_\_ Percent Ash: \_\_\_\_\_

Density: \_\_\_\_\_ lbs/gal Typical Percent Nitrogen: \_\_\_\_\_

Heat Capacity: \_\_\_\_\_ BTU/lb \_\_\_\_\_ BTU/gal

Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average \_\_\_\_\_ Maximum \_\_\_\_\_

G. Indicate liquid or solid wastes generated and method of disposal.

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H. Emission ~~Stack~~ <sup>Silo</sup> Geometry and Flow Characteristics (Provide data for each stack):  
~~Stack~~ Height: 57 ft. ~~Stack~~ <sup>Silo</sup> Diameter: 20 ft.  
~~Stack~~ <sup>Air</sup> Flow Rate: 2109 ACFM N/A DSCFM Gas Exit Temperature: Not Applicable °F.  
 Water Vapor Content: Not Applicable % Velocity: Not Applicable FPS

**SECTION IV: INCINERATOR INFORMATION**

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq. & Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste \_\_\_\_\_  
 Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_  
 Approximate Number of Hours of Operation per day \_\_\_\_\_ day/wk \_\_\_\_\_ wks/yr. \_\_\_\_\_  
 Manufacturer \_\_\_\_\_  
 Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

	Volume (ft) <sup>3</sup>	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_  
 Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

\*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

Brief description of operating characteristics of control devices: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

#### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY**

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes [ ] No

Contaminant	Rate or Concentration
Particulate	0.08 gr/dscf @ 12% CO <sub>2</sub>

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes  No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
Particulate	0.02 grains/acf

D. Describe the existing control and treatment technology (if any).

- |   |   |
|---|---|
| 1. Control Device/System: Pulse jet Fabric Filter | 2. Operating Principles: Bag filter with back jet pulsing for cleaning bags |
| 3. Efficiency:* 99.5%                             | 4. Capital Costs: \$ 7,150.00   |

\*Explain method of determining Lab tests

- 5. Useful Life: 40 years with occasional bag replacement
- 7. Energy: Minimal
- 9. Emissions:

- 6. Operating Costs: Minimal
- 8. Maintenance Cost: \$ 1,820/yr

Contaminant	Rate or Concentration
Particulate	0.02 Grains/acf

10. Stack Parameters

- a. Height: ft.
- b. Diameter: ft.
- c. Flow Rate: ACFM
- d. Temperature: °F.
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary). No other method of filtering particulate from storage silo.

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:<sup>1</sup>
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:<sup>1</sup>
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.



j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

- |   |  |
|---|--|
| 1. Control Device: Pulse jet bag filter                 | 2. Efficiency: <sup>1</sup> 99.5% Lab tests              |
| 3. Capital Cost: \$ 7,150.00                            | 4. Useful Life: 40 years with occasional bag replacement |
| 5. Operating Cost: Minimal                              | 6. Energy: <sup>2</sup> Minimal                          |
| 7. Maintenance Cost: \$1,820/year                       | 8. Manufacturer: FLEX_KLEEN                              |
| 9. Other locations where employed on similar processes: |  |

a. (1) Company: General Foods

(2) Mailing Address: W. North St.

(3) City: Dover

(4) State: Delaware

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) ~~XX~~ Project Engineer: Jim Schwartz

(6) Telephone No.: 302/734-0373

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration
Coal Fly Ash Particulate	0.02 Grains/ACF Max.

(8) Process Rate:<sup>1</sup> 8000 lb/hr

b. (1) Company: Carolina Power and Light

(2) Mailing Address: 411 Fayetteville St.

(3) City: Raleigh

(4) State: NC 27602

(5) ~~XX~~ Project Engineer: Bob McCullum

(6) Telephone No.: 919/836-8266

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration
Coal Fly Ash Particulate	

(8) Process Rate:<sup>1</sup> 50 tons per hour

10. Reason for selection and description of systems:

<sup>1</sup>Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

### SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

#### A. Company Monitored Data

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP ( ) SO<sub>2</sub>\* \_\_\_\_\_ Wind spd/dir  
Period of Monitoring \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year

Other data recorded \_\_\_\_\_

Attach all data or statistical summaries to this application.

\*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent?  Yes  No
- b. Was instrumentation calibrated in accordance with Department procedures?  
 Yes  No  Unknown

B. Meteorological Data Used for Air Quality Modeling

1. \_\_\_\_\_ Year(s) of data from \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year
2. Surface data obtained from (location) \_\_\_\_\_
3. Upper air (mixing height) data obtained from (location) \_\_\_\_\_
4. Stability wind rose (STAR) data obtained from (location) \_\_\_\_\_

C. Computer Models Used

1. \_\_\_\_\_ Modified? If yes, attach description.
2. \_\_\_\_\_ Modified? If yes, attach description.
3. \_\_\_\_\_ Modified? If yes, attach description.
4. \_\_\_\_\_ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO <sup>2</sup>	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

BAG FILTER - 457 SQ. FT.  
OF BAG SURFACE

BAGS

DISCHARGE TO  
ATMOSPHERE  
7,568 LB/HR AIR  
0.361 LB/HR PARTICULATE


ASH TRANSPORT  
LINE FROM  
PRECIPITATORS  
3,120 LB/HR FLY ASH  
2,750 LB/HR AIR

7,568 LB/HR AIR  
72.3 LB/HR FLY ASH  
(2,109 ACFM @ 200°F)

AERATION  
AIR  
4,890 LB/HR @  
300°F

REFUSE FLY ASH  
STORAGE SILO  
STORAGE VOLUME =  
180 TONS OF  
ASH

TRUCK DISPOSAL  
3,119.6 LB/HR FLY ASH

		<i>Kraich 7/24/87</i>		PROJECT NUMBER	PROJECT TITLE: MCKAY BAY REFUSE TO ENERGY PROJ. TAMPA, FL.	 Velund USA Ltd. OAK BROOK, ILLINOIS
		DRAWN	DATE	78100		
		CHECKED	DATE		SHEET TITLE: FLOW DIAGRAM FOR FLY ASH SILO VENT FILTER	DRAWING NO.
		ENGINEER	DATE			REV.
REV.	DESCRIPTION	ENG.	APPROVED	DATE	SCALE	ENCLOSURE 1
DRAWING RELEASE RECORD						

Enclosure 2  
July 23, 1985

BASIS OF POTENTIAL DISCHARGE

1. Uncontrolled emission rate is based on having no baghouse filter with a 4 grains/acf particulate loading in the air to be vented to the atmosphere.

Vented air to atmosphere: 2,109 acfm

Particulate loading: 4 grains/acf

Uncontrolled emission:  $2,109 \frac{\text{ft}^3}{\text{Min}} \times \frac{4 \text{ grains}}{\text{ft}^3} \times \frac{\text{LB}}{7000 \text{ grains}}$   
 $\times \frac{60 \text{ min}}{\text{hr}} \times \frac{8,760 \text{ hr}}{\text{year}}$   
: 633,423 lb/yr

TAMPAENV

One NorthWestern Center  
165 North Canal Street, Chicago, Illinois 60606  
312/648-5300 Telex 254254

# Flex-Kleen

Research-Cottrell

ALLEN-SHERMAN-HOFF COMPANY

July 16, 1986

JUL 21 1986

PROCUREMENT DEPT.

Allen Sherman Hoff Co.  
One Country View Road  
Great Valley Center  
Malvern, PA 19355

Attention: Mr. Jim Orlando

Reference: ASH Purchase Order D-010996  
Flex-Kleen Order 13-51-18993

Dear Sir:

For operating conditions as stated on Flex-Kleen certified drawing B-84JC-085 for this Model 100 BVBC 36 collector, the unit will emit a maximum of 0.02 grains of particulate per CFM filtered. The collector must be properly installed, operated and maintained.

Please advise if we may further assist you.

Sincerely,  
FLEX-KLEEN CORPORATION



A.V. Liepins  
Regional Sales Manager

CC: Mr. Tony Saraceni/CSI

AVL:ac



# CITY OF TAMPA

Sandra W. Freedman, Mayor

Water Resources and Public Works

Mike Salmon  
Administrator

July 21, 1986

Mr. Victor San Agustin  
Senior Air Permitting Engineer  
Hillsborough County Environmental  
Protection Commission  
1900 9th Avenue  
Tampa, Florida 33605

Dear Mr. San Agustin:

This letter is to officially notify regulatory agencies that Nancy McCann will replace Joe Murdoch as the authorized representative of the McKay Bay Refuse to Energy Facility. She is also the Urban Environmental Coordinator for the City of Tampa.

The mailing address and phone number will remain the same.

Sincerely,

Mike Salmon, Administrator  
Water Resources and Public Works

MS/mlr:17-76

cc: Nancy McCann  
Red McCormick  
HTD Sjoberg  
Bill Thomas

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

February 26, 1986

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Joseph D. Murdoch  
City of Tampa  
Office of Environmental Coordination  
McKay Bay Refuse-to-Energy Project  
City Hall Plaza, 5N  
Tampa, Florida 33602

Dear Mr. Murdoch:

The Bureau of Air Quality Management has received your request to amend construction permit AC 29-47277 to include the flyash silo. Because this is an amendment to the construction permit, no additional fees will be required. However, before we can process the amendment, the following information must be received by the bureau.


1. Page one of the application form was not completed and pages four, six, eight, and ten of the application form were not included in your submittal. Provide a complete application form which contains all the required information.
2. Provide the dates of the start of construction and the completion of construction of the flyash silo.
3. If the flyash silo was constructed after July 1, 1979, provide a recommended lowest achievable emission rate (LAER) for the control device.
4. Provide a manufacturer's guarantee of efficiency and outlet grain loading for the proposed control device.
5. Report outlet grain loadings as grains per dry standard cubic foot.



Mr. Joseph D. Murdoch  
Page Two  
February 26, 1986

When all the requested information is received, we will resume processing the amendment to construction permit AC 29-47277. If you have any questions, please write to me at the above address or call Edward Svec, Review Engineer, at (904)488-1344.

Sincerely,

*for*   
C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/ES/s

cc: W. Thomas, SW District  
V. San Agustin, HCEPC

PS Form 3811, July 1983

**SENDER: Complete items 1, 2, 3 and 4.**

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

- 1.  Show to whom, date and address of delivery.
- 2.  Restricted Delivery.

3. Article Addressed to:  
 Mr. Joseph D. Murdoch  
 City of Tampa  
 City Hall Plaza, 5N  
 Tampa, FL 33602

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	P 408 533 217

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
X

6. Signature - Agent  
X *A. Barton*

7. Date of Delivery

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

DOMESTIC RETURN RECEIPT

P 408 533 217  
RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to	
Mr. Joseph D. Murdoch	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
2/26/86	

PS Form 3800, Feb. 1982

DER

JAN 27 1986

BAQM



# CITY OF TAMPA

Bob Martinez, Mayor

OFFICE OF ENVIRONMENTAL COORDINATION/  
MCKAY BAY REFUSE-TO-ENERGY PROJECT

January 23, 1986

Mr. Clair Fancy  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. Fancy:

This letter is in reference to the flyash silo at the McKay Bay Refuse-to-Energy Facility and construction permit AC29-47277. The application submitted for construction AC29-47277 neglected to mention or give specifications for the baghouse associated with the flyash silo.

The Hillsborough County Environmental Protection Commission has advised the City of Tampa to submit an Application to Operate/Construct Air Pollution Sources to your office. We are not sure if this will be handled as an additional construction permit, an amendment to the original construction permit or some other way and are asking that you inform us as to your preference. At this time we are submitting one signed and sealed copy to your office and one signed and sealed copy to the Hillsborough County Environmental Protection Commission. We are retaining three signed and sealed copies and ask that you instruct us as to where to send the additional copies and what permit fees are required.

Please contact our office if additional information, additional copies or additional fees are required. Thank you very much for your assistance in this matter.

Sincerely,

*Joseph D. Murdoch*  
Joseph D. Murdoch  
Urban Environmental Coordinator

JDM/dw:14/23

Attachment

cc Victor San Agustin  
Jim Estler

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

January 13, 1986

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Joseph D. Murdoch  
Urban Environmental Coordinator  
City of Tampa  
City Hall Plaza, 5N  
Tampa, Florida 33602

Dear Mr. Murdoch:

RE: Request to extend the expiration date of construction permit  
AC 29-47277

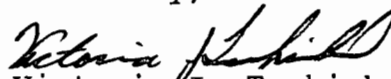
The department is in receipt of your request to extend the expiration date of the above referenced state construction permit. The department is in agreement with the request and the following shall be added or changed:

Expiration Date:

From: December 31, 1985  
To: April 30, 1986

This letter must be attached to your construction permit, AC 29-47277, and shall become a part of that permit.

Sincerely,

  
Victoria J. Tschinkel  
Secretary

VJT/ps

cc: Bill Thomas  
Jerry Campbell

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION



# Interoffice Memorandum

TO: Victoria J. Tschinkel

FROM: Clair Fancy *Clair Fancy*

DATE: January 13, 1986

SUBJ: Request to Modify Permit No. AC 29-47277  
City of Tampa

FOR ROUTING TO OTHER THAN THE ADDRESSEE	
TO: _____	LOCTN: _____
TO: _____	LOCTN: _____
TO: _____	LOCTN: _____
FROM: _____	DATE: _____

**RECEIVED**  
JAN 13 1986

Office of the Secretary

Attached for your signature is a letter modifying the specific conditions of Permit No. AC 29-47277 to the City of Tampa. The Bureau of Air Quality Management recommends that the modification be approved.

CHF/pa

Attachment

P 408 533 657

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL

*(See Reverse)*

Sent to Mr. Joseph D. Murdoch	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
<b>TOTAL Postage and Fees</b>	<b>\$</b>
Postmark or Date 1/16/86	

PS Form 3800, Feb. 1982

DER

DEC 24 1985

BAQM



# CITY OF TAMPA

Bob Martinez, Mayor

OFFICE OF ENVIRONMENTAL COORDINATION/  
MCKAY BAY REFUSE-TO-ENERGY PROJECT

December 20, 1985

Mr. Clair Fancy  
Department of Environmental Regulation  
Twin Towers  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

Dear Mr. Fancy:

The construction permit (AC29-47277) for the McKay Bay Refuse-to-Energy Facility is scheduled to expire on December 31, 1985. The City of Tampa is requesting that the permit expiration date be extended to April 31, 1986. This extension would allow the City of Tampa to submit a complete application for an operating permit 90 days prior to the expiration of the construction permit. This requirement is specific condition 7 in the construction permit.

The majority of construction was completed in April 1985. Compliance stack testing was done September 16, 1985 thru September 19, 1985. The compliance test report was received by the City of Tampa on November 4, 1985 and copies were forwarded to the Department of Environmental Regulation (Southwest District) and the Hillsborough County Environmental Protection Commission. These agencies requested additional information that was received and forwarded on November 22, 1985. Due to this sequence of events we have not yet been able to submit the operating permit. Emission levels of all pollutants are, however, below the emission limitations specified in the construction permit.

Please contact our office if any questions or problems remain concerning the extension of our construction permit.

Sincerely,

Joseph D. Murdoch  
Urban Environmental Coordinator

JDM/dw:13/87

cc Ken Roberts  
Jerry Campbell



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DER  
NOV 12 1985

REGION IV  
345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

11/13  
Ed Svec -  
Fri. Please  
Send copies to  
Bill Thomas (Tampa)  
and Jerry Campbell.  
Clam

BAQM

NOV 06 1985

REF: 4APT-AC

Mr. Kenneth Roberts  
Florida Department of Environmental  
Regulation  
Southwest District  
7601 Hwy 301 North  
Tampa, Florida 33610

Dear Mr. Roberts:

We have reviewed the second revision of the test protocol by Clean Air Engineering for source testing the two stacks serving the four municipal waste-fired boilers at the McKay Bay incinerator site in Tampa, Florida.

We feel that the use of four sampling trains as indicated in the September 17, 1985, protocol for sampling multiple pollutants (Particulates, SO<sub>2</sub>, NO<sub>x</sub>, Pb, Be, Hg, F and VOC) as required by 40 CFR 60 - Subpart E, EPA PSD permit requirements, and State permit requirements, is acceptable. This should reduce the potential analytical problems presented in the other proposed protocols wherein the multiple pollutants were to be collected in fewer sampling trains.

If you have further questions in this matter, please contact Joe Riley at 404/881-7654.

Sincerely yours,

James T. Wilburn, Chief  
Air Compliance Branch  
Air, Pesticides, & Toxics  
Management Division

cc: Steve Smallwood  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

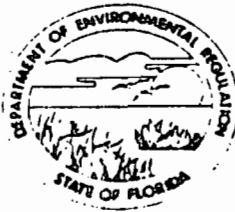


DEPARTMENT OF ENVIRONMENTAL REGULATION

DER

JAN 27 1986

BAQM



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

RICHARD D. GARRITY, PH D  
DISTRICT MANAGER

SOUTHWEST DISTRICT

7801 HIGHWAY 301 NORTH  
TAMPA, FLORIDA 33610-9844

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: \_\_\_\_\_ [ ] New<sup>1</sup> [ ] Existing<sup>1</sup>

APPLICATION TYPE: [ ] Construction [ ] Operation [ ] Modification

COMPANY NAME: \_\_\_\_\_ COUNTY: \_\_\_\_\_

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) \_\_\_\_\_

SOURCE LOCATION: Street \_\_\_\_\_ City \_\_\_\_\_

UTM: East \_\_\_\_\_ North \_\_\_\_\_

Latitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "N Longitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "W

APPLICANT NAME AND TITLE: \_\_\_\_\_

APPLICANT ADDRESS: \_\_\_\_\_

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of \_\_\_\_\_

I certify that the statements made in this application for a \_\_\_\_\_ permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

\*Attach letter of authorization

Signed: \_\_\_\_\_

\_\_\_\_\_  
Name and Title (Please Type)

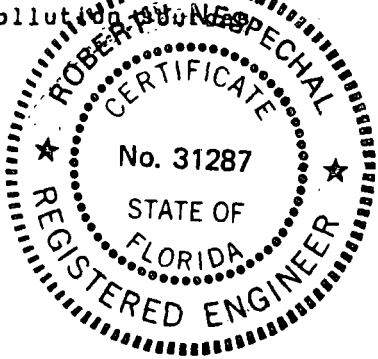
Date: \_\_\_\_\_ Telephone No. \_\_\_\_\_

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

<sup>1</sup> See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution control equipment.



Signed Robert J. Nespechal  
 \_\_\_\_\_  
 Robert J. Nespechal  
 Name (Please Type)  
 Vølund USA Ltd.  
 \_\_\_\_\_  
 Company Name (Please Type)  
 900 Jorie Blvd., Suite 222, Oak Brook, IL 60521  
 \_\_\_\_\_  
 Mailing Address (Please Type)

Florida Registration No. 31287 Date: July 23, 1985 Telephone No. 312/655-1490

**SECTION II: GENERAL PROJECT INFORMATION**

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Fly ash collected from the electrostatic precipitators is transported via a pressurized pneumatic conveying system to an ash storage silo. Conveying air is vented from the silo to atmosphere through a bag filter located on top of the silo. Ash from the silo will be loaded into trucks for subsequent disposal in the City's designated sanitary residue disposal site. The expected improvements to the ash storage silo performance will be improved containment of ash in the silo for proper disposal. The discharge of particulate to the atmosphere will be in compliance with the emission limitations for particulate contained in the City of Tampa's Construction Permit AC29-47277.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction \_\_\_\_\_ Completion of Construction \_\_\_\_\_

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Bag Filter: \$7,150.00

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

City of Tampa Construction Permit AC29-47277

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;  
if power plant, hrs/yr \_\_\_\_\_ ; if seasonal, describe: \_\_\_\_\_

F. If this is a new source or major modification, answer the following questions.  
(Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? Yes  
a. If yes, has "offset" been applied? Yes  
b. If yes, has "Lowest Achievable Emission Rate" been applied? Yes  
c. If yes, list non-attainment pollutants. Particulate, ozone
2. Does best available control technology (BACT) apply to this source?  
If yes, see Section VI. No
3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. No
4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? Yes
5. Do "National Emission Standards for Hazardous Air Pollutants"  
(NESHAP) apply to this source? No
- H. Do "Reasonably Available Control Technology" (RACT) requirements apply  
to this source? No  
a. If yes, for what pollutants? \_\_\_\_\_  
b. If yes, in addition to the information required in this form,  
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-  
cation for any answer of "No" that might be considered questionable.

- 1.) City of Tampa Construction Permit AC29-47277
- 2.) Florida Department of Environmental Regulation, Bureau of Air Quality Management,  
Central Air permitting Technical Evaluation and Preliminary Determination for  
Permit AC29-47277.

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
FLEX KLEEN BVBC-36(iIG)/D010996	Fly Ash	99.5%	0.5 And Greater	Lab tests on similar devices

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Not Applicable			

\*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: \_\_\_\_\_ Percent Ash: \_\_\_\_\_

Density: \_\_\_\_\_ lbs/gal Typical Percent Nitrogen: \_\_\_\_\_

Heat Capacity: \_\_\_\_\_ BTU/lb \_\_\_\_\_ BTU/gal

Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average \_\_\_\_\_ Maximum \_\_\_\_\_

G. Indicate liquid or solid wastes generated and method of disposal.

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---

Brief description of operating characteristics of control devices: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

#### SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

- 5. Useful Life: 40 years with occasional bag replacement
- 7. Energy: Minimal
- 9. Emissions:

- 6. Operating Costs: Minimal
- 8. Maintenance Cost: \$ 1,820/yr

Contaminant	Rate or Concentration
Particulate	0.02 Grains/acf

10. Stack Parameters

- a. Height: ft.
- b. Diameter: ft.
- c. Flow Rate: ACFM
- d. Temperature: °F.
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary). No other method of filtering particulate from storage silo.

1.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:<sup>1</sup>
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device:
- b. Operating Principles:
- c. Efficiency:<sup>1</sup>
- d. Capital Cost:
- e. Useful Life:
- f. Operating Cost:
- g. Energy:<sup>2</sup>
- h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ Project Engineer: Jim Schwartz

(6) Telephone No.: 302/734-0373

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration
Coal Fly Ash Particulate	0.02 Grains/ACF Max.

(8) Process Rate:<sup>1</sup> 8000 lb/hr

b. (1) Company: Carolina Power and Light

(2) Mailing Address: 411 Fayetteville St.

(3) City: Raleigh

(4) State: NC 27602

(5) ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ Project Engineer: Bob McCullum

(6) Telephone No.: 919/836-8266

(7) Emissions:<sup>1</sup>

Contaminant	Rate or Concentration
Coal Fly Ash Particulate	

(8) Process Rate:<sup>1</sup> 50 tons per hour

10. Reason for selection and description of systems:

<sup>1</sup>Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

**SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION**

**A. Company Monitored Data**

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP \_\_\_\_\_ ( ) SO<sub>2</sub>\* \_\_\_\_\_ Wind spd/dir

Period of Monitoring \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year

Other data recorded \_\_\_\_\_

Attach all data or statistical summaries to this application.

\*Specify bubbler (B) or continuous (C).





Enclosure 2  
July 23, 1985

BASIS OF POTENTIAL DISCHARGE

1. Uncontrolled emission rate is based on having no baghouse filter with a 4 grains/acf particulate loading in the air to be vented to the atmosphere.

Vented air to atmosphere: 2,109 acfm

Particulate loading: 4 grains/acf

Uncontrolled emission:  $2,109 \frac{\text{ft}^3}{\text{Min}} \times \frac{4 \text{ grains}}{\text{ft}^3} \times \frac{\text{LB}}{7000 \text{ grains}}$   
 $\times \frac{60 \text{ min}}{\text{hr}} \times \frac{8,760 \text{ hr}}{\text{year}}$   
: 633,423 lb/yr

TAMPAENV

JUL.07 '86 17:02 VOLUND USA LTD

P.02

# Allen-Sherman-Hoff

an Company

THE ALLEN-SHERMAN-HOFF COMPANY  
One Country View Road  
Malvern, PA 19355  
Phone 215-647-9900  
Telex 83-1395

July 17, 1985

VOLUND USA, LTD.  
900 JOPIE BOULEVARD  
OAK BROOK, IL 60521

Attention: Mr. Robert Nespechal  
Project Engineer

Subject: McKay/Pay Waste-to-Energy Project  
Tampa, Florida  
Contract No. 79100.114  
Fly Ash Handling System  
A-S-H Contract V5414

Gentlemen:

In response to your letter of July 11, 1985, please find enclosed a copy of the Department of Environmental Regulation Application filled out with the required information as it applies to us.

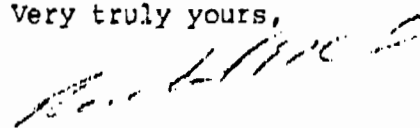
Some of the questions we are unable to answer because boiler loading and BTU are required.

The efficiency given for the filter baghouse was derived from laboratory tests and actual field data. This data is available at the manufacturer's plant, if required.

We certify that the ash filtration equipment provided for venting the fly ash silo is in conformity with modern engineering principles, and the pollution control facilities, when properly maintained and operated, will discharge an effluent that is acceptable to environmental agencies.

Should you have any questions or require further information, please do not hesitate to contact us.

Very truly yours,

  
Richard E. Peimels  
Project Manager

RFP/JJS/kaw

Enclosure

cc: R. Sahlstrom - FAVILLE-LEVALLY  
B. Minor - BOILER EQUIPMENT SERVICE COMPANY (Tampa)

DER

MAR 27 1985

BAQM



# CITY OF TAMPA

Bob Martinez, Mayor

OFFICE OF ENVIRONMENTAL COORDINATION/  
MCKAY BAY REFUSE-TO-ENERGY PROJECT

March 25, 1985

*Mika -  
for general  
dioxin file*

Mr. C. H. Fancy, P.E.  
Bureau of Air Quality Management, D.E.R.  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

Dear Mr. <sup>*claw*</sup>Fancy:

The McKay Bay Refuse-to-Energy Office, City of Tampa, has received a copy of your letter to the St. Petersburg Times (Mr. Milo Geyelin) dated February 8, 1985. This letter was in reference to the proposed emissions testing of the VICON Resource Recovery Facility in Pittsfield, Massachusetts.

As you are aware, the McKay Bay Refuse-to-Energy Facility is scheduled to be fully operational in the fall of this year. We would like to receive the result of the VICON tests, as well as test results from other facilities, as they become available. Thank you for your consideration.

Sincerely,

Joseph D. Murdoch  
Urban Environmental Coordinator

JDM/dw:9/10

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

January 24, 1985

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mike Salmon, Administrator  
Water Resources and Public Works  
City of Tampa  
City Hall Plaza, 5 North  
Tampa, Florida 33602

RE: Request to extend the expiration date of construction  
permit AC 29-47277

Dear Mr. Salmon:

The department has received your request to extend the expiration date of the above referenced state construction permit for the McKay Bay Refuse - to - Energy Project. The department is in agreement with the request and the following shall be added or changed:

Expiration Date:

From: December 31, 1984  
To: December 31, 1985

Attachments to be incorporated:

5. M. Salmon's letter, dated June 4, 1984, requesting the extension.
6. C. Gonzalez's memorandum, dated August 10, 1984, on commencement of construction.

Mr. Mike Salmon  
Page Two  
January 24, 1985

7. C.H. Fancy's letter, dated August 31, 1984, requesting additional information.
8. J.D. Murdoch's letter, dated January 15, 1985, in response to seeking offsets.

This letter must be attached to your construction permit, AC 29-47277, and shall become a part of that permit.

Sincerely,



Victoria J. Tschinkel  
Secretary

VJT/rw

Attachments

cc: Richard Garrity, Southwest District  
Victor St. Augustine, Hillsborough EPC

PS Form 3811, July 1983

**SENDER: Complete items 1, 2, 3 and 4.**  
 Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

- 1  Show to whom, date and address of delivery.
- 2  Restricted Delivery.

3 Article Addressed to:  
 Mr. Mike Salmon  
 City of Tampa  
 City Hall plaza, 5 North  
 Tampa, FL 33602

4 Type of Service: Article Number  
 Registered  Insured 0155814  
 Certified  COD  
 Express Mail

Always obtain signature of addressee or agent.  
 DATE DELIVERED: **TAMPA, FL DOWNTOWN STA**  
**FEB 4 1985**  
**USA**  
 5 Signature - Addressee  
 X *[Signature]*

6 Signature - Agent  
 X *[Signature]*

7 Date of Delivery  
*02-04-85*

8 Addressee's Address (ONLY if requested and fee paid)

DOMESTIC RETURN RECEIPT

No. 0155814

RECEIPT FOR CERTIFIED MAIL  
 NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

SENT TO		Mr. Mike Salmon	
STREET AND NO.			
P.O., STATE AND ZIP CODE			
POSTAGE		\$	
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE	¢	
	SPECIAL DELIVERY	¢	
	RESTRICTED DELIVERY	¢	
	OPTIONAL SERVICE'S RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
		SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE		1/30/85	

PS Form 3800, Apr. 1976



# CITY OF TAMPA

Bob Martinez, Mayor

McKAY BAY REFUSE-TO-ENERGY PROJECT

January 15, 1985

Mr. Clair Fancy  
Deputy Chief  
Bureau of Air Quality Management  
Department of Environmental Regulation  
Twin Towers  
2600 Blair Stone Road  
Tallahassee, Florida 32301-8241

Dear Mr. Fancy:

The City is in receipt of your letter of August 31, 1984 concerning continued solicitation of offsets for the McKay Bay Refuse-to-Energy Facility. In September, we sent the attached letter to all known particulate sources in and around the Hillsborough County particulate non-attainment area (see attached list). To date we have not received replies from any of these sources.

We will continue to periodically request offsets from these sources, and will copy you on all reports. I hope this information will make it possible to grant the extension of our air quality permit to December 31, 1985. Please contact me if you require additional information. Thank you.

Very truly yours,

Joseph D. Murdoch  
Urban Environmental Coordinator

JDM/dw:7/93

Attachment

DER

JAN 21 1985

BAQM

September 27, 1984

The City of Tampa is currently constructing a 1000 ton per day refuse-to-energy facility for the disposal of the City's solid waste. The Facility is located on McKay Bay, within the Hillsborough County non-attainment area for total suspended particulates (TSP).

The State of Florida non-attainment air emissions regulations require offsets for emissions of non-attainment pollutants from sources locating in non-attainment areas. In July of 1981 your company was contacted to determine whether TSP offsets were available, and your response was negative.

The City is required to show a continued effort to obtain offsets and to apply them when they become available. By this letter, the City is again inquiring as to the availability of offsets from your firm. If your firm possesses available TSP offsets from reduced emissions at your facility, or from other means, please contact me.

Thank you for your time and consideration.

Very truly yours,

Joseph D. Murdoch  
Resource Recovery Management Analyst

JDM/dw:6/30

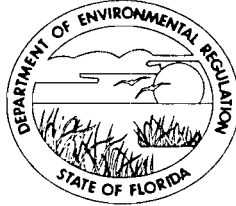


SOURCES OF PARTICULATE EMISSIONS  
IN HILLSBOROUGH COUNTY

<u>NAME OF FIRM</u>	<u>TELEPHONE</u>
1. Allen Morrison, Environmental and Chemical Services Manager Gardinier, Inc. P.O. Box 3269 Tampa, Florida 33601	677-9111
<i>William H.</i> 2. <del>Henry</del> Winders, Environmental Manager General Portland, Inc., Fla. Division P.O. Box 22348 Tampa, Florida 33622	872-7777
3. Robert O'Neil, Manager-Marketing Service Florida Steel Corp. P.O. Box 23328 Tampa, Florida 33623	251-8811
<i>Spencer A. Vary</i> 4. <del>J. L. Williams</del> , Manager-Environmental Planning Tampa Electric Company - Tampa P.O. Box 1118 Tampa, Florida 33601	879-4111
5. John C. Thompson, Environmental Nitram, Inc. P.O. Box 2968 Tampa, Florida 33601	626-2181

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

August 31, 1984

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Mike Salmon, Administrator  
Water Resources and Public Works  
City of Tampa  
City Hall Plaza, 5 North  
Tampa, Florida 33602

Dear Mr. Salmon:

The department has received your request to extend the expiration date of construction permit AC29-47277 for the McKay Bay Refuse-to-Energy project. We will need the following information in order to complete the review of your request.

Florida Administrative Code Rule 17-2.510(3)(c) requires that the applicant "commits to continuing to seek the required emission offsets and to apply them when they become available". Please provide all documentation that will show compliance with this requirement.

When this information is received, we will resume processing your request. If you have any questions, please call Edward Svec, Review Engineer, at (904) 488-1344 or write to me at the above address.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/ES/agh

cc: Richard Garrity, Southwest District  
Victor St. Augustine, EPC

PS Form 3811, Jan 1978  
RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

**SENDER:** Complete items 1, 2, and 3.  
Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)  
 Show to whom and date delivered. ....  
 Show to whom, date and address of delivery. ....  
 RESTRICTED DELIVERY  
Show to whom and date delivered. ....  
 RESTRICTED DELIVERY  
Show to whom, date, and address of delivery S. ....  
**(CONSULT POSTMASTER FOR FEES)**

2. ARTICLE ADDRESSED TO:  
Mr. Mike Salmon  
City Hall Plaza, 5 North  
Tampa, Florida 33602

3. ARTICLE DESCRIPTION:  
REGISTERED NO. | CERTIFIED NO. | INSURED NO.  
| 0156557 | |  
**(Always obtain signature of addressee or agent)**

I have received the article described above.  
SIGNATURE  Addressee  Authorized agent  
*[Signature]*

4. DATE OF DELIVERY  
SEP 10 1984

5. ADDRESS (Complete only if requested)

6. UNABLE TO DELIVER BECAUSE:

POSTMARK  
TAMPA FL  
SEP 10 1984  
CLERK'S INITIALS

# COUNTY OF HILLSBOROUGH



MEMORANDUM

DER

AUG 16 1984 Date August 10, 1984

To Ed Svec, BAQM, DER, Tallahassee

BAQM

From Carlos Gonzalez, HCEPC

Subject: Contract Agreement To Commence Construction Of McKay Bay RTE Project (City of Tampa)

As per our recent conversation, I received today the enclosed document on the McKay Bay Project from Nancy McCann of the City of Tampa.

Ironically, the term "McKay Bay", as we usually refer to this facility, does not appear anywhere in the document. I am, however, confident that the term "Refuse-to-Energy Facility" in the document agrees with what Ms. McCann and I discussed over the telephone in regard to "McKay Bay" on August 6, and I quote from her..."contract agreement with Waste Management, Inc. was signed in August 1982." She further added that actual construction began on April 1983.

On July 23, 1984 our Anthony Jones and Bill Voshell from EPA, Region IV visited the facility and commented that construction was underway, nearly half finished, and somewhat ahead of schedule.

I have reviewed the above information and feel confident that the City of Tampa has met the "Commence Construction" criteria as described in Federal 40 CFR Part 51 and kept in force the PSD permit issued on July 1982.

cc:  
Bill Thomas, DER

Enclosures

sw/5-B14

RESOLUTION NO. 2016 -H

A RESOLUTION APPROVING THE CONTRACT BETWEEN THE CITY OF TAMPA AND WASTE MANAGEMENT, INC., FOR THE DESIGN AND CONSTRUCTION OF A REFUSE-TO-ENERGY FACILITY; AUTHORIZING THE EXECUTION OF SAID CONTRACT BY THE MAYOR OF THE CITY OF TAMPA; AND PROVIDING AN EFFECTIVE DATE.

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF TAMPA, FLORIDA:**

Section 1. That the contract between the City of Tampa and Waste Management, Inc., for the design and construction of a refuse-to-energy facility, is hereby accepted and approved.

Section 2. That the Mayor of the City of Tampa is authorized to execute and the City Clerk to attest and affix the official Seal of the City of Tampa to a contract with Waste Management, Inc., a copy of which is attached and by reference made a part of this Resolution.

Section 3. Funds for this project are being anticipated and appropriated in a companion resolution being simultaneously presented. These funds will be made available within six months of this Contract's effective date by the sale of a bond issue presently estimated to be \$125,000,000.

Section 4. That other proper officers of the City of Tampa are hereby authorized and empowered to do all things necessary and proper in order to carry out and make effective all of the provisions of this Resolution.

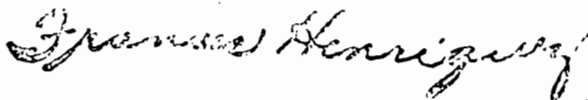
Section 5. That this Resolution shall take effect immediately upon its adoption.

PASSED AND ADOPTED by the City Council of the City of Tampa, Florida, on Aug 26 1982.



Chairman, City Council

ATTEST:



City Clerk

Approved as to Form:



Assistant City Attorney

HILLSBOROUGH COUNTY ENVIRONMENTAL PROTECTION COMMISSION

INSPECTION REPORT EXECUTIVE SUMMARY

PLANT NAME McKay Bay RTE NEDS 127 DATE/TIME 7/23/84 @ 10:00 a

PLANT LOCATION Tampa, Hillsborough County 27.56'51" N 82.25'14" W OF NEDS POINTS 4

PROCESS DESCRIPTION Disposal of solid waste + subsequent recovery of energy + materials

COMPLIANCE VERIFICATION ENFORCEMENT ( ) PERMIT REVIEW OTHER ( )

PERSONS CONTACTED-TITLE Bill Hooper, Site Administrator + Joe Murdoch, City of Tampa

NEDS POINTS CHECKED 4 NEDS POINTS IN COMPLIANCE NEDS POINTS IN VIOLATION 0

SUMMARY OF FINDINGS Visited facility w/ Bill Voskell, USEPA Region 4. Construction in progress. Expected completion 9/85. Boiler, Turbine, + Cooling towers in place. About 7 months ahead of schedule

INSPECTION COMMENTS FOR APIS (LIMIT 50 SPACES)

INSPECTOR'S SIGNATURE A. Jones



# CITY OF TAMPA

Bob Martinez, Mayor

Water Resources and Public Works

Mike Salmon  
Administrator

DER D.E.R.

June 4, 1984

JUL 19 1984

JUN 07 1984

BAQM SOUTH WEST DISTRICT  
TAMPA

Dr. Richard D. Garrity  
Department of Environmental Regulation  
Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610-9544

Dear Dr. Garrity:

The air permit for the McKay Bay Refuse-to-Energy Facility is scheduled to expire on December 31, 1984. Construction of the Facility is not expected to be completed until May of 1985, with acceptance testing anticipated in August or September. We are requesting, therefore, that our permit expiration date be extended to December 31, 1985, to allow for completion of construction and any construction contingencies. The City will notify your office and apply for an operating permit at least ninety (90) days prior to the acceptance testing date.

If you have any questions concerning this request, please contact Joe Murdoch (223-8071) of the McKay Bay staff. Thank you.

Sincerely,

Mike Salmon, Administrator  
Water Resources and Public Works

MS/dw:4/63

cc Robert Van Deman  
Joseph D. Murdoch  
Victor St. Augustine, EPC  
Charles Jeter, EPA

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

May 20, 1983

Mr. Dale H. Twachtmann  
City of Tampa  
McKay Bay Refuse-To-Energy Project  
City Hall Plaza, 5N  
Tampa, Florida 33602

Re: Modification of Conditions, Permit No. AC 29-47277

Dear Mr. Twachtmann:

We are in receipt of requests for modifications of the permit conditions. The specific conditions are changed as follows:


Specific Condition 2

From: Municipal waste only shall be burned in the facility. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.

TO: Municipal waste and infectious waste shall be burned in the facility. Waste oil collected from spills cleaned up by the Port Authority not exceeding 10,000 gallons per day from tanker trucks or 10 tons per day of fiber drums shall also be burned. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.

This letter must be attached to your permit and becomes a part of that permit.

Sincerely,

  
Victoria J. Tschinkel  
Secretary

VJT/ks

Issued this 20 day of May, 1983



Final Determination

Amendment to  
McKay Bay Refuse-To-Energy Project  
Hillsborough County

Permit Number  
AC 29-47277

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

May 20, 1983

## FINAL DETERMINATION

The City of Tampa's request to amend the construction permit of its McKay Bay Refuse-To-Energy Project to allow the incineration of infectious waste and waste oil recovered from oil spills has been reviewed by the Bureau of Air Quality Management. The department's Intent to Issue the permit was published in the Tampa Tribune on April 11, 1983.

Copies of the preliminary determination and technical review were available for public inspection at the Hillsborough County Environmental Protection Commission Office, the DER Southwest District Office, and the Bureau of Air Quality Management office.

No comments were received regarding this permit amendment. Therefore, it is requested that the permit conditions be issued as indicated in the preliminary determination.

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Victoria J. Tschinkel  
FROM: Clair Fancy *Clair Fancy*  
DATE: May 20, 1983  
SUBJ: Approval of Air Construction Permit Amendment

Please find attached an amendment to the City of Tampa's permit for the McKay Bay Refuse-To-Energy Project to allow the incineration of infectious waste and waste oil recovered from oil spills.

The Bureau recommends your approval and signature.

CF/pa

Attachment

**RECEIVED**  
MAY 20 1983  
Office of the Secretary



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

DER

MAY 09 1983

May 3, 1983

BAQM

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

Dear Mr. Fancy:

Please find the enclosed Legal Notice published in the Tampa Tribune, April 11, 1983. I believe this satisfies our legal advertising requirements.

Please contact me if you have additional questions or requests. Thank you.

Very truly yours,

Richard D. Garrity, Ph.D.  
Urban Environmental Coordinator

RDG/dw

THE TAMPA TRIBUNE

Published Daily  
Tampa, Hillsborough County, Florida

State of Florida }  
County of Hillsborough } ss.

Before the undersigned authority personally appeared  
C. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily  
newspaper published at Tampa in Hillsborough County, Florida; that the attached copy  
of advertisement being a

LEGAL NOTICE

in the matter of Notice that the Department of Environmental  
Regulation gives notice of its intent to modify a permit to  
the City of Tampa to allow the incinerating of infectious  
waste and waste oil recovered at the Port of Tampa.  
was published in said newspaper in the issues of  
April 11, 1983

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

*G. T. Gleason*

Sworn to and subscribed before me, this 19th day  
of April, A.D. 19 83

*J. S. R...*

(SEAL)

Notary Public, State of Florida at Large  
My Commission Expires Jan 25, 1986

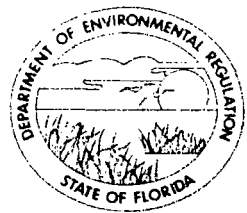
Notice of Proposed  
Agency Action  
The Department of  
Environmental Regulation  
gives notice of its intent  
to modify a permit to the  
City of Tampa to allow  
the incinerating of infec-  
tious waste and waste oil  
recovered from oil spills  
occurring at the Port of  
Tampa at the McKay Bay  
Refuse to Energy Project  
in Hillsborough County. A  
determination of Best  
Available Control Tech-  
nology (BACT) was not  
required.  
A person who is sub-  
stantially affected by the  
Department's proposed  
permitting decision may  
request a hearing in ac-  
cordance with Section  
120.57, Florida Statutes,  
and Chapters 171 and  
205, Florida Administra-  
tive Code. The request  
for hearing must be filed  
(received) in the Office of  
General Counsel of the  
Department at 2600 Blair  
Stone Road, Twin Towers  
Office Building, Tallahas-  
see, Florida 32301, within  
fourteen (14) days of  
publication of this notice.  
Failure to file a request  
for hearing within this  
time period shall consti-  
tute a waiver of any right  
such person may have to  
request a hearing under  
Section 120.57, Florida  
Statutes.  
The application, techni-  
cal evaluation and  
Department's intent are  
available for public in-  
spection during normal  
business hours, 8:00 a.m.  
to 5:00 p.m., Monday  
through Friday, except  
legal holidays, at the fol-  
lowing locations:  
DER Bureau of Air  
Quality Management  
2600 Blair Stone  
Road  
Tallahassee, Florida  
32301  
Hillsborough County  
Environmental  
Protection Commis-  
sion  
1900 Ninth Avenue  
Tampa, Florida  
33605  
DER Southwest Dis-  
trict  
7601 Highway 301  
North  
Tampa, Florida  
33610  
Comments on this  
action shall be submitted  
in writing to Bill Thomas  
of the DER Tallahassee  
office within thirty (30)  
days of this notice.  
M2785 4/11/83

*Subj file*

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

February 3, 1983

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Dale H. Twachtmann  
City of Tampa  
McKay Bay Refuse-To-Energy Project  
City Hall Plaza, 5N  
Tampa, Florida 33602

Dear Mr. Twachtmann:

Attached is one copy of the Technical Evaluation and Preliminary Determination, and proposed letter modifying your permit for the McKay Bay Refuse-To-Energy Project in Tampa, Florida.


Before final action can be taken on your proposed modification, you are required by Florida Administrative Code Rule 17-1.62(3) to publish the attached Notice of Proposed Agency Action in the legal advertising section of a newspaper of general circulation in Hillsborough County no later than fourteen days after receipt of this letter. The department must be provided with proof of publication within seven days of the date the notice is published.

The Preliminary Determination and proposed permit modification constitute a proposed action of the department and is subject to administrative hearing under the provisions of Chapter 120, Florida Statutes, if requested within fourteen days from receipt of this letter. Any petition for hearing must comply with the requirements of Florida Administrative Code Rule 28-5.201 and be filed with the Office of General Counsel, Florida Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32301. Failure to file a request for hearing within fourteen days shall constitute a waiver of your right to a hearing. Filing is deemed complete upon receipt by the Office of General Counsel.

Mr. Dale H. Twachtmann  
February 3, 1983  
Page Two

Please submit, in writing, any comments which you wish to have considered concerning the department's proposed action to Bill Thomas of the Bureau of Air Quality Management.

Sincerely,



C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/pa

Attachment

cc: Mr. Joe Murdoch, City of Tampa  
Mr. Ralph Lee Torrens, Henningson, Durham & Richardson  
Mr. Dan Williams, DER Southwest District  
Mr. John Egan, Hillsborough County Environmental  
Protection Commission

Preliminary Determination  
and  
Technical Review

Amendment to  
McKay Bay Refuse-To-Energy Project  
Hillsborough County

Permit Number  
AC 29-47277

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

February 1, 1983



## Notice of Proposed Agency Action

The Department of Environmental Regulation gives notice of its intent to modify a permit to the City of Tampa to allow the incinerating of infectious waste and waste oil recovered from oil spills by the Port Authority at its McKay Bay Refuse-To-Energy Project in Hillsborough County. A determination of Best Available Control Technology (BACT) was not required.

A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 17-1 and 28-5, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

The application, technical evaluation and Department's intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:

DER Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DER Southwest District  
7601 Highway 301 North  
Tampa, Florida 33610

Hillsborough County Environmental  
Protection Commission  
1900 Ninth Avenue  
Tampa, Florida 33605

Comments on this action shall be submitted in writing to Bill Thomas of the DER Tallahassee office within thirty (30) days of this notice.

## I. Project Description

### A. Applicant:

City of Tampa  
City Hall Plaza, 5N  
Tampa, Florida 33602

### B. Project and Location

The applicant's proposed project consists of constructing an infectious waste handling facility to feed this type waste to the resource recovery units. Also permission to burn oil from spills recovered by the Port Authority has been requested. The facility is located in Tampa in Hillsborough County. The universal transverse mercator (UTM) coordinates of the source are zone 17, 360.0 km East and 3091.9 km North.

### C. Project Description and Controls

The resource recovery facility will be modified by the addition of an infectious waste loading area at the rear of the facility. The bagged infectious waste will be transferred to portable buckets. The buckets will be wheeled into an elevator and transported to the feed chute for the incinerator, where they will be mechanically discharged into the chute. Workers will not come into direct contact with the waste and no infectious wastes will be discharged directly into the refuse pit.

The facility operation will also be modified by allowing the incineration of waste oil collected by the port authority from the clean up of oil spills. The oil will be delivered to the resource recovery facility by tanker truck or in polyethylene pads packed in fiber drums. Recovered oil from the tanker trucks would be sprayed onto the refuse in the pit. The fiber drums would be placed directly into the combustion train. The facility would accept no more than 15,000 gallons per day of oil from tankers or 10 tons per day of fiber drums. This will increase the heat content of the municipal waste. It is estimated that an average of 10,000 gallons per year will be disposed of by this method.

Since the capacity of the resource recovery units are not being increased, the control equipment will adequately control the emissions generated at the facility. Emission limitations will be the same as those issued previously.

## II. Rule Applicability

The proposed project does not meet the definition of a modification as contained in Florida Administrative Code Rule 17-2.100 (102) since actual emissions are not increased.

Therefore, the new source review requirements for nonattainment areas and the new source review requirements for prevention of significant deterioration areas are not applicable.

The proposed project is a significant change to permit specific conditions. Therefore, the public must have opportunity for comment before the amendment can be issued.

### III. Summary of Emissions and Air Quality Analysis

#### A. Emission Limitations

The maximum hourly and the annual emission limitations are unchanged by this proposal. The hourly and annual throughput rates of feed to the incinerator also remain the same. Therefore, the emission limitations previously issued, will not be amended.

#### B. Air Quality Analysis

Since there is no increase in emissions, an ambient air quality analysis is not required.

### IV. Conclusions

Incineration is the preferred method of disposal of infectious waste. The Department of Health and Rehabilitative Services and the Department of Environmental Regulation have issued a joint memorandum which defines infectious waste and recommends incineration.

The usual method of disposal of infectious waste is using a pathological incinerator. The information provided with this proposal indicated the residence time of approximately 3.7 seconds at 1800° F will exceed the minimum temperature and residence time requirements for a pathological incinerator which are listed in the EPA document AP-40. Since separate handling procedures and equipment will be added to ensure safe handling of this waste and adequate destruction should be provided by the incinerator, the Department agrees to this change.

The other part of the proposal involves the incineration of oil which has been cleaned up from oil spills and collected by the Port Authority. This oil will be put on the waste in the refuse pit. Thus, the heating value of the municipal waste should increase and aid in its destruction. No increase in emissions is expected from this operation.

The specific conditions should be amended to allow these proposals, since the facility would remain in compliance with all applicable requirements of Chapter 17-2, FAC.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

February 1, 1983

Mr. Dale H. Twachtmann  
City of Tampa  
McKay Bay Refuse-To-Energy Project  
City Hall Plaza, 5N  
Tampa, Florida 33602

**DRAFT**

Dear Mr. Twachtmann:

Re: Modification of Conditions, Permit No. AC 29-47277

We are in receipt of requests for modifications of the permit conditions. The specific conditions are changed as follows:

Specific Condition 2

From: Municipal waste only shall be burned in the facility. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.

To: Municipal waste and infectious waste shall be burned in the facility. Waste oil collected from spills cleaned up by the Port Authority not exceeding 10,000 gallons per day from tanker trucks or 10 tons per day of fiber drums shall also be burned. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.

This letter must be attached to your permit and becomes a part of that permit.

Sincerely,

Victoria J. Tschinkel  
Secretary

VJT/ks



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

November 9, 1982

DER  
NOV 17 1982  
EACOM

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. Fancy:

As you are aware, the City of Tampa has received permits from D.E.R. for construction of the McKay Bay Refuse-to-Energy Facility. The Facility is designed to burn solid waste from the City of Tampa and to simultaneously generate electricity. The City would also like to burn infectious waste in the Facility.

The Department of Health and Rehabilitative Services and D.E.R. have issued a joint memorandum which defines infectious waste and recommends incineration as the preferred method of disposal. While the City of Tampa's application to construct an air pollution source does not prohibit burning of infectious waste, the subject is not specifically addressed. The City therefore requests that your office confirm the acceptability of burning infectious waste in the McKay Bay Refuse-to-Energy Facility.

Special handling procedures and equipment have been added to the operation and construction plans for the Facility to insure safe handling of the infectious waste (see attached). Additionally, the Facility design will allow a residence time of approximately 3.7 seconds, at 1800°F, for all gases (attached). Also, as we have previously discussed, no radioactive waste will be disposed of at the incinerator.

If you have any questions concerning this request, please contact me. Thank you for your time and consideration.

Sincerely,

Joseph D. Murdoch  
Resource Recovery Management Analyst

JDM/dw

cc John Egan, EPC



Waste Management, Inc.  
3003 Butterfield Road • Oak Brook, Illinois 60521

November 5, 1982

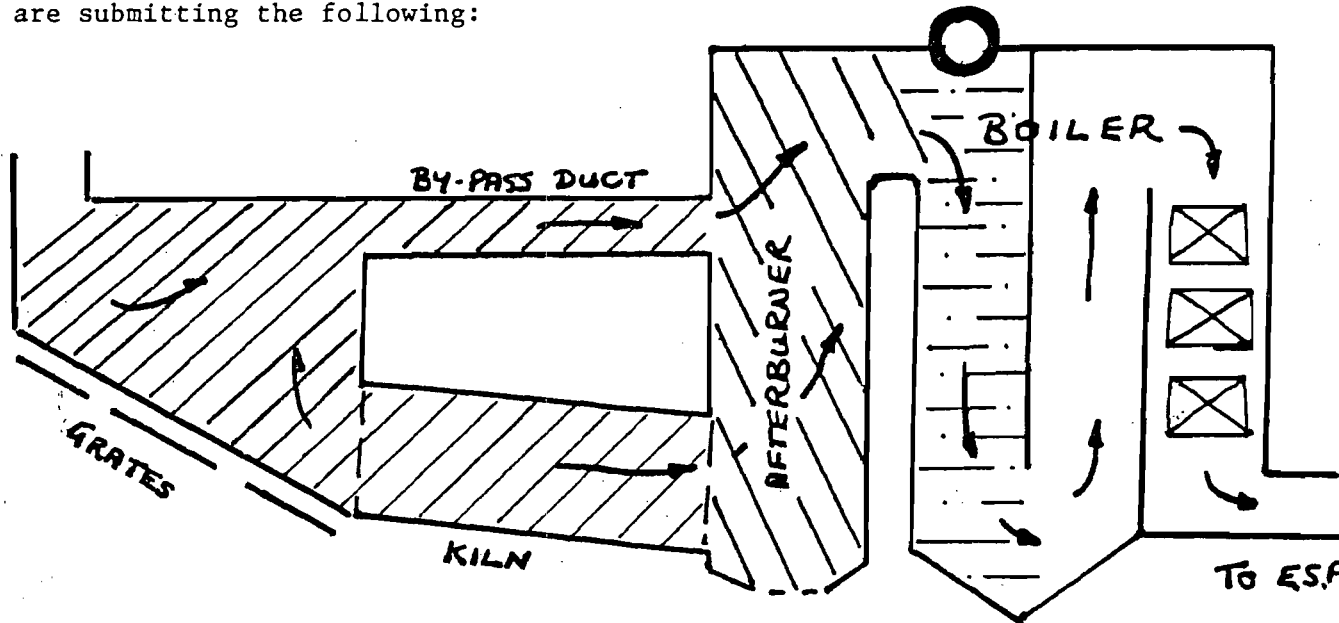
City of Tampa  
City Hall Plaza, 5N  
Tampa, Florida 33602

Attention: Mr. Joe Murdoch

Subject: System Vølund - Gas Residence Time and Temperature

Dear Joe:

In response to your recent request for information concerning odor control and burn-out of gases in the furnace system to be installed at McKay Bay, we are submitting the following:



Zone 1 - Furnace, Rotary Kiln and By-Pass Ducting  
Average Temperature 1750°F  
Residence Time 2.7 seconds



Zone 2 - Afterburner  
Average Temperature 1750°F  
Residence Time 0.95 seconds



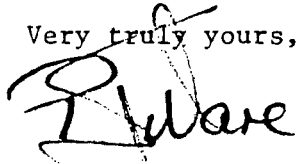
Zone 3 - Boiler - 1st Pass  
Average Temperature 1300°F  
Residence Time 3.89 seconds

Mr. Joe Murdoch  
November 5, 1982  
Page 2

It has been Volund's experience that gas retention for 1 second at or above 1300°F will eliminate any detectable odor in the flue gases.

I hope this information is helpful in your discussions with the appropriate officials.

Very truly yours,

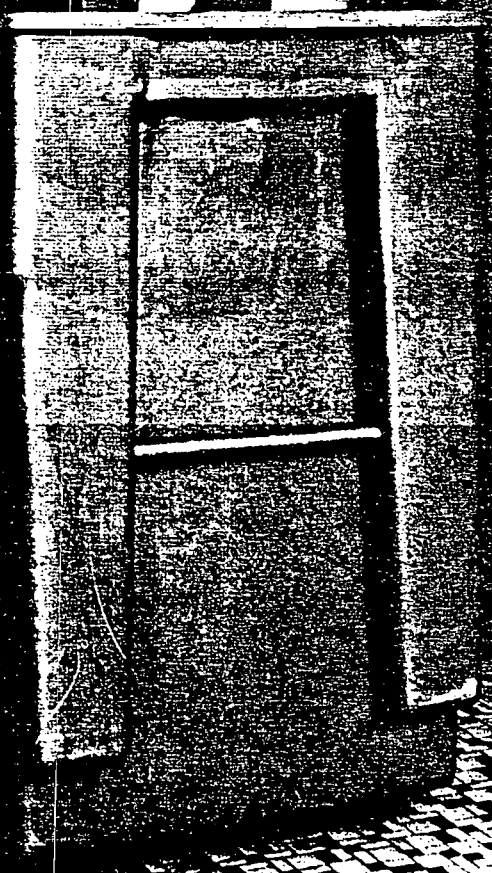
A handwritten signature in cursive script that reads "Peter J. Ware". The signature is written in black ink and is positioned above the typed name.

Peter J. Ware  
Director  
Technical Development

PJW:mat

**Rubbermaid**

# **in/terior service Tote**

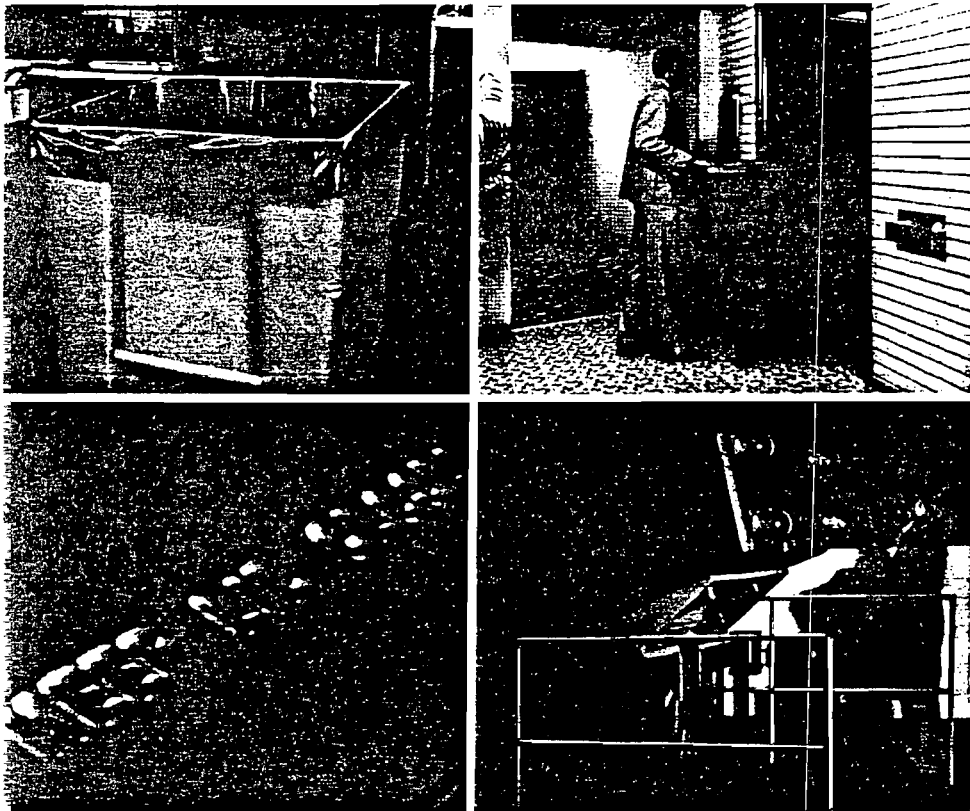


**A safety-first system for collecting and automatically dumping all types of building trash.**



# Building trash can now be collected, transported and automatically dumped in stationary compactors more efficiently; with greatly reduced risk of employee injury.

Collecting, transporting and dumping the wide variety of trash generated within a typical commercial building or plant presents many problems - but, a Rubbermaid in/terior service Toter system can solve **most** of them! For example:



## 1. Safer trash handling and dumping.

Back strain and fall related injuries are the two most obvious dangers of handling and dumping trash - Rubbermaid in/Toter systems feature automatic, remote-controlled dumpers to help avoid these potential employee hazards. The special electric - hydraulic dumping units eliminate the need to lift or hand-dump trash into compactors or other transfer containers. The employee simply hooks the in/Toter then actuates the dumper from a safe, remote location. Along with reducing injury risk - the system can also save on insurance costs, workmen's compensation settlements, plus absenteeism. And, of course, improved working conditions mean better employee morale!

## 2. Color-coding and signage for better management...and looks!

Each department, floor section...or, 'special activity', can have its own color-coded and/or custom-imprinted carts. This provides better inventory control and color harmony to your building decor.

## 3. Easier on your building!

The smooth, rounded edges. The less abrasive material. The more controlled - maneuverability...and the compact, trim-line design of **both** carts cuts down on damage to interior walls, floors and doors.

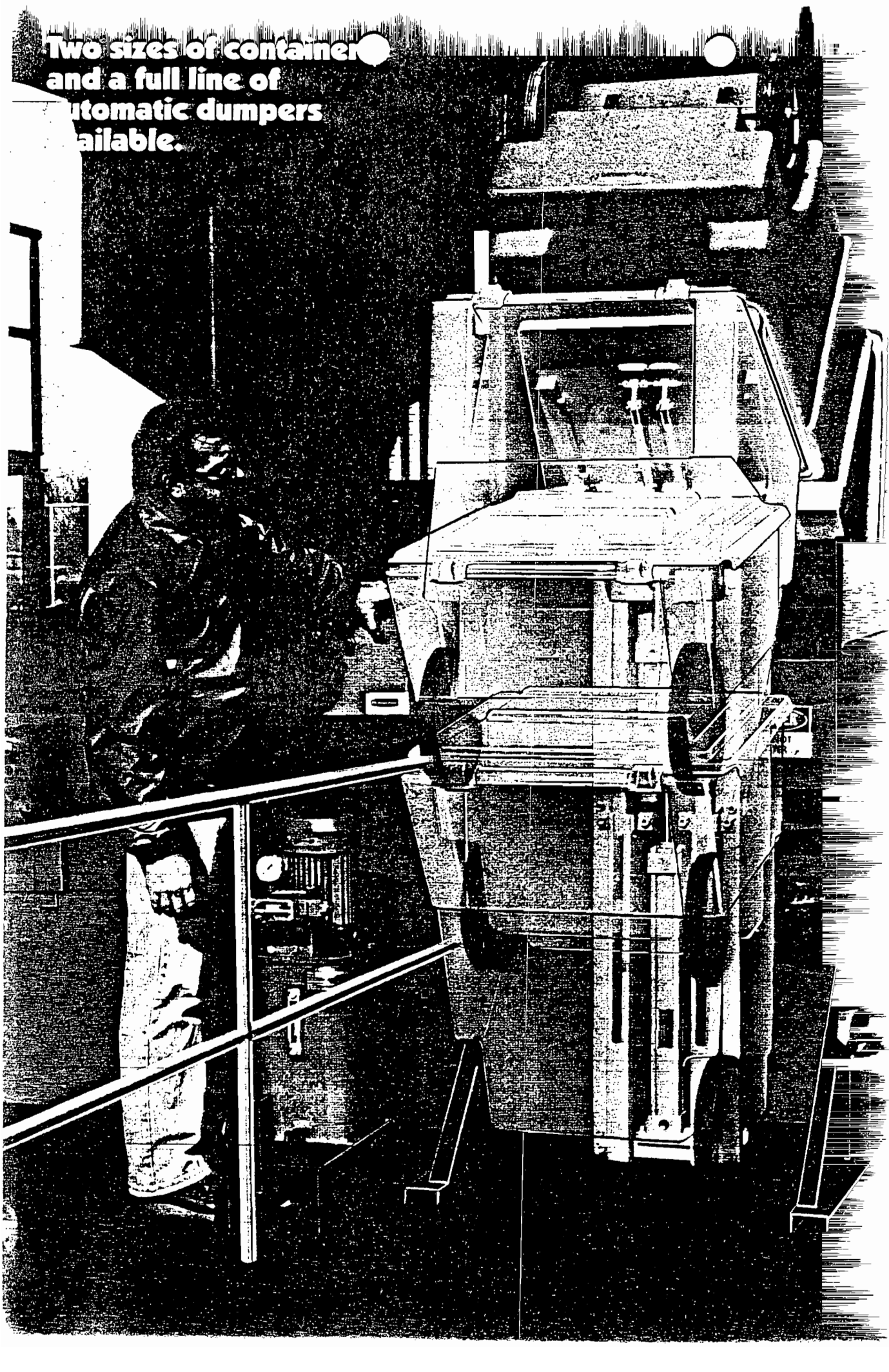
## 4. A versatile one-source answer!

Rubbermaid in/Toters can handle all types/of normal building refuse including **wet** trash. Our container walls are virtually impervious and special liners are available.

## 5. Efficiency and cost-control

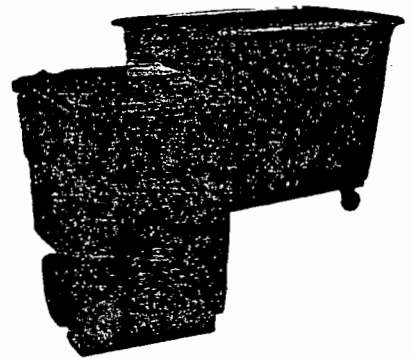
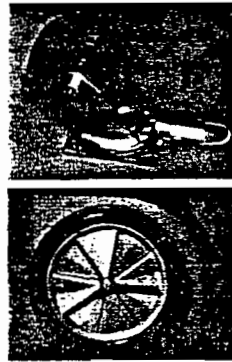
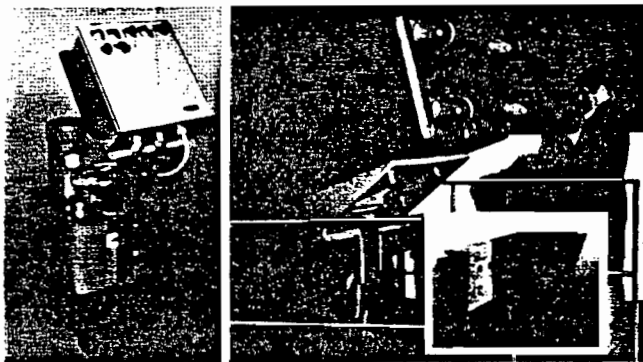
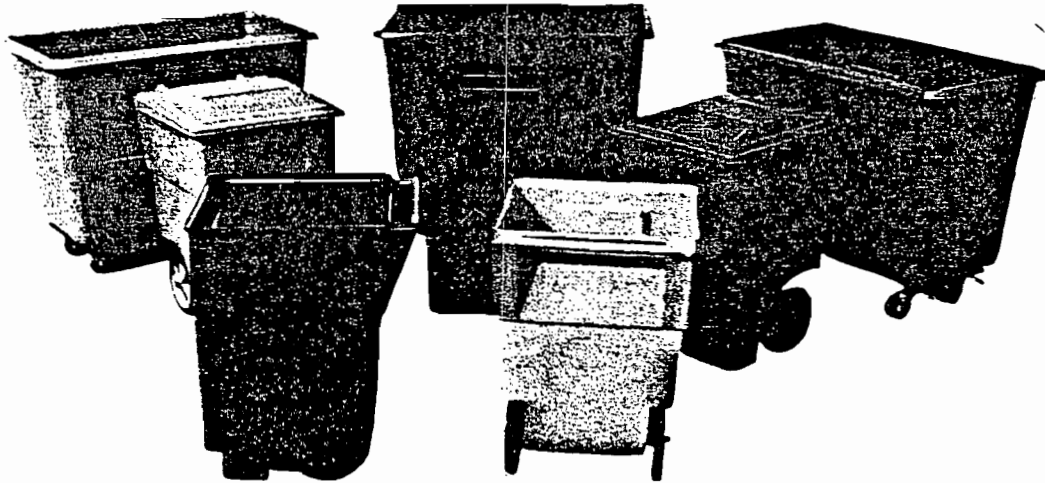
Easy-rolling, maneuverable Rubbermaid in/Toters come in two hi-capacity sizes to help achieve faster trash collection. This can significantly reduce manpower costs!

Two sizes of container  
and a full line of  
automatic dumpers  
available.



BEST AVAILABLE COPY

# Traditional Rubbermaid Product Integrity.



## Hydraulic Dumper SPECIFICATIONS

Electro-hydraulic dumpers available for most dock level and ground level stationary compactors. **NOTE:** 1.0 cu. yd. Dumper will dump both sizes of in/Toters.

<b>POWER:</b>	3ph./60cy./220-440V.	1/2 cu. yd.	1.0 cu. yd.
	Totally enclosed, fan-cooled motor. All electrical components are UL listed.	2 hp	3 hp
<b>HYDRAULICS:</b>	1300psi; Built-in fluid filter and flow control valves. Meets all J.I.C. and I.S.O. Standards.	2 gpm	3 gpm
		5 gal. reservoir	10 gal. reservoir

**CONTROLS:** Key - operated ON/OFF with manual directional "deadman" valve.

**INSTALLATION:** Dumpers are specified and custom -installed by exclusive in/Toter™ distributors. to work with most stationary compactor models.

This equipment conforms to all applicable ANSI Z245.1-1975 Safety Standards. Pictures in this brochure are illustrative only. Products must be installed in conformity with ANSI Z245.1 as well as any applicable codes and regulations. Products must be used with safe practices and in accordance with said regulations and standards.

## in/Toter™ SPECIFICATIONS

	1/2 cu. yd.	1.0 cu. yd.
<b>DIMENSIONS:</b>	32"Lx29"Wx41 1/2"H	55 1/2"Lx33 1/2"Wx44 1/2"H
<b>WEIGHT:</b>	37 lbs.	98 lbs.
<b>In/Toter Lid</b>	5 lbs.	11 lbs.
<b>CAPACITY:</b>	200 lbs., 11 cu. ft.	500 lbs., 1.0 cu. yd.
<b>WHEELS:</b>	2-12"x1.75" Semi-pneumatic	2-5" Swivel Casters 2-5" Locking Casters
<b>MATERIAL:</b>	Specially compounded high density polyethylene	
<b>COLORS:</b>	Brown, Blue, Red, Orange, Yellow	
<b>IMPRINTING:</b>	Permanent hot stamped imprinting optional. Examples: "SOILED LINEN", "KITCHEN"	
<b>LINER:</b>	Gray or red poly-bag liners available.	

Specifications subject to change without notice.

**A safety-engineered system manufactured and distributed exclusively by:**

Paul Reilly Company of Illinois, Inc.  
1319 Howard St.  
Elk Grove Village, IL 60007  
(312) 364-1960



**RUBBERMAID APPLIED PRODUCTS, INC.**



STATE OF FLORIDA

DEPARTMENT OF

# Health & Rehabilitative Services

Bob Graham, Governor

1317 WINEWOOD BOULEVARD

TALLAHASSEE, FLORIDA 32301

PDHEC (904/488-2905, SC278-2905)

January 25, 1982  
INFORMATION

**SUBJECT:** Guidelines for Hospitals, Renal Dialysis Centers,  
Nursing Homes and Laboratories for the Classification  
and Handling of Disposable Infectious Waste

**TO:** District Administrators  
Attention: Health Program Supervisors  
County Health Unit Directors  
All Licensed Hospitals

Attached are guidelines (minimum standards) for hospitals, renal dialysis centers, nursing homes, and laboratories for the classification and handling of disposable infectious waste. These guidelines were developed following a meeting of representatives from the Department of Health and Rehabilitative Services, Department of Environmental Regulation, Centers for Disease Control, County Health Units, Hospital Infection Control Specialists, and Waste Disposal Industry (June 29, 1981 - list of attendees available upon request). The guidelines in draft form were distributed to all meeting attendees for comment.

These guidelines are intended to aid hospitals, renal dialysis centers, nursing homes, and laboratories in classifying and handling disposable infectious waste in preparation for collection and ultimate disposal in the environment. They are not intended to be all encompassing recommendations for handling human tissues/waste specimens (or materials in contact with such specimens) within hospitals. Hospitals and other institutions should develop additional internal policies for the protection of employees from contact with potentially infectious material and for the proper sterilization of reusable items. We feel, and the Department of Environmental Regulation (DER) concurs, that these guidelines are not in conflict with DER Administrative Code, Chapter 17-7.02, Definition of Infectious Waste, since that definition uses permissive language in determining what waste materials are infectious waste, i.e. "...waste which may consist of...". Once materials are classified as infectious, they shall be disposed of in accordance with DER Administrative Code, Chapter 17-7.04. It is, therefore, obvious that the enforcement of these guidelines (or when they are incorporated

into F.A.C.) will have to take place at the source (hospital, etc.) and will not be enforceable by examining materials in landfills (unless they are in an infectious waste bag).

We hope that any local ordinances pertaining to this subject will be based on these guidelines. We plan to incorporate them, in principle, into the Florida Administrative Code pertaining to hospitals (Chapter 10D-28) and nursing homes (Chapter 10D-29) and therefore, additional comments are appreciated.



ROBERT A. GUNN, M.D., M.P.H.  
State Epidemiologist  
Epidemiology/Communicable Disease  
Health Program Office



JAMES T. HOWELL, M.D., M.P.H.  
~~Acting~~ Staff Director  
Health Program Office

RAG/JTH/sb

Attachment

cc: All Meeting Attendees  
OPHLS (Hr. Hartwig) (for distribution)  
OPLC (Ms. Beamer) (for distribution to nursing homes)  
PDPA (Ms. Selesky)  
Dr. Joel Ehrenkranz  
Mr. Spero Moutsatsos, Florida Endstage Renal  
Disease Network (for distribution)  
Mr. Robert J. Constantine, Director  
Mental Health Program Office (for distribution)  
OPIRM (for distribution)



STATE OF FLORIDA

DEPARTMENT OF

# Health & Rehabilitative Services

Bob Graham, Governor

1317 WINEWOOD BOULEVARD

TALLAHASSEE, FLORIDA 32301

February 1, 1982

## GUIDELINES (MINIMUM STANDARDS) FOR HOSPITALS, RENAL DIALYSIS CENTERS, NURSING HOMES, AND LABORATORIES FOR THE CLASSIFICATION AND HANDLING OF DISPOSABLE "INFECTIOUS WASTE"

### A. Definitions - for the purposes of these guidelines the following definitions are used:

1. Solid Waste - All solid material emanating from patient care which includes, but is not limited to, the following disposables: linens, gowns, intravenous (I.V.) material, catheters, syringes, needles, clinical laboratory specimen containers, tubes, drainage systems, renal dialyzers and accessories, and other disposable items which may be contaminated with urine, feces, blood, secretions or other bodily fluids.
2. Liquid Waste - All material emanating from patient care that may be and is routinely placed into the sewage system, which includes, but is not limited to, urine, feces, blood, secretions, drainage fluids and other bodily fluids.

### B. Infectious Waste

The following materials are classified as infectious waste:

1. Patients Under Isolation Orders - All solid wastes from patients under strict or respiratory isolation as defined in Isolation Techniques for Use in Hospitals, Second Edition (or more recent edition), 1975, U.S. Department of Health and Human Services, Centers for Disease Control.
2. Patients Under Precautions Orders - All solid wastes from patients pertaining to the maintenance of enteric, wound/skin, discharge (secretion and excretion) and blood precautions as defined in Isolation Techniques for Use in Hospitals, Second Edition (or more recent edition), 1975, U.S. Department of Health and Human Services, Centers for Disease Control.

3. All unautoclaved microbiologic waste derived from processing clinical specimens which includes, but is not limited to, all cultures and disposable items that may be contaminated with culture organisms.
4. All solid tissue specimens
5. Class IV Viral Agents - Waste from patients (or waste from laboratory experiments) infected with Centers for Disease Control (CDC) Class IV viral agents (Appendix A) shall include all solid waste in addition to all liquid waste which may contain the infecting agent.

C. Needles/Sharps ("sharps")

All material with sharp or jagged edges ("sharps"), which includes, but is not limited to, needles, syringes, scalpels, lancets, and pipettes shall be placed in rigid disposable containers. They may be disposed of in regular waste unless classified as infectious waste as per Section B; however, if the regular waste disposal system uses a trash compacter and the integrity of the container is in doubt, such container should be handled as infectious waste. It is also recommended that needles and syringes not be dismantled or destroyed after use but that they be placed intact directly into a rigid container.

D. Handling

Infectious waste shall be placed in double impervious plastic bags (color-coded - usually red) and each single bag shall be at least two mills in thickness. A bag, when full, should not exceed 25 pounds. All bags should be securely closed and a tag, which reads "INFECTIOUS WASTE" and identifies the hospital, dialysis center, laboratory, or nursing home from which the waste is being removed, shall be attached to the bag in a conspicuous manner. As an alternative to tagging, the information which is required to be placed on the tags may be printed in a conspicuous manner on the bag itself.

E. Storage and Removal

Bags of infectious waste shall be transported and stored in receptacles which are conspicuously marked "INFECTIOUS WASTE". Infectious waste shall be held for pick-up in specially-marked non-metal containers separate from regular waste and shall be secured from unauthorized persons, birds, and animals and, if possible, rain/storm water. Infectious waste bags should not be removed by mechanical or compaction equipment. Broken or leaking

bags shall not be transported from the originating site until re-bagged.

F. Disposal

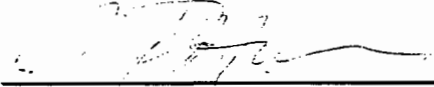
Infectious waste must be disposed of according to the Department of Environmental Regulation rule 17-7.04(6) which states "infectious waste shall be properly incinerated or processed by an alternate method which has been approved by the Department (DER). No untreated infectious waste shall be deposited in any sanitary landfill."



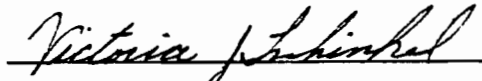
ROBERT A. GUNN, M.D, M.P.H.  
State Epidemiologist  
Epidemiology/Communicable Disease  
Health Program Office  
Department of Health and  
Rehabilitative Services



RODNEY S. DeHan, Ph.D.  
Administrator  
Groundwater Section  
Department of Environmental  
Regulation



JAMES T. HOWELL, M.D., M.P.H.  
Acting Staff Director  
Health Program Office  
Department of Health and  
Rehabilitative Services



VICTORIA J. TSCHINKEL  
Secretary  
Department of Environmental  
Regulation

Attachment



APPENDIX A - CENTERS FOR DISEASE CONTROL (CDC)  
CLASSIFICATION OF ETIOLOGIC AGENTS

Class 4

Agents that require the most stringent conditions for their containment because they are extremely hazardous to laboratory personnel or may cause serious epidemic disease. This class includes Class 3 agents from outside the United States when they are employed in entomological experiments or when other entomological experiments are conducted in the same laboratory area.

Alastrun, Smallpox, Monkey pox and Whitepox, when used for transmission or animal inoculation experiments

Hemorrhagic fever agents, including Critmean hemorrhagic fever (Congo), Junin, and Machupo viruses, and others as yet undefined

Herpesvirus simiae (Monkey B virus)

Lassa virus

Marbug Virus

Tick-borne encephalitis virus complex, including Russian spring-summer encephalitis, Kyasanur forest disease. Omsk hemorrhagic fever, and Central European encephalitis viruses.

Venzuelan equine encephalitis virus, epidemic strains, when used for transmission or animal inoculation experiments

Yellow fever virus - wild, when used for transmission or animal inoculation experiments



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

December 29, 1982

DER  
JAN 3 1983  
BAQM

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality  
2600 Blair Stone Road  
Tallahassee, Florida 32301

RE: Permit #PSD-FL-086, AC29-47277

Dear Mr. Fancy:

As you are aware, the City of Tampa has received permits from D.E.R. for construction of the McKay Bay Refuse-to-Energy Facility. The Facility is designed to burn solid waste from the City of Tampa and to simultaneously generate electricity. The City has previously requested to modify its permits to Construct an Air Pollution Source to allow burning of infectious waste in the Facility (letter of November 9, 1982). Recently, the City received a request from a Tampa Port Authority group to provide facilities for disposal of oil recovered from oil spills occurring at the Port of Tampa.

Oil would be delivered to the Facility by tanker truck or in polyethylene pads packed in fiber drums. The Facility would accept no more than 15,000 gallons per day from tanker trucks which would spray the oil onto the garbage in the pit. The Facility would accept up to 10 tons per day of fiber drums which would be placed directly into the combustion train. Disposal will only be available for oil spilled at the Port of Tampa. Such spills have resulted in an average of approximately 10,000 gallons of oil being recovered each year. The only major spill in the Port of Tampa released approximately 30,000 gallons of oil in 1979. No additional air emissions are expected from the burning of recovered oil.


The City therefore requests to have its permits to Construct an Air Pollution Source (PSD FL-086, AC29-47277)

Mr. Clair Fancy  
Page 2  
December 29, 1982

modified to allow burning of the above-mentioned quantities of recovered oil. Additionally, we request modification of these permits to allow burning of infectious waste as described in our letter of November 9, 1982.

If you have any questions concerning these requests, please contact my office. Thank you.

Very truly yours,



Joseph D. Murdoch  
Resource Recovery  
Management Analyst

JDM/dw

cc Rick Garrity  
John Egan



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

December 29, 1982

DER  
JAN 3 1983  
BAQM

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality  
2600 Blair Stone Road  
Tallahassee, Florida 32301

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December 29, 1982

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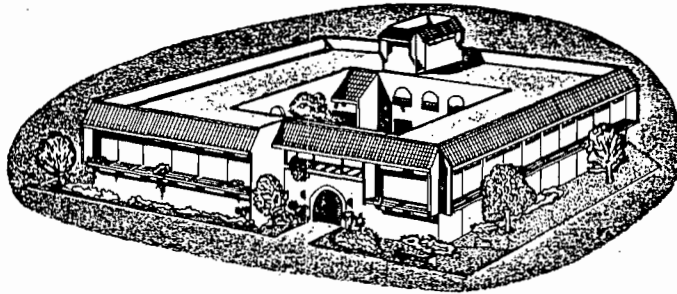
Joseph D. Murdoch  
Resource Recovery  
Management Analyst

JDM/dw

cc Rick Garrity  
John Egan

HILLSBOROUGH COUNTY  
ENVIRONMENTAL PROTECTION

COMMISSION  
FRED A. ANDERSON  
JERRY M. BOWMER  
FRAN DAVIN  
JOE KOTVAS  
JAN KAMINIS PLATT



ROGER P. STEWART  
DIRECTOR  
1900 - 9th AVE.  
TAMPA, FLORIDA 33605  
TELEPHONE (813) 272-5960

*E. Stewart*  
2/15

December 6, 1982

Mr. Bill Thomas, P. E.  
Air Engineering  
Florida Department of Environmental Regulation  
7601 Highway 301 North  
Tampa, Florida 33610

*File Co.*  
*Hills.*  
SOUTHERN  
↓

Dear Bill:

I have attached some correspondence that has been flowing between HCEPC, Clair Fancy, and The Tampa McKay Bay Refuse - to - Energy Project.

Tampa is requesting to be allowed to burn infectious waste in its new (modified) incinerator. The residence time of 3.7 seconds and 1800°F is adequate to destroy this type of waste.

They plan to insert the waste into the chute and not into the pit.

Hillsborough County concurs with this request.

Sincerely,

*John Egan*

John Egan  
Environmental Engineer  
Hillsborough County Environmental  
Protection Commission

JE:dr

attachments

cc: Joseph D. Murdoch

*copy to Clair Fancy*  
*12-13-82*



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

November 23, 1982

*John Slec*

Mr. John Egan  
Hillsborough County Environmental  
Protection Commission  
1500 -9th Avenue  
Tampa, FL 33605

DER  
NOV 29 1982  
BAQM

Dear John:

In response to your letter of November 18, 1982, the point of introduction of infectious waste to the Facility will be at a separate loading area at the rear of the Facility. The infectious waste will be transferred to the Rubbermaid bucket arrangement shown in the attachments to my letter of November 9, 1982. The buckets will be wheeled into an elevator and transported to the feed chute for the incinerator, where they will be mechanically discharged into the chute. Workers will not have to come in direct contact with the waste and no infectious wastes will be discharged directly into the refuse pit.

Thank you for your cooperation on this issue. If you have additional questions, please contact me.

Sincerely,

*Joe*

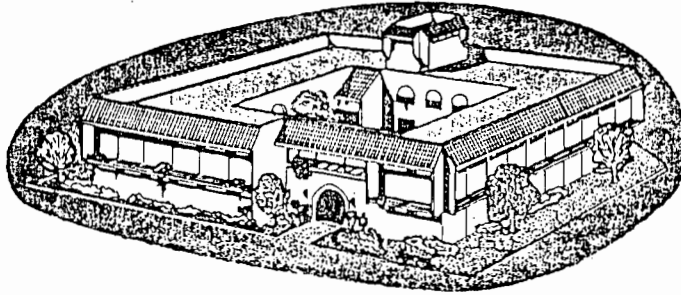
Joseph D. Murdoch  
Resource Recovery Management Analyst

cc Clair Fancy, D.E.R.

HILLSBOROUGH COUNTY  
ENVIRONMENTAL PROTECTION

COMMISSION

FRED A. ANDERSON  
JERRY M. BOWMER  
FRAN DAVIN  
JOE KOTVAS  
JAN KAMINIS PLATT



ROGER P. STEWART  
DIRECTOR  
1900 - 9th AVE.  
TAMPA, FLORIDA 33605  
TELEPHONE (813) 272-5960

November 18, 1982

Mr. Joseph D. Murdoch  
Resource Recovery Management Analyst  
City Hall Plaza, 5N  
Tampa, FL 33602

RE: Your letter dated November 9, 1982

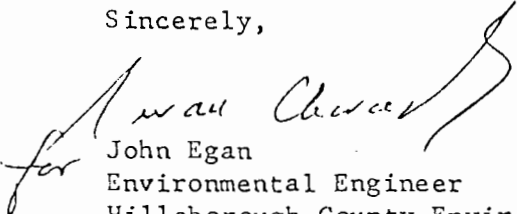
Dear Joe:

I am sending a copy of your request to the local FDER office here in Tampa.

As I indicated in our phone conversation, we will need to know exactly how you plan to introduce the wastes into the furnace. Your letter does not address this. Please indicate the entry point and system of entry of the refuse into the system

Joe, your residence time is good and so is the temp of the system. If you are not using the pit, I believe you will be able to handle this waste.

Sincerely,

*for*   
John Egan  
Environmental Engineer  
Hillsborough County Environmental  
Protection Commission

JE/rr  
cc: Bill Thomas DER

1 Attachment





# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

November 9, 1982

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DER  
NOV 17 1982  
BAQM

Dear Mr. Fancy:

As you are aware, the City of Tampa has received permits from D.E.R. for construction of the McKay Bay Refuse-to-Energy Facility. The Facility is designed to burn solid waste from the City of Tampa and to simultaneously generate electricity. The City would also like to burn infectious waste in the Facility.

The Department of Health and Rehabilitative Services and D.E.R. have issued a joint memorandum which defines infectious waste and recommends incineration as the preferred method of disposal. While the City of Tampa's application to construct an air pollution source does not prohibit burning of infectious waste, the subject is not specifically addressed. The City therefore requests that your office confirm the acceptability of burning infectious waste in the McKay Bay Refuse-to-Energy Facility.

Special handling procedures and equipment have been added to the operation and construction plans for the Facility to insure safe handling of the infectious waste (see attached). Additionally, the Facility design will allow a residence time of approximately 3.7 seconds, at 1800°F, for all gases (attached). Also, as we have previously discussed, no radioactive waste will be disposed of at the incinerator.

If you have any questions concerning this request, please contact me. Thank you for your time and consideration.

Sincerely,

Joseph D. Murdoch  
Resource Recovery Management Analyst

JDM/dw

cc John Egan, EPC



Waste Management, Inc.  
3003 Butterfield Road • Oak Brook, Illinois 60521

November 5, 1982

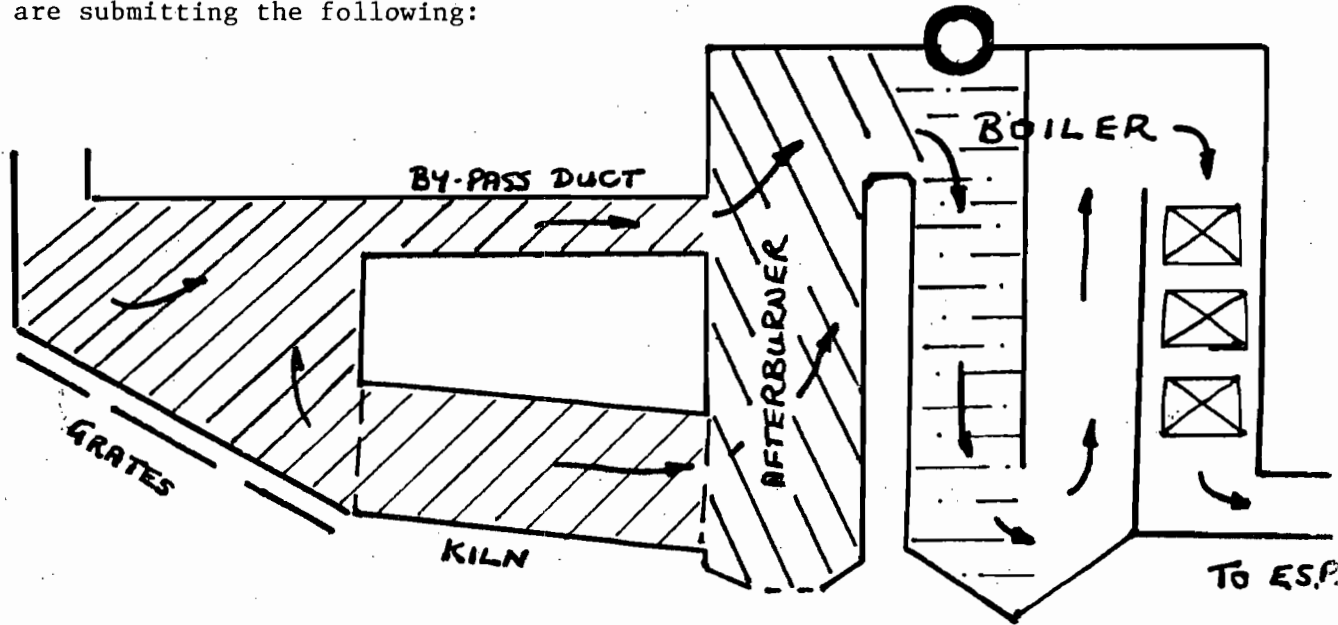
City of Tampa  
City Hall Plaza, 5N  
Tampa, Florida 33602

Attention: Mr. Joe Murdoch

Subject: System Vølund - Gas Residence Time and Temperature

Dear Joe:

In response to your recent request for information concerning odor control and burn-out of gases in the furnace system to be installed at McKay Bay, we are submitting the following:



Zone 1 - Furnace, Rotary Kiln and By-Pass Ducting  
Average Temperature 1750°F  
Residence Time 2.7 seconds



Zone 2 - Afterburner  
Average Temperature 1750°F  
Residence Time 0.95 seconds



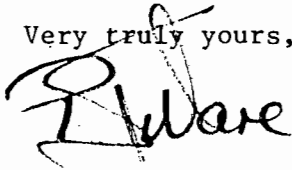
Zone 3 - Boiler - 1st Pass  
Average Temperature 1300°F  
Residence Time 3.89 seconds

Mr. Joe Murdoch  
November 5, 1982  
Page 2

It has been Volund's experience that gas retention for 1 second at or above 1300°F will eliminate any detectable odor in the flue gases.

I hope this information is helpful in your discussions with the appropriate officials.

Very truly yours,

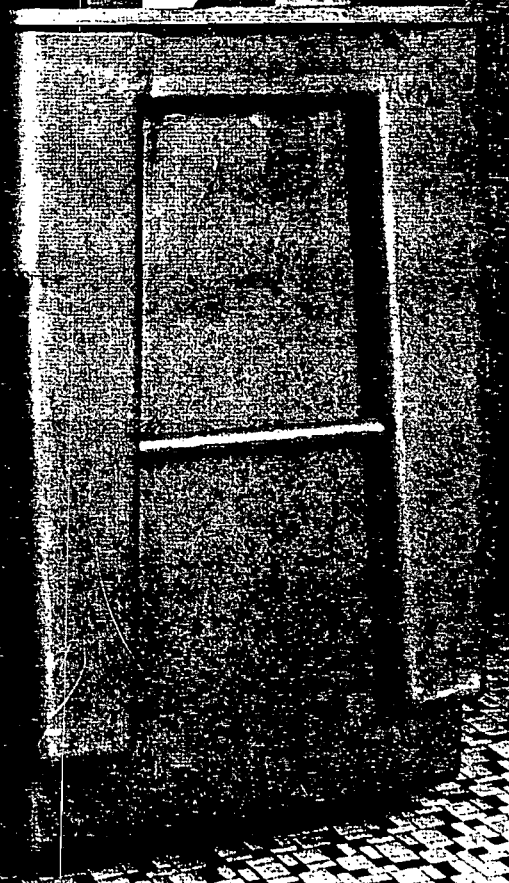
A handwritten signature in dark ink, appearing to read "P. Ware". The signature is written in a cursive style with a large initial "P" and a long horizontal stroke extending to the right.

Peter J. Ware  
Director  
Technical Development

PJW:mat

**Rubbermaid**

# **in/terior service Tote**



**A safety-first system for collecting and automatically dumping all types of building trash.**

# Building trash can now be collected, transported and automatically dumped in stationary compactors more efficiently; with greatly reduced risk of employee injury.

Collecting, transporting and dumping the wide variety of trash generated within a typical commercial building or plant presents many problems - but, a Rubbermaid in/Terior service Toter system can solve

**most of them!** For example:

## 1. Safer trash handling and dumping.

Back strain and fall related injuries are the two most obvious dangers of handling and dumping trash - Rubbermaid in/Toter systems feature automatic, remote-controlled dumpers to help avoid these potential employee hazards. The special electric - hydraulic dumping units eliminate the need to lift or hand-dump trash into compactors or other transfer containers. The employee simply hooks the in/Toter then actuates the dumper from a safe, remote location. Along with reducing injury risk - the system can also save on insurance costs, workmen's compensation settlements, plus absenteeism. And, of course, improved working conditions mean better employee morale!

## 2. Color-coding and signage for better management...and looks!

Each department; floor section...or, 'special activity', can have its own color-coded and/or custom-imprinted carts. This provides better inventory control and color harmony to your building decor.

## 3. Easier on your building!

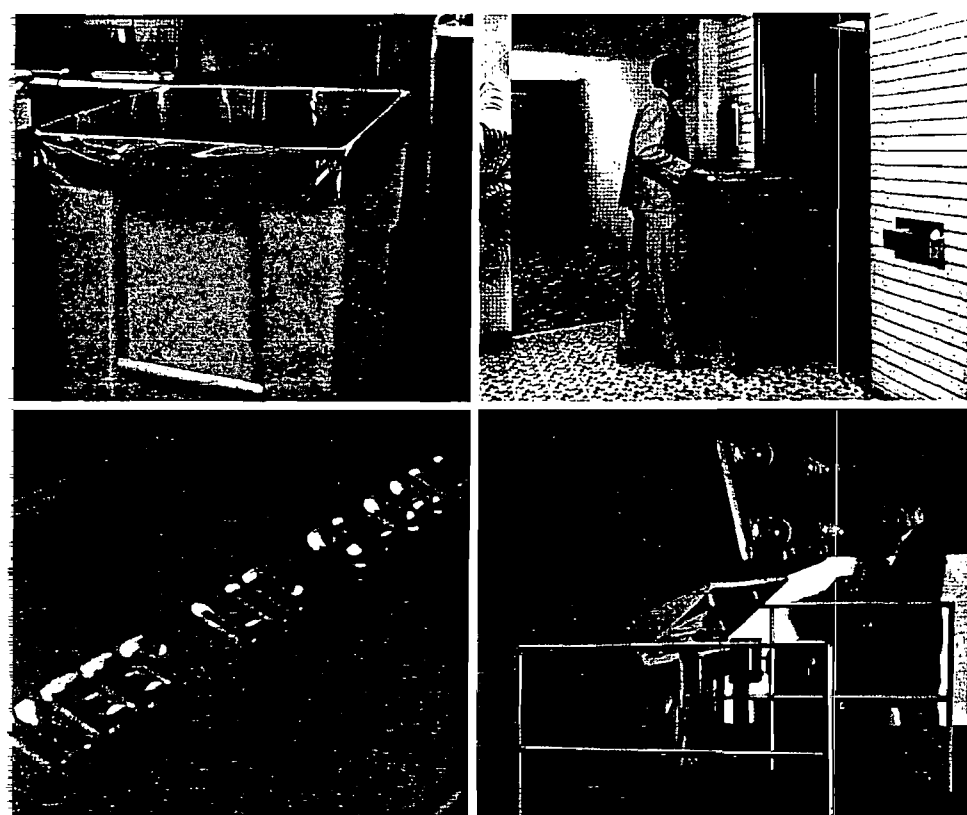
The smooth, rounded edges. The less abrasive material. The more controlled - maneuverability...and the compact, trim-line design of **both** carts cuts down on damage to interior walls, floors and doors.

## 4. A versatile one-source answer!

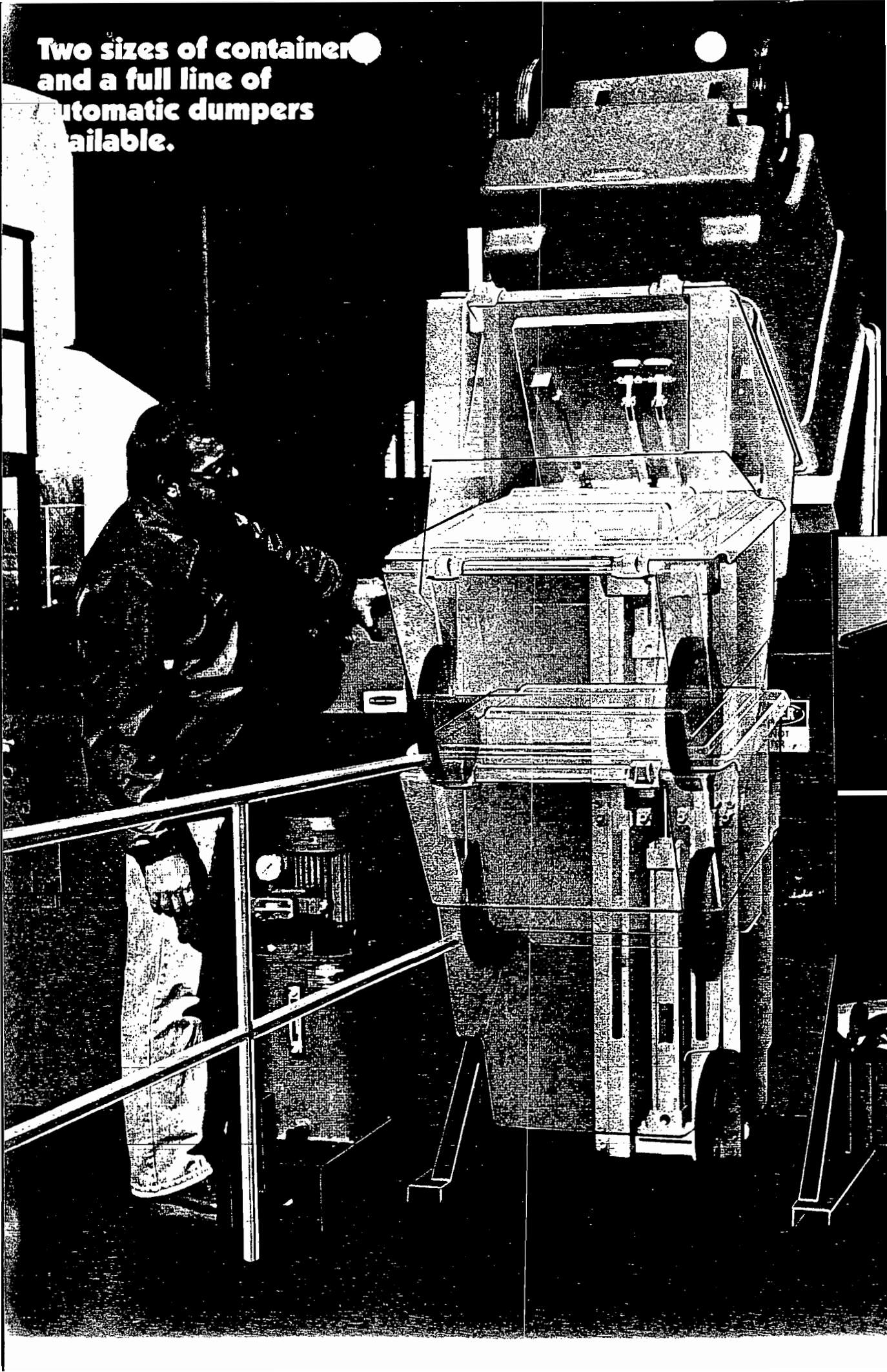
Rubbermaid in/Toters can handle all types of normal building refuse including **wet** trash. Our container walls are virtually impervious and special liners are available.

## 5. Efficiency and cost-control

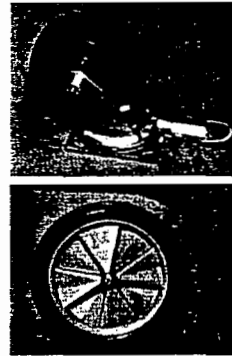
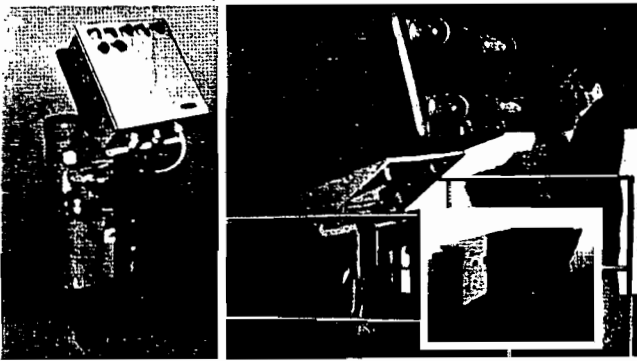
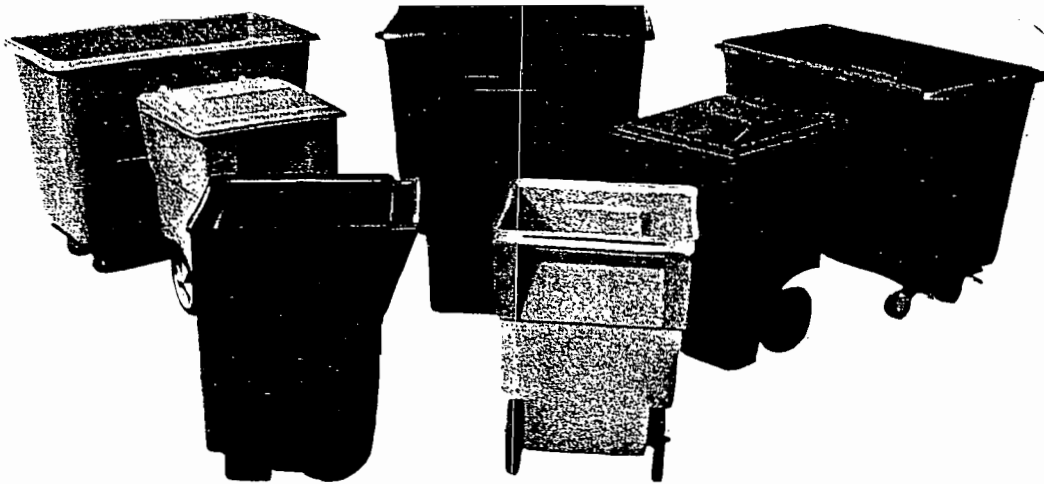
Easy-rolling, maneuverable Rubbermaid in/Toters come in two hi-capacity sizes to help achieve faster trash collection. This can significantly reduce manpower costs!



**Two sizes of container  
and a full line of  
automatic dumpers  
available.**



# Traditional Rubbermaid Product integrity.



## Hydraulic Dumper SPECIFICATIONS

Electro-hydraulic dumpers available for most dock level and ground level stationary compactors. **NOTE:** 1.0 cu. yd. Dumper will dump both sizes of in/Toters.

<b>POWER:</b>	3ph./60cy./220-440V	1/2 cu. yd.	1.0 cu. yd.
	Totally enclosed, fan-cooled motor. All electrical components are UL listed.	2 hp	3 hp
<b>HYDRAULICS:</b>	1300psi; Built-in fluid filter and flow control valves. Meets all J.I.C. and I.S.O. Standards.	2 gpm reservoir	3 gpm reservoir

**CONTROLS:** Key - operated. ON/OFF with manual directional "deadman" valve.

**INSTALLATION:** Dumpers are specified and custom-installed by exclusive in/Toter™ distributors, to work with most stationary compactor models.

This equipment conforms to all applicable ANSI Z245.1-1975 Safety Standards. Pictures in this brochure are illustrative only. Products must be installed in conformity with ANSI Z245.1 as well as any applicable codes and regulations. Products must be used with safe practices and in accordance with said regulations and standards.

## in/Toter™ SPECIFICATIONS

	1/2 cu. yd.	1.0 cu. yd.
<b>DIMENSIONS:</b>	32"Lx29"Wx41 1/2"H	55 1/2"Lx33 1/2"Wx44 1/2"H
<b>WEIGHT:</b>	37 lbs.	98 lbs.
<b>In/Toter Lid</b>	5 lbs.	11 lbs.
<b>CAPACITY:</b>	200 lbs., 11 cu. ft.	500 lbs., 1.0 cu. yd.
<b>WHEELS:</b>	2-12"x1.75" Semi-pneumatic	2-5" Swivel Casters 2-5" Locking Casters

**MATERIAL:** Specially compounded high density polyethylene

**COLORS:** Brown, Blue, Red, Orange, Yellow

**IMPRINTING:** Permanent hot stamped imprinting optional. Examples: "SOILED LINEN", "KITCHEN"

**LINER:** Gray or red poly-bag liners available.

Specifications subject to change without notice.

**A safety-engineered system manufactured and distributed exclusively by:**

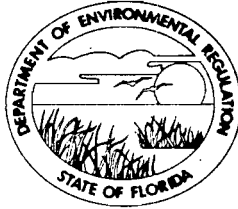
Paul Reilly Company of Illinois, Inc.  
1319 Howard St.  
Elk Grove Village, IL 60007  
(312) 364-1960



**RUBBERMAID APPLIED PRODUCTS INC.**  
1000 N. W. 10th St., Ft. Lauderdale, FL 33304

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

June 4, 1982

Mr. Dale H. Twachtmann  
City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

Dear Mr. Twachtmann:

RE: Final Determination - McKay Bay Refuse-to-Energy-Project  
Federal PSD Permit Application PSD-FL-086

Enclosed please find the Bureau of Air Quality Management's Final Determination of the referenced Federal PSD application. Final approval of the Federal PSD permit is contingent upon review and acceptance of the permit conditions by the Environmental Protection Agency Region IV office in Atlanta. Questions concerning final issuance of the Federal permit should be directed to Mr. James T. Wilburn of the EPA office.

Please feel free to call if we may be of further help.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/pa

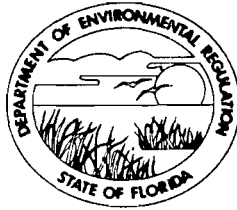
Enclosure

cc: Ralph Lee Torrens, Henningson, Durham and Richardson  
Joe Murdoch, City of Tampa  
Robert E. Gilmore, Fish and Wildlife Service  
John Christiano, National Park Service  
Dan Williams, FDER, Southwest District  
Hooshang Boostani, Hillsborough County Environmental  
Protection Commission



STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

May 28, 1982

Mr. James T. Wilburn, Chief  
Air Management Branch  
U. S. Environmental Protection Agency, Region IV  
345 Courtland Street  
Atlanta, Georgia 30365

Dear Mr. Wilburn:

RE: PSD Permit Application - McKay Bay  
Refust-To-Energy Project (PSD-FL-086)

Enclosed please find a copy of the proof of publication of the public notice, the public comments, the Department's response to the public comments, and Final Determination for the subject project. We recommend that the applicant be granted Authority to Construct, subject to the conditions in the Final Determination.

Sincerely,

C. H. Fancy, P.E.  
Deputy Bureau Chief  
Central Air Permitting

CHF/jf

Final Determination

City of Tampa  
McKay Bay Refuse-To-Energy Project  
Hillsborough County, Florida

Permit Number  
Federal PSD-FL-086

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting  
May 28, 1982

THE TAMPA TIMES

Published Daily  
Tampa, Hillsborough County, Florida

State of Florida }  
County of Hillsborough } ss.

Before the undersigned authority personally appeared  
R. F. Pittman, who on oath says that he is Publisher of The Tampa Times, a daily  
newspaper published at Tampa in Hillsborough County, Florida; that the attached copy  
of advertisement being a .....

LEGAL NOTICE

.....  
in the matter of Notice of a construction of an air pollution source  
is being proposed by the City of Tampa.  
.....

.....  
was published in said newspaper in the issues of March 22, 1982.  
.....

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

*R. D. Aronau*

Sworn to and subscribed before me, this ... 7th ... day  
of ... April ... A.D. 19 82

*Steve E. Runyon*

(SEAL)

Notary Public, State of Florida at Large  
My Commission Expires Jan. 25, 1986

pollution source is being  
proposed by the City of  
Tampa to be located in the  
City of Tampa, Hillsborough  
County, Florida. The pro-  
posed project is the con-  
struction of a 1,000 ton per  
day solid waste resource  
recovery facility. The con-  
struction will increase  
emission of air pollutants, in  
tons per year, by the follow-  
ing amounts:  
PM-122.2; Pb-13.6; SO<sub>2</sub>-744.6;  
NO<sub>x</sub>-1,314; CO-74.5 VOC-39.4;  
P-18.4; H<sub>2</sub>-1.8; Be-.0012;

The proposed con-  
struction has been reviewed  
by the Florida Department  
of Environmental Regulation  
(FDER) under Federal  
regulation 40 CFR 52.21,  
Prevention of Significant  
Deterioration (PSD) and  
Chapter 17-2, Florida Ad-  
ministrative Code. The  
Department has made a  
preliminary determination  
that the construction can be  
approved provided certain  
conditions are met. A sum-  
mary of the basis for the  
determination and the ap-  
plication for a federal  
permit submitted by the City  
of Tampa are available for  
public review at the follow-  
ing offices:

Bureau of Air Quality  
Management, Dept. of En-  
vironmental Regulation, 2600  
Blair Stone Road, Tallah-  
assee, Florida 32301;

Southwest District, Dept.  
of Env. Regulation, 7601  
Highway 301 North, Tampa,  
Florida 33610;

Hillsborough Co. En-  
vironmental Protection Com-  
mission, 1900 9th Avenue,  
Tampa, Florida 33605;

The maximum percent-  
ages of allowable PSD in-  
crements consumed in the  
area of the proposed con-  
struction will be as follows:

	Annual	24-Hour	3-Hour
PM	N/A	N/A	N/A
SO <sub>2</sub>	10	48	38

Any person may submit  
written comments to FDER  
regarding the proposal con-  
struction. All comments,  
postmarked not later than 30  
days from the date of notice,  
will be considered by FDER  
in making a final determina-  
tion regarding approval for  
construction of this source.  
Those comments will be  
made available for public  
review on request. Further-  
more, a public hearing can  
be requested by any person.  
Such request should be sub-  
mitted within 14 days of the  
date of this notice. Letters  
should be addressed to:

Mr. C. H. Fancy  
Bureau of Air Quality  
Management  
Department of  
Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
E6295 Mar. 22, 1982

Final Determination  
McKay Bay Refuse-To-Energy Project  
(PSD-FL-086)

On March 17, 1982, FDER issued a Preliminary Determination that the source could be approved with conditions. The Preliminary Determination was advertised in the Tampa Times on March 22, 1982, and made available for inspection at the Hillsborough County Environmental Protection Commission office, EPA-Region IV office and the FDER's offices in Tallahassee and Tampa.

Comments were received from Mr. Richard D. Garrity, Urban Environmental Coordinator, City of Tampa; and Mr. Robert E. Gilmore, Acting Associate Director, U.S. Department of the Interior, Fish and Wildlife Service, and Mr. Tommie A. Gibbs, Chief, Air Facilities Branch, EPA-Region IV. The comments questioned FDER's Preliminary Determination in several areas. The areas of question and FDER's response are as follows:

Comment 1 (from Robert E. Gilmore)

The insignificant impact on the Chassahowitzka National Wildlife Area and the choice of control technology as representing Best Available Control Technology (BACT) is agreed with. However, it is requested that emissions also be limited in terms of pounds of pollutant per ton refuse burned. This is to ensure BACT is used at all levels of operation.

#### Response 1

Particulate emissions are limited to 0.025 grain/dscf. This limitation ensures optimum performance of the electrostatic precipitator. Since this limitation is to be complied with at all times, a limitation based on tons of refuse burned would not create any additional benefits. In addition, when the refuse burned is decreased, the amount of stack gas is also decreased. Therefore, the hourly emissions would be decreased thus ensuring BACT is being complied with. For the gaseous emissions, no control equipment is required. Since the mixture of the refuse is not homogeneous, emission rates would not be constant in other processes. The maximum hourly emission rates, however, do not threaten any PSD increment or ambient air quality standard. Therefore, operation at or below these levels would not threaten public health or welfare. In summary, the addition of another emission limitation based upon pounds of pollutant per ton of refuse fired does not appear to provide any substantial benefit and is not included in the final specific conditions.

#### Comment 2 (from Richard Garrity)

Since emission estimates were based upon average predicted emissions it is requested that the fluoride emission limitation be raised to 6.0 lb/hr and the mercury (vaporous and particulate) emission limitation be raised to 0.6 lb/hr in specific condition #1.

Response 2

FDER agrees that the average emission rates may not reflect what the maximum emission rates may be. The requested emission rates for mercury and fluoride have been examined to determine if any additional permitting requirements would be needed. These emission rates and projected impacts are listed below.

Pollutant	Emissions		Significance	Projected	DeMinimus
	lb/hr	TPY	Level (TPY)	24hr Impact	Level
Fluoride	6.0	26.3	3.0	0.33 ug/m <sup>3</sup>	0.25ug/m <sup>3</sup>
Mercury	0.6	2.6	0.1	0.03 ug/m <sup>3</sup>	0.25ug/m <sup>3</sup>

It has been determined that these changes would not trigger any new requirements other than those contained in the preliminary determination. Both mercury and fluoride emissions are still above the annual significance levels. Therefore, BACT still needs to be determined. The proposed emission rates do not change the BACT determination of applicable control equipment. Therefore, the BACT determination is changed only to reflect these revised emission rates. The projected air quality impacts have been examined to determine if the preconstruction monitoring requirement would be triggered. The projected impact of the mercury emissions is still below the de minimus level. The projected impact of the fluoride emissions slightly exceeds the de minimus level. However, FDER has determined that modeling may be used in lieu of monitoring of fluorides. The projected impact is still much

less than the threshold limit value (TLV) of 2.5 mg/m<sup>3</sup> and therefore is not expected to present any health effects. The combination of the vaporous and particulate mercury into a single emission limitation does not appear to negate the intent of the emission limitation. Since both vaporous and particulate mercury are collected in the sampling train, the total mercury emissions are readily available. Also, since the total emission of mercury were modeled to estimate impact, there does not appear to be any disadvantage in having total mercury emission limitation. Therefore FDER agrees with this change in specific condition #1.

Comment 3 (from Richard Garrity)

A request is made that general condition number 5 be revised from a five day notification of failure to comply with emission limitations to a ten business day notification period.

Response 3

The intent of this condition is to require notification without significant delay on the part of the applicant. FDER realizes that part of the five day period may contain the weekend. The ten business day notification period should be sufficient to alleviate any problems. Therefore, general condition number five is changed to a ten business day notification period. The other comment is immaterial. The applicant would not officially know a violation had occurred until the report was received from its consultant.

Comment 4 (from Richard Garrity)

The last sentence of general condition #6 appears to negate the rest of condition #6 and the City requests that this sentence be removed.

Response 4

The Department has reviewed this condition with input from EPA Region IV. It is apparent that the condition may be interpreted in this way. Removal of the last sentence will not alter the intent of this condition. Therefore, the last sentence is deleted in the final determination.

Comment 5 (from Richard Garrity)

The applicant requests that general condition # 8a be changed to read:

"be allowed reasonable access to the permittee's premises or premises under control of the permittee..."

Response 5

The rewording of this part of the general condition does not modify the intent. The agency or its representatives still have the right to enter the applicant's property. Therefore, FDER does not object with this wording and makes this change in the final determination.

Comment 6 (from Tommie Gibbs)

Further clarification concerning the insignificant impact on the Pinellas County sulfur dioxide nonattainment area, such as distance from the source and associated impact, is requested.



Response 6

The Pinellas County sulfur dioxide nonattainment area is 36.9 km to the west-northwest of the resource recovery unit.

Modeling that was performed showed that the 1 ug/m<sup>3</sup> annual impact area would extend no more than 10 km from the source and that the source itself would have a maximum impact of only 9 ug/m<sup>3</sup>, 24-hour average. Therefore, it is concluded that the Pinellas County sulfur dioxide nonattainment area would not be significantly impacted. This item was covered in the state permit.

Comment 7 (from Tommie Gibbs)

TSP offsets should be documented and obtained prior to issuing the PSD permit.

Response 7

Under the new source review requirements (17-2.17(3)(a)), (FAC), for nonattainment areas which were approved by EPA, resource recovery units are exempt from obtaining the offsets prior to construction if a best effort to obtain the offsets were made, all available offsets were secured, and the applicant commits to continue to search and secure offsets when they become available. All sources of particulate were contacted by the City of Tampa but no particulate offsets were available. The requirement to continue to search for offsets was made part of the state construction permit. All requirements for offsets have been met by the City of Tampa.

Comment 8 (from Tommie Gibbs)

Emissions of lead, fluoride, mercury and beryllium are all greater than the significance levels and are subject to BACT, monitoring, and modeling requirements as contained in the PSD regulations.

Response 8

These points were addressed in the preliminary determination. The requirements to be met were brought out in the applicability section. Justification of the BACT limitations was presented in technical Appendix A. The requirements for monitoring and modeling were presented in the source impact analysis section and Technical Appendix B. All pollutants were below the de minimus impact levels and therefore exempt from preconstruction monitoring except for lead and fluoride. For lead, the monitoring data from the existing sites in Hillsborough County were used in the air quality impact analysis. The project impacts were calculated for the criteria pollutants and compared with the PSD increments and ambient air quality standards. The methodology and assumptions used in this analysis are contained in Technical Appendix B of the preliminary determination.

Comment 9 (from Tommie Gibbs)

A condition should be added to the permit to include the New Source Performance Standard Section 60.53, "Monitoring of Operations".

Response 9

A new specific condition is added which requires the recording and reporting of daily charging rates and hours of operation.

Comment 10 (from Tommie Gibbs)

Continuous monitoring requirements for TSP, SO<sub>2</sub> and NO<sub>x</sub> should be added to the permit to insure compliance with hourly emission limitations.

Response 10

There are no continuous monitoring requirements contained in the New Source Performance Standard for incinerators. However, the facility is in the particulate nonattainment area. A continuous opacity monitor would aid the applicant with information on the electrostatic precipitator's performance. It would also ensure minimal impact of the facility's particulate emissions. A continuous monitor for sulfur dioxide emissions does not appear to be warranted. The fuel is equivalent to low sulfur fuel and no emission controls are feasible. The stack testing requirement should be sufficient to determine if the emission limitation is being complied with. Likewise a continuous monitor for nitrogen oxide emissions does not appear to be necessary. The combustion temperature is to be held above 1500°F for odor control. Therefore no wide temperature variation is expected that would cause increases in nitrogen oxide emissions. Again, the stack testing requirement should be sufficient to determine

if the emission limitation is being complied with. In summary, a new specific condition is added requiring a continuous opacity monitor be installed and operated.

Item 11

A typographical error is corrected for the beryllium hourly emission rate, from 0.00026 to 0.00046 lb/hr.

## GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.
2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.
3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitation contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.
4. The permittee shall retain records for all information resulting from monitoring activities and information indicating operating parameters as specified in the specific

conditions of this permit for a minimum of two (2) years from the date of recording.

5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within ten (10) business days of such conditions:

- (a) description of noncomplying emission(s).
- (b) cause of noncompliance,
- (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,
- (d) steps taken by the permittee to reduce and eliminate the noncomplying emission,

and

(e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

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

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit

may then be made by the permitting authority to reflect any necessary changes in the permit conditions.

7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.

8. The permittee shall allow representatives of the State environmental control agency or representatives of the Environmental Protection Agency, upon the presentation of credentials:

- (a) to be allowed reasonable access to the permittee's premises, or other premises under the control of the permittee, where air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;
- (b) to have access to any copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;
- (c) to inspect at reasonable times any monitoring equipment or monitoring methods required in this permit;
- (d) to sample at reasonable times any emission of pollutants;

and

- (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to:
- Chief, Air Management Branch  
U. S. Environmental Protection Agency  
Region IV  
345 Courtland Street  
Atlanta, Georgia 30308
10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.



SPECIFIC CONDITIONS

1. The maximum allowable emissions from the resource recovery facility no. 1 shall be:

Pollutant	Emission Limitation
Sulfur dioxide	170.0 lb/hr
Nitrogen Oxides	300.0 lb/hr
Lead	3.1 lb/hr
Fluoride	6.0 lb/hr
Mercury (vaporous and particulate)	0.6 lb/hr
Beryllium      5 grams/24-hour period	0.00046 lb/hr

2. Municipal waste only shall be burned in the facility.

Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.

3. Electric output for sale to Tampa Electric Company (TECO) shall not exceed 25 MW.

4. Hours of operation for the facility shall be 24 hours per day, 7 days per week, 52 weeks per year.

5. An operation and maintenance plan shall be submitted with the state operating permit application and be made part of this permit.

6. Compliance testing for all criteria and NESHAPS pollutants shall be conducted in accordance with the methods contained in 40 CFR 60 and 61. A source testing plan shall be submitted to the Department of Environmental Regulation for approval 90 days prior to testing. The Department shall be notified of compliance testing at least 30 days prior to the testing.

7. The applicant shall record and keep on file the daily charging rate of the facility and the hours of operation of the facility and shall report this information quarterly to the permitting authority.

8. The applicant shall install and operate continuous opacity monitoring equipment.

Final Determination

City of Tampa  
McKay Bay Refuse-To-Energy Project  
Hillsborough County, Florida

Permit Number  
Federal PSD-FL-086

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting  
May 28, 1982.

## GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.
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- (a) description of noncomplying emission(s).
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and

- (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

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

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit

may then be made by the permitting authority to reflect any necessary changes in the permit conditions.

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- (b) to have access to any copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;
- (c) to inspect at reasonable times any monitoring equipment or monitoring methods required in this permit;
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and

- (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

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

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7. The applicant shall record and keep on file the daily charging rate of the facility and the hours of operation of the facility and shall report this information quarterly to the permitting authority.

8. The applicant shall install and operate continuous opacity monitoring equipment.



# CITY OF TAMPA

Bob Martinez, Mayor

Water Resources and Public Works

Dale Twachtmann  
Administrator

May 18, 1982

Mr. Clair Fancy  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DER  
JUN 01 1982  
BAQM

Dear Mr. Fancy:

By this letter, the City of Tampa wishes to notify the Department of Environmental Regulation of its intent to withdraw permit application number AC-2947278 for construction of Facility II of the McKay Bay Refuse-to-Energy Project. Hillsborough County is now, separately from the City of Tampa, constructing its own resource recovery facility and therefore it is now no longer appropriate to plan for a second resource recovery facility at our McKay Bay site.

Thank you for your time and efforts on the City's behalf and if you have questions concerning this action, please contact Dr. Richard Garrity of my staff.

Very truly yours,

Dale H. Twachtmann  
Administrator, Water Resources and  
Public Works

DHT/dw

## Gaseous Emission Control Is Vital

DER  
MAY 13 1982  
BAQM

By Daniel T. Skizim

**C**ONTROL OF GASEOUS emissions recently has become a major issue facing some proposed mass-burning resource recovery projects. For these and future projects, specification of the degree of air pollution control will dictate not only the type and cost of control equipment, but more importantly will affect the perception and allocation of project risks for both the project proponent and system vendor.

Preservation of air quality and recovery of energy from municipal solid wastes are noteworthy goals. Therefore, project planners and regulators need to weigh carefully the technical and financial aspects of gaseous emissions controls in relation to the objectives of the entire project.

The Clean Air Act Amendments of 1977 and Prevention of Significant Deterioration (PSD) requirements focused increased attention on maintaining or improving the quality of the air we breathe with regard to several key pollutants. Since then the EPA has been studying the problem of gaseous emissions from municipal solid waste incinerators. As a result, resource recovery facilities (incineration plants) have come under scrutiny for various pollutants emitted during the combustion process, primarily sulfur dioxide (SO<sub>2</sub>) and hydrogen chloride (HCl). Since both SO<sub>2</sub> and HCl, in sufficient concentration, are recognized as human irritants and can cause damage to buildings, interest is increasing in the post combustion control of these gases. However, thus far the EPA has not promulgated any new regulations in this area.

### Local, State Attention

Until recently, furnace operational parameters and the fuel itself (solid wastes) have been considered a method or device for abating SO<sub>2</sub> and HCl emissions because: (1) not all of the sulfur and chlorine present in the waste are released as SO<sub>2</sub> and HCl and (2) municipal solid waste is a relatively low

sulfur and low chlorine content fuel. For example, a mass-burning resource recovery facility burning "typical" solid wastes might emit about two pounds of SO<sub>2</sub> and eight pounds of HCl for every ton of waste input.

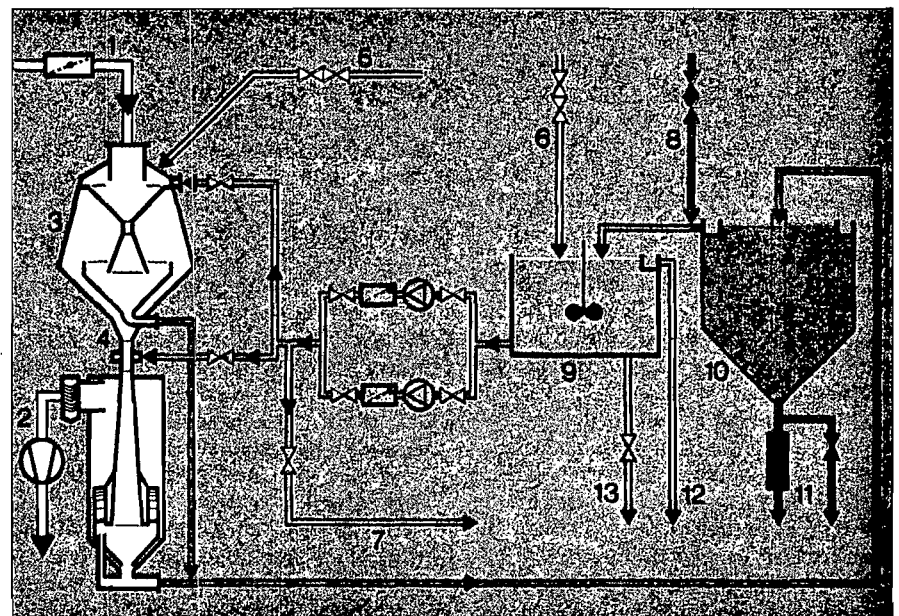
Because of existing (SO<sub>2</sub>) and potential (HCl) ambient air quality problems in certain regions of the U.S., the question of gaseous emissions control for resource recovery plants is receiving much attention on the state and local levels. This question is delaying implementation of a few major resource recovery projects. The delays stem from controversy over what to control, how to control it and how much control is necessary.

California is moving toward fairly

stringent control requirements for HCl and SO<sub>2</sub>. The level of control and type of technology to be applied have been the subject of debate among regulatory bodies, project proponents and equipment suppliers. One California project is requiring equipment vendors to supply control devices to achieve 90% removal of both HCl and SO<sub>2</sub>. It seems likely that the first resource recovery facility to be permitted in California will set state precedents with regard to the type and degree of control. Also, both New York and New Jersey are currently testing flue gases from municipal waste incinerators to determine applicable standards for HCl.

On the local level, gaseous emissions control is often imposed without regard

FIGURE 1



- 1 Raw gas inlet
- 2 Clean gas outlet
- 3 Saturation venturi
- 4 Washing stage
- 5 Emergency water
- 6 Fresh water
- 7 Waste-water to settling basin

- 8 Soda lye
- 9 Agitated tank preceding pumps
- 10 Settling tank
- 11 Sludge
- 12 Emergency overflow
- 13 Emergency drain

for the existing local ambient air quality. Local regulations are sometimes the result of prior bad experiences with dirty incineration plants of another era, the belief being that resource recovery plants are the equivalent of such archaic polluting sources. In one major project recently, additional gas cleaning was required by the host community after the proposal process was completed. This was done without preliminary study of existing conditions and impact on the project's viability.

### West German Standards

A review of European experience might be helpful to U.S. project proponents. Emission limitations for HCl and SO<sub>2</sub> have been placed on municipal waste incinerators in other industrialized countries, most notably West Germany, a densely populated nation with a large concentration of people in a small geographic area. Resource recovery plants often are placed near population centers to be near district heating grids and industrial energy markets. Because of the heavy use of plastic in consumer packaging in West Germany, uncontrolled HCl emissions from a West German municipal waste incinerator can be several times greater than those from a U.S. incinerator. Hence, there was rather early recognition of the need for strict controls and a consequent development of gas scrubbing technology.

West German regulations, which were tightened in 1974, place emphasis on HCl control. However, SO<sub>2</sub> is also controlled by the chemical reactions taking place in the same control device.

West German gaseous emission standards for municipal refuse-fired plants are:

HCl, ppm, — 61 (77)\*\*

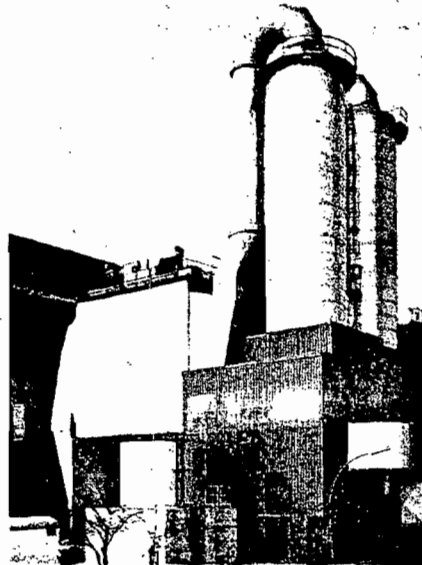
SO<sub>2</sub>, ppm, — 34\* (43)\*\*

\*Lowest value applied in 1981. West German emission limitations for SO<sub>2</sub> are applied selectively at varying degrees of control, depending on the local situation (much like U.S. PSD regulations).

\*\*Approximate values. West German standards are reported at 11% O<sub>2</sub> which is indicative of about 110% excess air. For a U.S. mass-burning resource recovery facility firing "typical" refuse and operating at 100% excess air, these values are converted to a 12% CO<sub>2</sub> standard. West Germany also has regulations for hydrofluoric acid (HF) and carbon monoxide (CO).

### Wet Scrubber System

Until recently the West Germans met both acid gas and particulate regulations with an electrostatic precipitator for particulate removal followed by a wet scrubber for acid gas control. A



DRY SCRUBBING is used effectively on this West German refuse-burning facility.

schematic of such a system is shown in Figure 1.

Resource recovery facilities have historically achieved efficient, reliable particulate control with the electrostatic precipitator (ESP). An ESP uses high-voltage direct-current corona discharge established between two electrodes to charge particles of dust in the flue gas. Charged particles are collected on a grounded electrode, which is then rapped to dislodge the dust. The dust falls into a hopper and is removed from the system.

Precipitator advantages are:

- High efficiency.
  - High turn-down ratio.
  - Low pressure drop.
  - High reliability.
  - Low maintenance.
- However, limitations on precipitators include:
- Sensitivity to changes in dust and gas characteristics.
  - Loss of efficiency in the submicron range.
  - Effect of fluctuations in flow and changes in dust loading on performance, i.e., it is a constant percentage device.

In spite of these drawbacks, the ability of an ESP to operate on a resource recovery plant for long periods with a high efficiency is well documented.

Traditionally, a wet scrubber has been used downstream of an ESP to control gaseous emissions. A typical wet scrubber for the control of HCl emissions consists of a gas cooling section where the flue gases are saturated, an absorption section and a recirculation loop. At saturation temperature, the dirty gases flow into the absorption section where relatively high velocity is

achieved. Here the liquid is finely atomized to promote good contact with the dirty gas. The scrubbed gas then exits the device. The particulate laden liquid is further processed prior to recirculation.

The advantages of wet scrubbing for gaseous emissions control are:

- Great versatility in handling varying gas flows and conditions as fuel and furnace parameters change.
- It is not susceptible to fires.
- Some re-entrained particulate carried over from the ESP is captured.

Although this is recognized to be an effective process for gaseous emissions control, it has several tradeoffs.

- Scrubber disadvantages are:
- Sludge disposal poses a problem.
  - The scrubber operates in a highly corrosive atmosphere with the attendant maintenance problems.
  - It has relatively high power requirements.
  - Exotic materials used in fabrication increase the cost.
  - The cool, high moisture content flue gas inhibits plume (and pollutant) dispersion and is usually highly visible. The facility must either pay an energy penalty for flue gas reheat to suppress the visible plume and regain buoyancy or consider a taller stack.

### Dry Scrubbing Technology

To eliminate many of the problems associated with wet scrubbing, a new dry scrubbing technology recently has been developed. This system is shown installed on a West German refuse-fired plant in the accompanying photo. It has been in commercial operation about five years. It consists of a reaction tower in which the chemistry, although similar to the wet scrubbing process, produces a free-flowing powder of dry salts; a particulate control device to capture this powder, usually a fabric filter, but sometimes an ESP as shown in the photo; and reagent storage and metering equipment.

A schematic of this system is shown in Figure 2. Dirty flue gas enters the reaction tower in a tangential manner. A precollector section removes up to 70% or more of the particles. Then, a spray system injects and atomizes slurried reagent into the flue gas. The water is completely evaporated, and the chemical reaction between the pollutant gases and the reagent produces dry salts that are carried over to the fabric filter. There, the dust is collected on the surface of the bags by inertial compaction, diffusion, direct interception and sieving. Dust that builds up is dislodged by mechanical or pneumatic means, or by a combination of the two, and collected in hoppers for subsequent removal. A fabric filter is preferred since any unreacted reagent buildup on the bags is available to react with residual SO<sub>2</sub> and

for HCl and type have been regulatory d equip- t project to sup- 90% re- It seems recovery California regard to. Also, they are a munic- nine ap-

nissions t regard

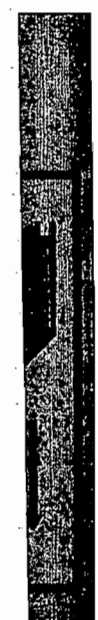
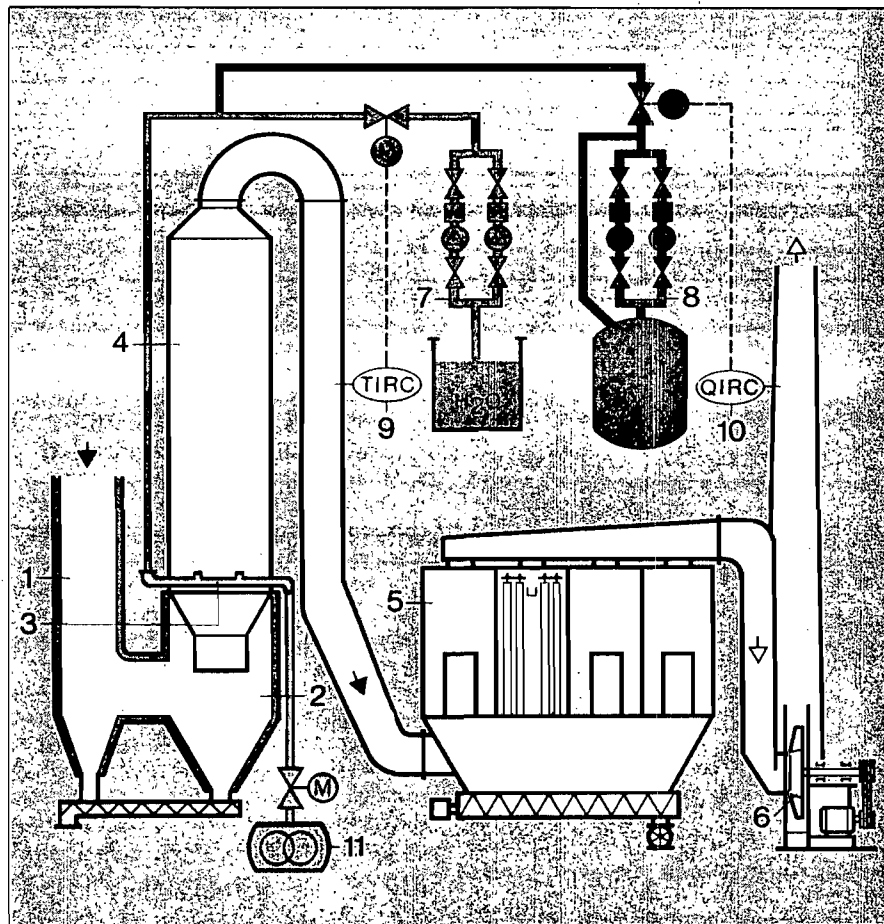


FIGURE 2



- 1 Boiler outlet
- 2 Precollector
- 3 Spray system
- 4 Reactor vessel
- 5 Fabric filter
- 6 I.D. fan

- 7 Water system
- 8 Absorbent system
- 9 Temperature control
- 10 Outlet concentration monitor and control
- 11 Compressed air system

HCl in the flue gas, yielding potentially higher removal efficiencies.

In addition to the advantages of this system that have been noted, fabric filters are insensitive to fluctuations in gas flow and inlet loading, i.e., they are constant output devices, and they are more efficient than ESPs in the sub-micron range. Also, since the flue gas is not saturated, there is no visible plume.

Some disadvantages are:

- The dry product contains soluble salts that may make disposal difficult.
- Exit gas temperature is reduced by about 180°F, somewhat inhibiting plume rise and pollutant dispersion.
- Reagent can be expensive, depending on the degree of control required.

Because of the significant advantages of the dry scrubbing system for both gaseous and particulate emission control (particularly in the submicron range), it undoubtedly will be preferred

over the wet system except in some site-specific instances.

In the absence of firm emission limitations, it is difficult to evaluate the economic impact of gas scrubbing on resource recovery in general. However, for this discussion, let's use as an example two typical 1,200 tons per day (TPD) mass-burning resource recovery facilities and evaluate the effects on capital and operating cost of applying high efficiency ESP's for one facility versus a dry scrubber/fabric filter for emissions control for the other. Let's establish fairly stringent control requirements: The particulate outlet requirement is .02 grains per day standard cubic foot (corrected to 12% CO<sub>2</sub>) for both control scenarios, and HCl and SO<sub>2</sub> removal efficiencies are 90% for the additional control of gaseous pollutants. The installed capital cost of the equipment only, flange-to-flange, in current dollars is:

Particulate control — \$3.2 million.

Particulate plus gaseous control — \$8.2 million.

These costs represent about 3.9% and 9.6% of the total construction capital costs of each resource recovery facility. For the control of gaseous emissions the capital cost does not reflect additional modifications that may be necessary to the balance of the facility, e.g., increased fan horsepowers, controls, foundations, etc. These will add slightly to the stated capital cost for gaseous emissions control.

Operating and maintenance costs of the dry scrubbing system are difficult to predict because of two important reasons:

- Experience with the equipment is limited.
- Refuse is notoriously variable in its elemental make-up.

For this example, let's apply the previously discussed emission controls to each refuse-fired system operating continuously at its design rating and firing a "typical" waste (of a fixed composition). The incremental cost of the gas cleaning system is represented by additional labor and materials, chemicals, water and the debt service (assume power consumption of the precipitator is offset by the motor horsepower requirements of the dry system). In present day dollars, this incremental cost could add approximately \$1.25 million, or \$3.25 per ton of waste processed, to the annual operating budget. Not included in this example is a large unknown factor, the perceived risk of the system operator. The true magnitude of this factor, and its relative worth, cannot become fully known until the project participants are sitting at the negotiating table.

**Caution Urged**

It is hoped that the foregoing discussion has acquainted the reader with the technological developments in gaseous emission controls for resource recovery plants and with the complexities and impacts of these control requirements. It is apparent that there will be continued and increasing emphasis on the control of gaseous emissions from resource recovery facilities. This is expected as resource recovery facilities most often seek sites near the centers of population and industry. In the absence of federal guidelines for gaseous incinerator emissions, state and local regulatory bodies are playing a more active role in setting emission limits. The following cautions are urged:

- The regulatory and project framework should be compatible with the development of resource recovery projects.
- Given the lack of ambient HCl data, existing local conditions should be studied.

Continued on page 61

# Energy Market

Continued from page 18

clarified, project cost analyses should be updated to insure continued project viability. It is possible for market requirements to become so stringent that the project becomes unfeasible. This is a fact best discovered early in the project so that efforts can be redirected to other alternatives before major expenditures are incurred.

Fuels derived from municipal solid waste will have physical and chemical properties different from those of conventional fuels. In some cases, existing facilities will need to be modified to handle refuse-derived fuel. Costs for modifying existing facilities must be identified in the early stages of a project so the net economic benefit of selling RDF to a market can be quantified.

The price of RDF will usually be equivalent to the price of the displaced fossil fuel, less additional costs incurred in its use, and perhaps, a discount reflecting risk borne by the user. Table III lists the prices several energy markets are paying for different types of refuse-derived fuels. Prices vary considerably because of the different fuels being displaced and the different expenses incurred by the market in handling the fuel.

## RDF Market Opportunities

Solid RDF can be used in combination with other fuels in existing boilers, generally coal-fired. There are two principal markets for such use — electric utilities operating steam-electric power plants fired by fossil fuel and large industrial operations.

Utilities would appear to be the most promising market because they represent a long-term, stable market that consumes large quantities of fuel and often are located close to urban areas where the solid waste is generated. One prime concern of a utility is to maintain a reliable system. Utilities, however, have been reluctant to purchase RDF because the long-term effects of RDF combustion on utility boilers is not known and therefore represent a sizable risk for the utility.

In most cases, a coal-fired power plant will require at least the addition of receiving and storage facilities to enable it to handle solid RDF. The cost for modifications should be known by the project team before fuel pricing is discussed.

Large industries represent a potential market for solid RDF due to the quantity of fuel consumed by many industrial operations. To date, however, no industry has purchased the fuel on a long-term contractual basis. Cement plants, paper mills, steel mills and lime plants burn large amounts of fossil fuel, but have little or no experience

**TABLE III**  
Selling Price of Different Refuse-Derived Fuels

Facility Location	Type of RDF Produced	Energy Market	Market Fuel Displaced	Selling Price of RDF <sup>(a)</sup> (\$/million Btu)
Ames, Iowa	fluff	municipal utility	coal	— <sup>(b)</sup>
Bridgeport, Connecticut	powdered	investor-owned utility	oil	3.76 <sup>(c)</sup>
Madison, Wisconsin	coarse	municipal utility	coal	1.60
Milwaukee, Wisconsin	fluff	investor-owned utility	coal	1.27

<sup>(a)</sup>Source: "Waste to Energy Compendium" DOE Report CE/20167-05 (1981).  
<sup>(b)</sup>City-owned RDF plant and municipal power plant. No specific price set for RDF.  
<sup>(c)</sup>RDF was priced at \$56.50/ton with HHV of 7,500 Btu/lb.

with firing solid RDF. Of these markets, cement plants appear most promising. Several plants have burned RDF as a supplemental fuel on a trial basis.

A typical cement plant producing 2,000 tons per day of product could consume the RDF produced from a 500 tpd resource recovery facility. □

## First 'Keep America Beautiful Week' Set

New York, New York — The nation's first Keep America Beautiful Week will be observed from April 18 to April 24. The week-long event expands Keep America Beautiful Day activities carried out in American communities for the past 11 years.

Activities are expected to include recycling, beautification, restoration of historic monuments, cleanups and educational efforts, as in past years. An awards competition will honor the best KAB Week projects. Further information and entry materials are available from Keep America Beautiful, 99 Park Ave., New York, N.Y. 10016.

## Financing

Continued from page 20

are ultimately transferred to the vendor and the municipality. Ideally, the lease and the service agreement are of equal duration. Under ERTA, at the end of both, the lessor can sell the entire plant to the city for a nominal amount, say one dollar.

### Word of Caution

It would be best to conclude this article with a word of caution about innovative financing of major capital investments such as resource recovery plants. It is a very tricky business and it involves some risk. The process of setting up a tax leasing scheme is particularly complex. There are many unanswered questions concerning the involvement of municipalities in these ar-

rangements. In many ways, leverage leasing is still an experimental technique for raising capital.

At the same time, the investment community is very optimistic about the future of leverage leasing to finance resource recovery plants. Most consultants agree these individually designed plans are the best way to line up attractive financing in inflationary times. And financing costs can be the element that makes a new waste-to-energy plant an economic success. □

## Emissions

Continued from page 30

ried before imposing a standard (or guarantee point).

- If regulations are to be set, serious consideration should be given to the West German experience. Any attempt at standard setting should recognize the variable nature of the fuel source.

- Project proponents and system vendors need to work together to determine the economic effects of gaseous emissions control on the project.

- If no gaseous emissions control is required, the facility design should include provisions for the future addition of gas control equipment.

- Regardless of the type or degree of emissions control required, the financial community perceives resource recovery as risky. An increase in control requirements at this juncture can only serve to further inhibit project implementation. □

The author is manager of proposals, Energy Systems Division, Brownings-Ferris Industries, Inc., Houston, Texas.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET  
ATLANTA, GEORGIA 30365

*Jhn*

APR 29 1982

REF: 4AW-AF

Mr. C. H. Fancy, Deputy Chief  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DER  
MAY 03 1982  
BAQM

Dear Mr. Fancy:

My staff has completed its review of your Preliminary Determination for the City of Tampa's proposal to construct a 1,000 ton per day solid waste disposal facility to be located in Tampa, Florida, and offer the following comments:

1. The SO<sub>2</sub> impact on Pinellas County's non-attainment area was stated as being insignificant, however, for clarification purposes the distance from the source to the non-attainment area and its associated impact at that point should be presented.
2. TSP offsets should be documented and obtained prior to issuing the PSD permit. If revised permits or modified emissions limitations are to be used, these should be attached to the PSD permit.
3. The predicted annual concentrations for lead, flouride, mercury, and beryllium are all greater than the significance levels, and are therefore subject to BACT, monitoring, and modeling requirements as contained in the PSD regulations.
4. A condition should be added to the permit to include the New Source Performance Standard §160.53 "Monitoring of Operations". This should include comparative daily charging rates and hours of operation.
5. Continuous monitoring requirements for TSP, SO<sub>2</sub> and NO<sub>x</sub> should be added to the permit in order to insure compliance with hourly emissions limitations.

If you have any questions concerning this matter, please contact Mr. Kent Williams of my staff at (404) 881-4552.

Sincerely yours,

*Tommie A. Gibbs*

Tommie A. Gibbs, Chief  
Air Facilities Branch



ADDRESS ONLY THE DIRECTOR,  
FISH AND WILDLIFE SERVICE

# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
WASHINGTON, D.C. 20240

APR 23 1982

Mr. C. H. Fancy  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DER  
APR 30 1982  
BAQM

Dear Mr. Fancy:

The City of Tampa proposes to rehabilitate a municipal incinerator and to add an additional unit to increase the combustion design capacity to 1000 tons of refuse per day. The project will result in allowable emission increases of 27.9 lb/hr of particulate matter (PM) and 170.0 lb/hr of sulfur dioxide (SO<sub>2</sub>) and is subject to PSD review.

The proposed site is approximately 77 km south-southeast of Chassahowitzka National Wildlife Refuge, a class I area administered by the Fish and Wildlife Service (FWS). Air quality estimates made by the applicant, using the EPA approved Single Source (CRSTER) Model with five years of hourly meteorological data from Tampa, indicate the SO<sub>2</sub> and PM concentrations should be less than one microgram per cubic meter on an annual average at distances greater than 10 km from the source. A screening analysis performed for the FWS by the Air Quality Division of the National Park Service indicated one hour concentration estimates of less than one microgram per cubic meter at Chassahowitzka. Therefore, we do not expect an adverse effect on this class I area due to the emissions of the proposed project alone.

The proposed emission control technology was also evaluated and we concur with the State of Florida's determination that the best available control technology (BACT) will be applied. However, we recommend that the emission limitations in the permit be expressed in terms of lb pollutant/ton refuse in addition to the lb pollutant/hr limitations contained in the draft. This will ensure that BACT will be used at all levels of operation.

We appreciate this opportunity to provide comments.

Sincerely yours,

*Robert E. Silman*  
Acting Associate  
Director



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
WASHINGTON, D. C. 20240

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Mr. C. H. Fancy  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

RENOTICE OF TECHNICAL EVALUATION  
and  
PRELIMINARY DETERMINATION

MCKAY BAY REFUSE-TO-ENERGY PROJECT

PERMIT NUMBER:

AC 29-47277

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION  
BUREAU OF AIR QUALITY MANAGEMENT  
CENTRAL AIR PERMITTING

## Proposed Department Action

The Department intends to issue the requested permit to the City of Tampa for the rehabilitation of the old municipal incinerator to a resource recovery facility which will produce steam to generate electricity at the existing site in Hillsborough County. This action is renoticed due to significant changes made by the applicant to the original application.

Any person wanting to comment on this action may do so by submitting such comments in writing to:

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Any comments received within thirty days after publication of this notice will be considered and noted in the Department's final determination.

Any person whose substantial interest would be affected by the issuance or denial of this permit may request an administrative hearing by filing a petition for hearing as set forth in Section 28-5.15 FAC (copy attached). Such petition must be filed within 14 days of the date of this notice with:

Ms. Martha Hall  
Department of Environmental Regulation  
Office of General Counsel  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

I. PROJECT DESCRIPTION

A. Applicant

City of Tampa  
306 Jackson Street  
Tampa, Florida 33602

B. Project and Location

The applicant's proposed project consists of rehabilitating the municipal incinerator into a 1000 ton per day solid waste resource recovery facility capable of generating electricity for sale to Tampa Electric Company. The second phase of the project, consisting of constructing a second 1000 ton per day solid waste resource recovery unit has been delayed and will be reviewed as a contemporaneous increase when reactivated. The facility is to be located on a fourteen acre site adjacent to McKay Bay, south of Florida Route 60 in Tampa, Hillsborough County, Florida. The UTM coordinates are 360.0 km East and 3091.9 km North.

C. Process Description and Controls

The existing incinerator system consists of three mass burn combustion trains, without energy recovery, based upon the Volund technology. Each unit is rated at 250 tons per day. A fourth unit is to be added, thus increasing the design capacity of the facility to 1000 tons per day. The incinerator will be rehabilitated into a resource recovery facility by the addition of waste heat boilers, electrostatic precipitators and turbine generators. Ash produced by the combustion process will be handled by a wet system. The wet ash will be dewatered and loaded into trucks for subsequent disposal in the City's designated residue disposal site.

II. RULE APPLICABILITY

The proposed project is located in the particulate and ozone nonattainment areas in Hillsborough County. For the remaining criteria pollutants, Hillsborough County is listed as unclassifiable for sulfur dioxide and attainment for carbon monoxide and nitrogen oxides. The project is also in the area of influence for the Pinellas County sulfur dioxide nonattainment area.

The uncontrolled emissions and the controlled emissions for the facility are:

Contaminant	Uncontrolled Tons Per Year	Controlled Tons Per Year
Particulate	19,970	122.2
Sulfur Dioxide	745	745
Nitrogen Oxides	1,314	1,314
Carbon Monoxide	75	75
VOC	39	39
Lead	14	14
Fluoride	18	18
Hydrogen Chloride	823	823
Mercury (vaporous)	1.8	1.8
Mercury (particulate)	0.07	0.07
Beryllium	0.00116	0.00116

The proposed project is a major emitting facility for the criteria pollutant sulfur dioxide, nitrogen oxides, and particulate. Since the project will increase sulfur dioxide concentrations over the baseline, it is subject to the requirements of 17-2.04, FAC, prevention of significant deterioration (PSD). PSD review consists of a determination of best available control technology (BACT) and an air quality impact analysis to demonstrate that the project would not cause or contribute to a violation of Florida ambient air quality standards (FAAQS) or PSD increments. Since the project is a major emitting facility for nitrogen oxide, a BACT determination is required by 17-2.03, FAC, for that pollutant.

In addition, since construction is in the particulate (PM) and ozone nonattainment areas in Hillsborough County, the project is subject to the new source review (NSR) requirements of 17-2.17, FAC, for PM and VOC emissions. The nonattainment review consists of a determination of Lowest Achievable Emission Rate (LAER) for PM emissions, emission offsets for PM, and state-wide compliance requirement for multiple facility ownership. In accordance with 17-2.17(3)1.C. FAC, lack of sufficient particulate emission offsets prior to issuance of a construction permit will not preclude issuance of that permit since all available offsets have been secured and other sources of offsets are being explored. VOC emissions are required to meet BACT according to 17-2.17(4), FAC, since they meet the limited new source review exemption contained in 17-2.17(3)(a)1.a.(ii), FAC.

In addition, the project is subject to emission limiting standards for PM under the adopted federal new source performance standards (NSPS) for incinerators (17-2.21(2)(a), FAC). The LAER determination must be at least as stringent as the applicable NSPS. (The project is not subject to the requirements of 17-2.22,

FAC, Emission Standards for Hazardous Air Pollutants as they will not be burning sewage sludge, asbestos, or beryllium wastes.)

Although the project is in the area of influence of the Pinellas County sulfur dioxide nonattainment area, emission modeling for SO<sub>2</sub> demonstrates that the SO<sub>2</sub> nonattainment area will not be significantly impacted by the project. Therefore, the project is exempt from the NSR requirements (17-2.17, FAC) for the SO<sub>2</sub> non-attainment area.

### III. SUMMARY OF EMISSIONS AND AIR QUALITY ANALYSIS

#### A. Emission Limitations

The emission limitations determined to be Lowest Achievable Emission Rate (LAER) are presented in Attachment A. The emission limitations determined to represent Best Available Control Technology (BACT) are presented in Attachment B. The projected emissions from the facility are given below.

Pollutant	Emission Limitation	Maximum Hourly Rate (lb/hr)	Maximum Annual Rate (TPY)
Particulate	0.025 gr/dscf @ 12% CO <sub>2</sub>	27.9	122.2
Sulfur Dioxide	BACT	170.0	744.6
Nitrogen Oxides	BACT	300.0	1314.0
Carbon Monoxide		17.0	74.5
VOC	BACT	9.0	39.4
Lead		3.1	13.6
Mercury (vaporous)		0.4	1.8
Mercury (particulate)		0.015	0.067
Beryllium		0.00026	0.00116
Fluoride		4.2	18.4
Hydrogen Chloride		188.1	823.0

The emission information was based on data from Waste Management, Inc., the current Volund technology license.

## B. AIR QUALITY IMPACT ANALYSIS

The PSD review process requires an air quality impact analysis for all applicable pollutants. This analysis includes the use of FDER and EPA approved air quality dispersion models in conjunction with ambient air monitoring data. Estimates of maximum ground-level concentrations are determined for comparison with State standards. The analysis requires:

- o An analysis of existing air quality;
- o A PSD increment analysis (for PM and SO<sub>2</sub> only); and
- o A Florida Ambient Air Quality Standards (FAAQS) Analysis

In addition, preconstruction monitoring may be necessary to establish existing air quality conditions if valid monitoring data do not presently exist.

The proposed project is considered a major emitting facility with significant emissions of PM, SO<sub>2</sub>, and NO<sub>2</sub>. Because the project is located in an area that is nonattainment for PM it is exempt from PSD review and is reviewed under the more stringent nonattainment process.

Based on these required air quality impact analyses, FDER has reasonable assurance that the subject facility, as described in this permit and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A discussion of the required analyses follows.

### 1. Modeling Methodology

The FDER and EPA-approved Single-Source CRSTER dispersion model was used in the air quality impact analyses.

This model was used to determine the maximum predicted annual and short-term ground-level ambient concentrations of the subject

pollutants. Receptors were located in 36 azimuthal directions surrounding the facility in concentric rings ranging from 0.5 to 9.0 kilometers. All emission stacks (2) were collocated. The stack parameters used in the modeling are given in Table B-1.

The surface and upper air meteorological data used in the model were National Weather Service data collected at Tampa, Florida during the period 1970-1974.

Table B-1

Stack Parameters for McKay Bay Refuse-to-Energy Project

Emissions Unit	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temperature (K)
1	45.72	1.75	23.43	500
2	45.72	1.75	23.43	500

2. Analysis of Existing Air Quality

In order to evaluate existing air quality in the area of a proposed project, FDER may require a period of continuous preconstruction monitoring for any pollutant subject to PSD review. If current monitoring data of sufficient quantity and quality already exist within the area of the proposed project, preconstruction monitoring is not necessary.

Since the proposed facility is located near the Tampa urban area, existing monitoring data for SO<sub>2</sub> and NO<sub>2</sub> were available for use by the applicant. Table B-2 lists the highest recorded monitored values for these pollutants in the previous year (1980).

Table B-2  
Monitoring Results, SO<sub>2</sub> and NO<sub>2</sub> (ug/m<sup>3</sup>)

<u>Station</u>	<u>Pollutant</u>	<u>3-hour*</u>	<u>24-hour*</u>	<u>Annual</u>
Davis Island	SO <sub>2</sub>	496/465	89/87	21
Hookers Pt.	SO <sub>2</sub>	476/469	132/106	20



\* Values represent the highest and the second highest for the year.

### 3. PSD Increment Analysis

The PSD increment analysis pertains to PM and SO<sub>2</sub>, for which maximum allowable increases (increments) are defined. The proposed project is located in an area designated as nonattainment for PM and therefore not subject to PSD review for that pollutant. The area is classified as Class II for SO<sub>2</sub>. The nearest Class I area is the Chassahowitzka National Wilderness Area approximately 77 kilometers to the north-northwest.

All SO<sub>2</sub> emissions from the proposed project will consume increment. In addition, all other increment consuming sources that might impact the project area were included in the analysis. Table B-3 lists the maximum increment consumption expected in the project area.

Table B-3  
Maximum Increment Consumption (SO<sub>2</sub>)

Averaging Time	Class II Increment Consumed (ug/m <sup>3</sup> )	Allowable Class II Increment (ug/m <sup>3</sup> )
3-hour	193	512
24-hour	44	91
Annual	2	20

The SO<sub>2</sub> significant impact area of the proposed project is the area encompassing all predicted concentrations greater than 1 ug/m<sup>3</sup> on an annual average. The greatest distance to the edge of this area is less than 10 kilometers. No significant impact on the nearest Class I area, 77 kilometers away, is expected as a result of this project.

### 4. Ambient Air Quality Standards Analysis

The PSD regulations require the permit applicant to demonstrate that, given existing air quality in an area, a proposed emissions increase subject to PSD review will not cause or contribute to any violation of ambient air quality standards. For the proposed project,

an ambient air quality standards analysis is required for SO<sub>2</sub> and NO<sub>2</sub>.

A conservative estimate of the maximum concentration to be expected, for comparison with the Florida Ambient Air Quality Standards (FAAQS), is obtained by adding the maximum (highest, second-high) predicted ground-level concentration as modeled for the proposed project to the maximum monitored value in the vicinity for each respective pollutant.

Table B-4 lists the maximum predicted concentrations expected to occur in the project area for comparison with the NAAQS.

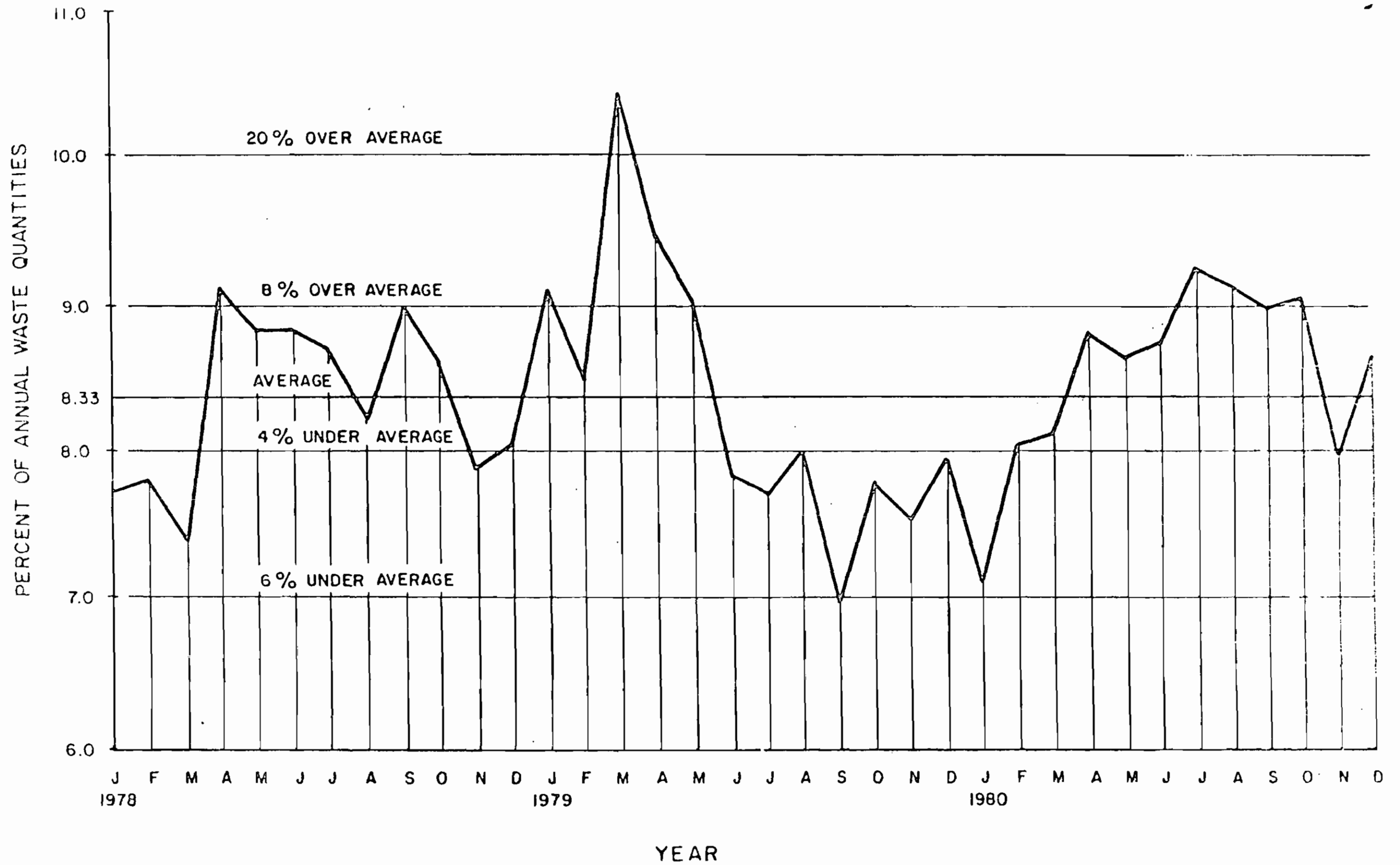
Table B-4  
Maximum Predicted Concentrations

<u>Pollutant</u>	<u>Predicted Impact (ug/m<sup>3</sup>)</u>	<u>FAAQS (ug/m<sup>3</sup>)</u>
SO <sub>2</sub>		
Annual	22	80
24-hour	141	365
3-hour	524	1300
NO <sub>2</sub>		
Annual	35	100

IV. CONCLUSIONS

The emission limitations stated previously are based upon the applicant's estimated combustion rates. The emission limitations proposed will not violate any ambient air quality standard, PSD increment, NSPS emission limitation or NESHAP limitation. All new source review requirements for nonattainment areas and all PSD requirements have been met in the application.

The General and Specific Conditions listed in the proposed permits will assure compliance with all applicable requirements of Chapter 17-2, FAC.



SEASONAL VARIATIONS IN SOLID WASTE QUANTITIES  
1978 - 1980

FIGURE A-1

Table A-5 summarizes the seasonal variation in the waste stream composition. The percentage of combustibles was the highest at 89.8% in August 1980, and the lowest at 80.3% in February 1980.

**TABLE A-5 - STUDY AREA MSW COMPOSITION COMPARISON**

Category	Waste Stream Composition, Percent				
	November 1979(1)	February 1980(2)	May 1980(3)	August 1980(4)	Average (5)
Combustibles					
Paper					
Miscellaneous paper	33.4	33.1	27.2	24.4	29.5
Newspaper	11.2	7.6	9.6	9.4	9.4
Food and organics	9.5	16.2	7.9	4.8	9.6
Wood and garden	18.7	13.8	17.9	42.1	25.6
Rubber, leather, and textile	2.8	3.8	4.5	4.5	3.9
Plastics	6.2	5.8	6.1	4.6	5.7
Subtotal combustibles	81.8	80.3	83.1	89.8	83.7
Noncombustibles					
Ferrous					
Heavy	1.2	2.4	1.1	0.1	1.2
Light	4.0	4.7	2.9	2.3	3.5
Aluminum	1.1	1.0	.7	0.8	0.9
Other nonferrous metals	0.0	0.0	.5	0.0	0.1
Glass	7.9	8.3	9.2	6.0	7.9
Rocks, dirt, ash and miscellaneous	4.0	3.3	2.4	1.0	2.7
Subtotal noncombustibles	18.2	19.7	16.9	10.2	16.3

- (1) Average wet weight from a 6-day sampling survey from November 12 to November 17, 1979.
- (2) Average wet weight from a 6-day sampling survey from February 4 to February 9, 1980.
- (3) Average wet weight from a 6-day sampling survey from May 5 to May 10, 1980.
- (4) Average wet weight from a 6-day sampling survey from August 4 to August 9, 1980.
- (5) Based on the November, February, May and August results.

Source: Hillsborough County Resource Recovery Planning Study, Chapter 2.

Table A-6 illustrates the seasonal variation of the higher heating value and moisture content of the solid waste. The heating value was lowest in May 1980, the highest values occurred in the months of November 1979 and August 1980. This local data correlates reasonably with HDR and other's sampling programs listed in Table A-7 and its use should provide a reasonable basis for the procurement activities.

TABLE A-6 - STUDY AREA HIGH HEAT VALUE, PROXIMATE ANALYSES

Category	High Heat Value, Btu per Pound				
	November 1979(1)	February 1980(2)	May 1980(3)	August 1980(4)	Average
Combustible fraction, as received	5750	5290	4910	5290	5310
Combustible fraction, moisture free	8100	7560	7220	7780	7660
MSW, as received	4710	4250	4080	4750	4450
MSW, moisture free	6630	6070	6000	6980	6420
Average Moisture %	29	30	32	32	-

- (1) Based on a 6-day sampling survey from November 12 to November 17, 1979.
- (2) Based on a 6-day sampling survey from February 4 to February 9, 1980.
- (3) Based on a 6-day sampling survey from May 5 to May 10, 1980.
- (4) Based on a 6-day sampling survey from August 4 to August 9, 1980.

Source: Hillsborough County Resource Recovery Planning Study, Chapter 2.

Special wastes can comprise a significant amount of the waste that is landfilled. Included in these wastes are large amounts of shrimp, tires, dead animals, lumber, and construction wastes. These non-processable wastes will go directly to the landfills and bypass any waste processing facilities. By selecting the 4.3 unit waste generation rate, we are of the opinion the special wastes have been adequately included in the total waste quantities listed in Table 4.

From Chapter 3 of original application  
submitted July 1981

### AIR QUALITY ANALYSIS

The purpose of air quality analysis is to determine the effects this Project will have on the surrounding area and the attainment status of that area. This is done first determining a good estimate of the emissions from the Project, then modeling the emissions from this facility and finally adding the modeled emissions to the existing background concentration. The area of air quality analysis is less than a precise science and assumptions must be made. These assumptions include the use of air quality models. A fundamental assumption used in the analysis is that the facility is operating at full-load, all day, everyday. This will lead to a more conservative analysis than will actually exist.

#### Facility Emissions and Monitoring

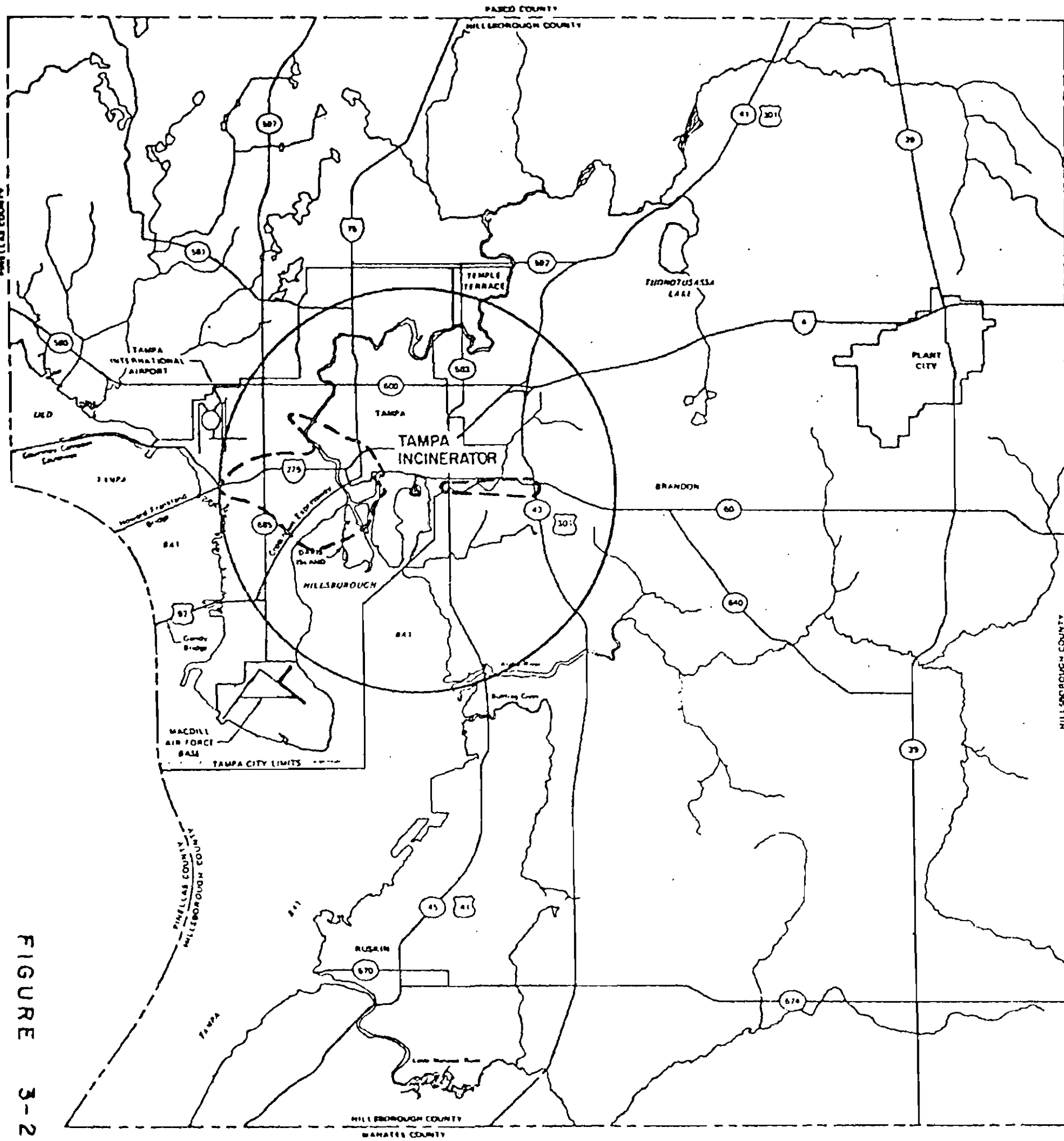
The emissions information for Facility 1 was obtained from Waste Management, Inc. (WMI), the current Volund technology licensee. The data represents the highest value obtained from stack tests done worldwide (see Appendix I). The expected emissions are shown in Table 3-1. The Project's emissions are compared to the PSD significance levels in Table 3-2.

Table 3-1  
Emissions Expected from Project

	Facility 1		Facility 2		TOTAL
	gm/s	TPY	gm/s	TPY	TPY
Particulate (uncontrolled)	575	19970	400	13890	27350
Particulate (controlled)	4.6	160	3.2	109	269
Sulfur Dioxide	20.8	722	12.1	420	1142
Nitrogen Oxides	26.0	903	9.5	330	1233
Carbon Monoxide	1.68	58	5.8	200	258
Hydrocarbons	0.92	32	0.92	32	64
Lead	0.47	16.3	0.47	16.3	32.6
Mercury (vaporous)	0.05	1.8	0.05	1.8	3.6
Mercury (particulate)	$2.3 \times 10^{-3}$	0.08	$2.3 \times 10^{-3}$	0.08	0.16
Beryllium	$4.0 \times 10^{-5}$	$1.4 \times 10^{-3}$	$4.0 \times 10^{-5}$	$1.4 \times 10^{-3}$	$2.8 \times 10^{-3}$
Flouride	0.53	18.4	.53	18.4	32.6
Hydrogen Chloride	23.7	823	23.7	823	1646

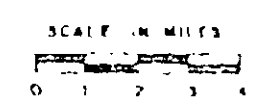
please note our actual stack test data shows lesser emissions at 1200TPD than originally estimated for facility 1, the total for both facilities was used

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LEGEND

- ACTUAL IMPACT AREA  
1.49/M<sup>3</sup>
- PSD IMPACT AREA

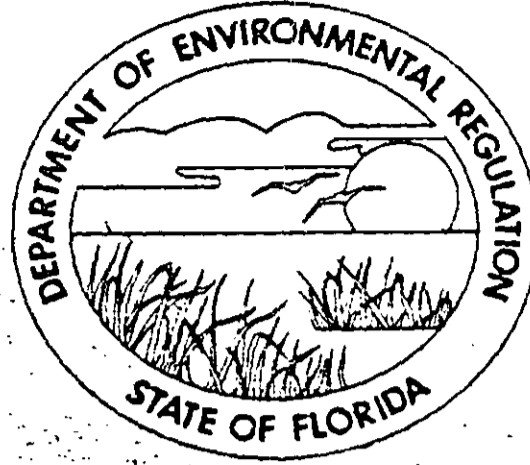


SULFUR DIOXIDE  
SIGNIFICANT IMPACT AREA

MCKAY BAY REFUSE-TO-ENERGY PROJECT

3-6

FIGURE 3-2



STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL REGULATION

CONSTRUCTION  
PERMIT

NO. AC 29- 47277

CITY OF TAMPA  
MCKAY BAY REFUSE-TO-ENERGY  
FACILITY NO. 1

DATE OF ISSUANCE

April 23, 1982

DATE OF EXPIRATION

DECEMBER 31, 1984

Victoria Tschinkel

VICTORIA TSCHINKEL  
SECRETARY



Final Determination

McKay Bay Refuse-to-Energy Project  
Hillsborough County

Permit Number:

AC 29-47277

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

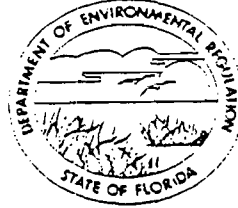
April 21, 1982

Best Available Copy

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAV  
GOVERNOR

VICTORIA J. TSCHIN  
SECRETARY

APPLICANT: City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

PERMIT/CERTIFICATION  
NO. AC 29-47277

COUNTY Hillsborough

PROJECT: McKay Bay  
Refuse-to-Energy  
Facility No. 1

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17  
and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized  
to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached here  
to and made a part hereof and specifically described as follows:

Rehabilitation of the three combustion chambers at the Tampa Municipal  
Incinerator and the construction of a fourth 250 TPD combustion chamber  
and the modification of the facility to a resource recovery facility.

Attachments:

1. McKay Bay Refuse-to-Energy Project, Application to Construct an Air Pollution Source, July, 1981.
2. McKay Bay Refuse-to-Energy Project, Application to Construct an Air Pollution Source, October, 1981.
3. Letter of Richard Garrity to Steve Smallwood, December 10, 1981, concerning effort to obtain emission offsets.
4. Letter of Richard Garrity to Clair Fancy, February 18, 1982, request hourly emission rate changes.

## Best Available Copy

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

### GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions", and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.
3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.
4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.
6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.
7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.
9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.
10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.
11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.
12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
13. This permit also constitutes:
  - Determination of Best Available Control Technology (BACT)
  - Determination of Prevention of Significant Deterioration (PSD)
  - Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

SPECIFIC CONDITIONS:

1. The maximum allowable emissions from the resource recovery facility No. 1 shall be:

Pollutant	Emission Limitation
Particulate	0.025 gr/dscf @12% CO <sub>2</sub> 27.9 lb/hr
Sulfur Dioxide	170.0 lb/hr
Nitrogen Oxides	300.0 lb/hr
VOC	9.0 lb/hr

2. Municipal waste only shall be burned in the facility. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.
3. Hours of operation for the facility shall be 24 hours per day, 7 days per week, 52 weeks per year.
4. An operation and maintenance plan as contained in 17-2.13(7), FAC, shall be submitted with the operating permit applications and be made part of the operating permit.
5. Compliance testing for all criteria shall be conducted in accordance with the methods contained in 40 CFR 60 and 61. A source testing plan shall be submitted to the Department for approval 90 days prior to testing. The Department shall be notified of compliance testing at least 30 days prior to the testing.
6. During the particulate compliance testing, a visible emission standard shall be established by 40 CFR 60, Appendix A, Method 9, as a surrogate compliance method as contained in 17-2.23(3), FAC, and be made a condition of the operating permit.
7. Prior to ninety days before the expiration of this permit, a complete application for an operating permit shall be submitted to the DER Southwest District Office or its designee.

**BEST AVAILABLE COPY**

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

8. The above stated emission limitations are based upon the best estimates of the permittee. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, the permitting authority may then institute procedures to amend the permit conditions.

Expiration Date: December 31, 1984

Issued this 23 day of August, 1982

\_\_\_\_\_ Pages Attached.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

*[Handwritten Signature]*

Signature

Best Available Control Technology (BACT) Determination

Amendment

Hillsborough County

The City of Tampa proposes to construct a facility to incinerate municipal solid waste and use the resulting heat energy to produce electricity as a saleable by-product. The facility is to be located at the site of a previous incinerator installation which has been inoperative since December 1979. This venture, known as the McKay Bay Refuse-to-Energy project, is tentatively a two phase plan.

Phase one is the renovation and conversion of the three existing mass burn combustion furnaces into a state-of-the-art resource recovery system. A fourth combustion furnace will be installed plus waste heat boilers, electrostatic precipitators and a condensing steam turbine electric generator. When phase one is completed the facility will have the capability to burn approximately 300,000 tons per year of solid waste and generate 21 megawatts of electricity. This BACT determination applies to phase one of this project.

Phase two will be the installation of two new mass burn combustion furnaces, with heat recovery systems, and will be located adjacent to the renovated system. The new system will be capable of processing 1,000 tons per day of municipal solid waste and, in addition, to producing electricity will allow the recovery of recyclable materials, such as ferrous metals and aluminum. A BACT determination, if applicable, will be made when the plans for phase two of the project are finalized.

The McKay Bay Refuse-to-Energy project, when completed, will be capable of processing 2,000 tons per day of solid waste. The facility is scheduled to operate continuously with a 20 percent downtime allowance for maintenance.

Applicant's estimated net increase in air emissions (tons/year):

Pollutant	Phase I
Particulates	133
SO <sub>2</sub>	745
NO <sub>x</sub>	1314
CO	75
HC	39

The Refuse-to-Energy complex is located on a 14 acre site adjacent to McKay Bay, south of Route U.S. 60, which is in that portion of Hillsborough County classified nonattainment for the pollutants: particulate matter (17-2.13(1)(a) FAC) and ozone (17-2.16(1)(d) FAC). This area is unclassified for the pollutant sulfur dioxide and classified attainment for the pollutant NO<sub>x</sub>. Therefore the emission limiting standard for the pollutant particulate matter will be subject to a Lowest Achievable Emission Rate (LAER) determination (17-2.17(6) FAC), and a Best Available Control Technology (BACT) determination for the pollutants SO<sub>2</sub>, NO<sub>x</sub> and VOC (17-2.04(6)(c) FAC and 17-2.17(3)(a)1.a.(ii) FAC).

BACT Determination Requested by the Applicant:

Pollutant	Emission Limit
SO <sub>2</sub>	Low sulfur content waste
NO <sub>x</sub>	Boiler design and operating procedures
VOC	9 pounds per hour

Date of Receipt of a BACT Application:

August 24, 1981

Date of Publication in the Florida Administrative Weekly:

September 4, 1981

Review Group Members:

John Svec, BAQM New Source Review Section  
Tom Rogers, BAQM Air Modeling Section  
Anthony Jones, Hillsborough County Environmental Prot. Commission  
Dan Williams, DER Southwest District

Recommendations from the review group and other respondents were the basis for the final determination.

BACT Determination by DER:

Pollutant	Emission Limit
SO <sub>2</sub>	170 pounds per hour
NO <sub>x</sub>	300 pounds per hour
VOC	9.0 pounds per hour

Justification of DER Determination:

The BACT review group members in making the final determination

had to consider the following:

- 1) Resource recovery facilities have a high potential for severely and adversely affecting air quality. Pollutants of concern are SO<sub>2</sub>, NO<sub>x</sub>, particulates, HC, HCL and HF acid gases.
- 2) The thermal destruction of municipal waste is a recognized method of disposal, and A. reduces landfill area requirements; B. eliminates a breeding ground for rodents; C. reduces possibility of ground water contamination; D. allows for the recovery of various metals for recycle.
- 3) Air pollution control technology is currently commercially available and capable of achieving the levels of control necessary to reduce most emissions from resource recovery facilities.
- 4) Calculation of sulfur dioxide emission factors for solid waste based upon the amount of SO<sub>2</sub> generated per million Btu of solid waste burned show the high value of the solid waste SO<sub>2</sub> emission to be slightly higher than the SO<sub>2</sub> emission factor for residual fuel oil containing 0.5 percent sulfur.
- 5) The technology for controlling NO<sub>x</sub> emissions from resource recovery facilities is still in the experimental stage.
- 6) The land area needed for a landfill (dump) will be reduced approximately 90 percent. The residue (ash) to be disposed of in a landfill will be 15 percent of the mass but only 5 percent of the volume of waste collected and burned.

The applicant stated the SO<sub>2</sub> emissions would be 170 pounds per hour. This is analogous to burning oil with a sulfur content of 0.43 percent, which, in most cases, would be BACT for a boiler of this size not using a flue gas desulfurization system. Atmospheric dispersion modeling predicts no violation of the SO<sub>2</sub> increment at this rate of SO<sub>2</sub> emissions. The SO<sub>2</sub> emission limit of 170 pounds per hour, is therefore, determined to be BACT.

The emission of NO<sub>x</sub> is the result of two chemical processes that occur during combustion. In one case the heat of combustion causes the oxidation of nitrogen in the air, called thermal NO<sub>x</sub>. The second case is when the nitrogen in the fuel becomes oxidized, called fuel NO<sub>x</sub>. Some of the factors influencing the amount of



NO<sub>x</sub> produced are flame temperature, nitrogen content of the fuel and the amount of excess air used.

Several methods are being investigated to control NO<sub>x</sub> emissions during the burning of the fuel or treatment of the flue gas. These methods are in the research and development stage and will require additional testing before being considered as BACT for the control of NO<sub>x</sub> emissions from a resource recovery facility.

Resource recovery facilities have the potential to emit large amounts of HC, VOC's and carbon monoxide. Some of the main contributing factors are; the heterogeneous nature of municipal waste, a fuel feed system that does not maintain a constant firing rate and the use of unregulated combustion temperatures and air.

The applicant has proposed a NO<sub>x</sub> emission limit of 300 pounds per hour and a VOC emission limit of 9 pounds per hour based on test results from a similar facility. These emission limits are determined to be BACT, with the requirement that the applicant set up an Operation and Maintenance (O&M) plan for the combustion controls so as to minimize these emissions.

The facility is to be located in an area classified nonattainment for the pollutant particulate matter. The emission limit for particulates will be subject to a Lowest Achievable Emission Rate (LAER) determination.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, BACT Coordinator  
Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, FL 32301

Recommended By:

*J. H. George*  
for Steve Smallwood, Chief BAQM  
Date: March 17, 1982

Approved:

*Terry Cole*  
Victoria Tschinkel, Secretary  
Date: 3/18/82

Lowest Achievable Emission Rate (LAER) Determination  
Amendment

City of Tampa

Hillsborough County

The City of Tampa proposes to construct a facility to incinerate municipal solid waste and use the resulting heat energy to produce electricity as a saleable by-product. The facility is to be located at the site of a previous incinerator installation which has been inoperative since December 1979. This venture, known as the McKay Bay Refuse-to-Energy project, is a two phase plan.

Phase one is the renovation and conversion of the three existing mass burn combustion furnaces into a state-of-the-art resource recovery system. A fourth combustion furnace will be installed plus waste heat boilers, electrostatic precipitators and a condensing steam turbine electric generator. When phase one is completed the facility will have the capability to burn approximately 300,000 tons per year of solid waste and generate 21 megawatts of electricity. This LAER determination applies to phase one of this project.

Phase two will be the installation of two new mass burn combustion furnaces, with heat recovery systems, and will be located adjacent to the renovated system. The new system will be capable of processing 1,000 tons per day of municipal solid waste and, in addition, to producing electricity will allow the recovery of recyclable materials, such as ferrous metals and aluminum. A LAER determination, if applicable, will be made when phase two plans are finalized.

The McKay Bay Refuse-to-Energy project, when completed, will be capable of processing 2,000 tons per day of solid waste. The land area needed for a landfill (dump) will be reduced approximately 90 percent. The residue (ash) to be disposed of in a landfill will be 15 percent of the mass but only 5 percent of the volume of waste collected and incinerated. The facility is scheduled to operate continuously with a 20 percent downtime allowable for maintenance.

Applicant's Estimated net increase in air emissions (tons/year):

Pollutant	Phase I
Particulates	133
SO <sub>2</sub>	745
NO <sub>x</sub>	1314
CO <sup>x</sup>	75
HC (VOC)	39

Page Two

The Refuse-to-Energy complex is located on a 14 acre site adjacent to McKay Bay, south of Route U.S. 60, which is in that portion of Hillsborough County classified nonattainment for the pollutants; particulate matter (17-2.13(1)(a)FAC) and ozone (17-2.16(1)FAC). Therefore the emission limiting standards for the pollutant particulate matter will be subject to a Lowest Achievable Emission Rate (LAER) determination (17-2.17(6)FAC and 17-2.17(3)(a)1.a.(ii)FAC).

LAER Determination Requested by the Applicant:

Pollutant	Emission Limit
Particulates	0.03 grains/DSCF at 50% excess air

Date of Receipt of a LAER Application:

August 24, 1981

Review Group Members:

John Svec, BAQM New Source Review Section  
Tom Rogers, BAQM Air Modeling Section  
Anthony Jones, Hillsborough County Environmental Protection Commission  
Dan Williams, DER Southwest District

Recommendations from the review group and other respondents were the basis for the final determination.

LAER Determination by DER:

Pollutant	Emission Limit
Particulates	0.025 grains/DSCF, corrected to 12% CO <sub>2</sub>

Justification of DER Determination:

The LAER review group members in making the final determination had to cope with the following:

1. Resource recovery facilities have a high potential for severely and adversely affecting air quality. Pollutants of concern are SO<sub>2</sub>, NO<sub>x</sub>, particulates, HC (VOC), HCl and HF acid gases.
2. The thermal destruction of municipal waste is a recognized method of disposal, and A. reduces landfill

area requirements; B. eliminates a breeding ground for rodents; C. reduces possibility of ground water contamination; D. allows for the recovery of various metals for recycle.

3. Air pollution control technology is currently commercially available and capable of achieving the levels of control necessary to reduce most emissions from resource recovery facilities.
4. The construction of a new source, or modification, in a nonattainment area shall apply to the Department for a determination of the Lowest Achievable Emission Rate (LAER) that is applicable to the affected pollutant, which, in this case, is particulate matter (17-2.17(6)(a)FAC).

The Department has determined LAER for particulate matter to be 0.025 grains/DSCF, corrected to 12% CO<sub>2</sub>. The emission limit is deemed to be achievable based on test data from a similar operating facility located in Nashville, Tennessee.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, LAER Coordinator  
Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, FL 32301

Recommended By:

*Steve Smallwood*  
for Steve Smallwood, Chief, BAQM

Date:

March 19, 1982

Approved:

*Victoria Tschinkel*  
Victoria Tschinkel, Secretary

Date:

March 23, 1982

# COUNTY



# OF HILLSBOROUGH

POST OFFICE BOX 1110 TAMPA, FLORIDA 33601

WILLIAM C. TATUM, COUNTY ADMINISTRATOR

May 12, 1981

Mr. Lawrence A. George  
Environmental Administrator  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. George:

Thank you for your April 8, 1981, response to our questions. In reviewing your statement concerning the use of offsets from the City of Tampa Municipal Incinerator, we have formulated additional considerations.

The basic reason you have presented for prohibiting the use of emissions from the municipal incinerator as offsets for the resource recovery incinerator conversion is the inclusion of the municipal incinerator shut-down in the non-attainment State Implementation Plan (SIP) revision of April 24, 1979. Subsequent to the filing of the SIP with EPA, revisions to the plan have been proposed by the local environmental program, the Hillsborough County Environmental Protection Commission (EPC). The most recent revision is currently being prepared by the EPC and refers to the eventual resumption of incineration by the municipal incinerator (pg. 7 of revised SIP, 1981). In addition, a modeling analysis of the impact of emissions from the proposed resource recovery incinerator conversion on monitoring stations referred to in the SIP shows that progress toward attainment would not be significantly impaired.

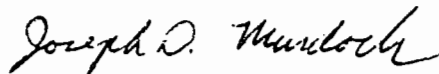
Statutorily, Section 17-2.12(3)(b)3a of the Florida Administrative Code would appear to support our request for offsets from the Tampa Municipal Incinerator. The section states that:

"Any source, whose permit to operate at a specific location or within specified areas, has expired without timely renewal or transfer, or whose operating permit has been revoked, as provided for in chapter 17-4, is permanently shut down, for purposes of section 17-2.17. At the time that such source is so permanently shut down an amount of emission allowance equal to the Base Emission Limit (BEL) for that source, shall be added to the new source allowance for that non-attainment area."

Your office has informed us that no new facilities have submitted requests for use of the New Source Allowance for Total Suspended Particulates since the incinerator closing in December, 1979. We therefore feel the Base Emission Limit from the closed municipal incinerator should be available for use for the resource recovery incinerator conversion. We hope this additional information will permit you to amend your determination on the use of offsets from the closed municipal incinerator.

We feel that obtaining offsets for the incinerator emissions may have a significant impact on the permitting of our project and we would appreciate a timely comment from your office. Thank you for your further consideration in this matter.

Sincerely,



Joseph D. Murdoch  
Resource Recovery Management  
Analyst  
Division of Public Utilities  
and Safety

JDM:cmb

### Proposed Department Action

The Department intends to issue the requested permits to the City of Tampa for the rehabilitation of the old municipal incinerator to a resource recovery facility which will produce steam to generate electricity and for the construction of another 1000 ton per day solid waste resource recovery facility at the existing site in Hillsborough County.

Any person wanting to comment on this action may do so by submitting such comments in writing to:

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Any comments received within thirty days after publication of this notice will be considered and noted in the Department's final determination.

Any person whose substantial interest would be affected by the issuance or denial of this permit may request an administrative hearing by filing a petition for hearing as set forth in Section 28-5.15 FAC (copy attached). Such petition must be filed within 14 days of the date of this notice with:

Ms. Martha Hall  
Department of Environmental Regulation  
Office of General Counsel  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR

Victoria J. Tschinkel  
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

April 23, 1982

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

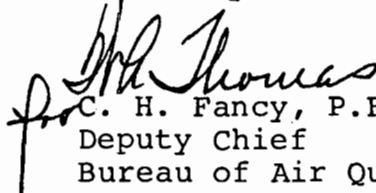
Dale H. Twachtmann  
City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

Dear Mr. Twachtmann:

Enclosed is Permit Number AC 29-47277, dated April 23, 1982  
to City of Tampa  
issued pursuant to Section 403, Florida Statutes.

Acceptance of the permit constitutes notice and agreement that the Department will periodically review this permit for compliance, including site inspections where applicable, and may initiate enforcement actions for violation of the conditions and requirements thereof.

Sincerely,

  
C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality Management

CHF/pa

cc: Dan Williams, FDER, Southwest District  
Hooshang Boostani, Hillsborough County Environmental  
Protection Commission  
Joe Murdoch, City of Tampa



P16 7682486

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

SENT TO		<i>Dale H. Swalltmann</i>	
STREET AND NO.		<i>306 E. Jackson St.</i>	
P.O., STATE AND ZIP CODE		<i>Tampa, FL 33602</i>	
POSTAGE		\$	
CONSULT POSTMASTER FOR FEES	CERTIFIED FEE		c
	SPECIAL DELIVERY		c
	RESTRICTED DELIVERY		c
	OPTIONAL SERVICES		
	RETURN RECEIPT SERVICE		
	SHOW TO WHOM AND DATE DELIVERED		c
	SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY		c
	SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY		c
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY		c
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			
<i>4/26/82</i>			

PS Form 3800, Apr. 1976

PS Form 3811, Jan. 1978

**1. SENDER:** Complete Items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

**2. The following service is requested (check one.)**

Show to whom and date delivered.....

Show to whom, date and address of delivery.....

RESTRICTED DELIVERY  
Show to whom and date delivered.....

RESTRICTED DELIVERY  
Show to whom, date, and address of delivery \$.....

(CONSULT POSTMASTER FOR FEES)

**2. ARTICLE ADDRESSED TO:**  
*Dale H. Swalltmann*  
*City of Tampa*  
*306 E. Jackson Street*  
*Tampa, Florida 33602*

**3. ARTICLE DESCRIPTION:**

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	<i>7682496</i>	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE  Addressee  Authorized agent

*C. Thompson*

**4. DATE OF DELIVERY** **POSTMARK**

*APR 29 1982*

**5. ADDRESS (Complete only if requested)**

**6. UNABLE TO DELIVER BECAUSE:** **CLERK'S INITIALS**

*Zov*

☆ GPO : 1979-300-459

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

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

TO: Victoria J. Tschinkel  
FROM: C. H. Fancy *Clan Jancy*  
DATE: April 21, 1982  
SUBJ: Approval and Signature of Attached Air  
Construction Permit Described Below

RECEIVED

APR 22 1982

Office of the Secretary

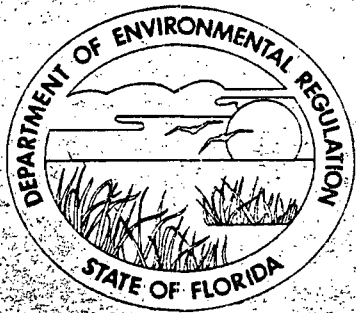
Attached please find one Air Construction Permit for which the applicant is the City of Tampa. The proposed construction is for a 1,000 ton per day resource recovery unit.

The waiver date, after which the permit would be issued by default, is April 25, 1982.

The Bureau recommends your approval and signature.

CHF/pa

Attachment



STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL REGULATION

CONSTRUCTION  
PERMIT

NO. AC 29- 47277

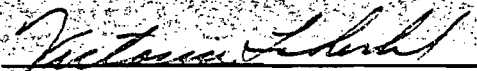
CITY OF TAMPA  
MCKAY BAY REFUSE-TO-ENERGY  
FACILITY NO. 1

DATE OF ISSUANCE

April 23, 1982

DATE OF EXPIRATION

DECEMBER 31, 1984



VICTORIA TSCHINKEL  
SECRETARY

Final Determination

McKay Bay Refuse-to-Energy Project  
Hillsborough County

Permit Number:

AC 29-47277

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

April 21, 1982

The proposed air pollution construction application from the City of Tampa to build a resource recovery facility has been reviewed by the Bureau. The Department's Intent to Issue the construction permit was published in the Tampa Times on March 22 , 1982. Copies of the preliminary determination were available for public inspection at the Hillsborough County Environmental Protection Commission Office, at the Department's Southwest District Office and at the Bureau of Air Quality Management.

Only one letter of comment was received during the thirty day public notice period. The City of Tampa has requested that another specific condition be added that would allow a procedure for adjusting the emission limitations if the estimated emissions were less than the actual emissions. Since this condition is similar to a general condition in the federal permit and follows the Department's policy, the Bureau agrees with the recommendation.

Therefore, it is recommended that the air construction permit be issued with the above mentioned addition.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

APPLICANT: City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

PERMIT/CERTIFICATION  
NO. AC 29-47277

COUNTY Hillsborough.

PROJECT: McKay Bay  
Refuse-to-Energy  
Facility No. 1

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

Rehabilitation of the three combustion chambers at the Tampa Municipal Incinerator and the construction of a fourth 250 TPD combustion chamber and the modification of the facility to a resource recovery facility.

Attachments:

1. McKay Bay Refuse-to-Energy Project, Application to Construct an Air Pollution Source, July, 1981.
2. McKay Bay Refuse-to-Energy Project, Application to Construct an Air Pollution Source, October, 1981.
3. Letter of Richard Garrity to Steve Smallwood, December 10, 1981, concerning effort to obtain emission offsets.
4. Letter of Richard Garrity to Clair Fancy, February 18, 1982, requesting hourly emission rate changes.

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions," and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.
3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.
4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.
6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.
7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.
9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.
10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.
11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.
12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
13. This permit also constitutes:
  - Determination of Best Available Control Technology (BACT)
  - Determination of Prevention of Significant Deterioration (PSD)
  - Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

SPECIFIC CONDITIONS:

1. The maximum allowable emissions from the resource recovery facility No. 1 shall be:

Pollutant	Emission Limitation	
Particulate	0.025 gr/dscf @12% CO <sub>2</sub>	27.9 lb/hr
Sulfur Dioxide		170.0 lb/hr
Nitrogen Oxides		300.0 lb/hr
VOC		9.0 lb/hr

2. Municipal waste only shall be burned in the facility. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.
3. Hours of operation for the facility shall be 24 hours per day, 7 days per week, 52 weeks per year.
4. An operation and maintenance plan as contained in 17-2.13(7), FAC, shall be submitted with the operating permit applications and be made part of the operating permit.
5. Compliance testing for all criteria shall be conducted in accordance with the methods contained in 40 CFR 60 and 61. A source testing plan shall be submitted to the Department for approval 90 days prior to testing. The Department shall be notified of compliance testing at least 30 days prior to the testing.
6. During the particulate compliance testing, a visible emission standard shall be established by 40 CFR 60, Appendix A, Method 9, as a surrogate compliance method as contained in 17-2.23(3), FAC, and be made a condition of the operating permit.
7. Prior to ninety days before the expiration of this permit, a complete application for an operating permit shall be submitted to the DER Southwest District Office or its designee.



PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

8. The above stated emission limitations are based upon the best estimates of the permittee. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, the permitting authority may then institute procedures to amend the permit conditions.

Expiration Date: December 31, 1984

Issued this 23 day of April, 1982

\_\_\_\_\_ Pages Attached.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

*Victoria L. Smith*  
Signature

Best Available Control Technology (BACT) Determination  
Amendment  
Hillsborough County

The City of Tampa proposes to construct a facility to incinerate municipal solid waste and use the resulting heat energy to produce electricity as a saleable by-product. The facility is to be located at the site of a previous incinerator installation which has been inoperative since December 1979. This venture, known as the McKay Bay Refuse-to-Energy project, is tentatively a two phase plan.

Phase one is the renovation and conversion of the three existing mass burn combustion furnaces into a state-of-the-art resource recovery system. A fourth combustion furnace will be installed plus waste heat boilers, electrostatic precipitators and a condensing steam turbine electric generator. When phase one is completed the facility will have the capability to burn approximately 300,000 tons per year of solid waste and generate 21 megawatts of electricity. This BACT determination applies to phase one of this project.

Phase two will be the installation of two new mass burn combustion furnaces, with heat recovery systems, and will be located adjacent to the renovated system. The new system will be capable of processing 1,000 tons per day of municipal solid waste and, in addition, to producing electricity will allow the recovery of recyclable materials, such as ferrous metals and aluminum. A BACT determination, if applicable, will be made when the plans for phase two of the project are finalized.

The McKay Bay Refuse-to-Energy project, when completed, will be capable of processing 2,000 tons per day of solid waste. The facility is scheduled to operate continuously with a 20 percent downtime allowance for maintenance.

Applicant's estimated net increase in air emissions (tons/year):

Pollutant	Phase I
Particulates	133
SO <sub>2</sub>	745
NO <sub>x</sub>	1314
CO	75
HC	39

The Refuse-to-Energy complex is located on a 14 acre site adjacent to McKay Bay, south of Route U.S. 60, which is in that portion of Hillsborough County classified nonattainment for the pollutants: particulate matter (17-2.13(1)(a) FAC) and ozone (17-2.16(1)(d) FAC). This area is unclassified for the pollutant sulfur dioxide and classified attainment for the pollutant NO<sub>x</sub>. Therefore the emission limiting standard for the pollutant particulate matter will be subject to a Lowest Achievable Emission Rate (LAER) determination (17-2.17(6) FAC), and a Best Available Control Technology (BACT) determination for the pollutants SO<sub>2</sub>, NO<sub>x</sub> and VOC (17-2.04(6)(c) FAC and 17-2.17(3)(a)1.a.(ii) FAC).

BACT Determination Requested by the Applicant:

Pollutant	Emission Limit
SO <sub>2</sub>	Low sulfur content waste
NO <sub>x</sub>	Boiler design and operating procedures
VOC	9 pounds per hour

Date of Receipt of a BACT Application:

August 24, 1981

Date of Publication in the Florida Administrative Weekly:

September 4, 1981

Review Group Members:

John Svec, BAQM New Source Review Section  
Tom Rogers, BAQM Air Modeling Section  
Anthony Jones, Hillsborough County Environmental Prot. Commission  
Dan Williams, DER Southwest District

Recommendations from the review group and other respondents were the basis for the final determination.

BACT Determination by DER:

Pollutant	Emission Limit
SO <sub>2</sub>	170 pounds per hour
NO <sub>x</sub>	300 pounds per hour
VOC	9.0 pounds per hour

Justification of DER Determination:

The BACT review group members in making the final determination

had to consider the following:

- 1) Resource recovery facilities have a high potential for severely and adversely affecting air quality. Pollutants of concern are SO<sub>2</sub>, NO<sub>x</sub>, particulates, HC, HCL and HF acid gases.
- 2) The thermal destruction of municipal waste is a recognized method of disposal, and A. reduces landfill area requirements; B. eliminates a breeding ground for rodents; C. reduces possibility of ground water contamination; D. allows for the recovery of various metals for recycle.
- 3) Air pollution control technology is currently commercially available and capable of achieving the levels of control necessary to reduce most emissions from resource recovery facilities.
- 4) Calculation of sulfur dioxide emission factors for solid waste based upon the amount of SO<sub>2</sub> generated per million Btu of solid waste burned show the high value of the solid waste SO<sub>2</sub> emission to be slightly higher than the SO<sub>2</sub> emission factor for residual fuel oil containing 0.5 percent sulfur.
- 5) The technology for controlling NO<sub>x</sub> emissions from resource recovery facilities is still in the experimental stage.
- 6) The land area needed for a landfill (dump) will be reduced approximately 90 percent. The residue (ash) to be disposed of in a landfill will be 15 percent of the mass but only 5 percent of the volume of waste collected and burned.

The applicant stated the SO<sub>2</sub> emissions would be 170 pounds per hour. This is analogous to burning oil with a sulfur content of 0.43 percent, which, in most cases, would be BACT for a boiler of this size not using a flue gas desulfurization system. Atmospheric dispersion modeling predicts no violation of the SO<sub>2</sub> increment at this rate of SO<sub>2</sub> emissions. The SO<sub>2</sub> emission limit of 170 pounds per hour, is therefore, determined to be BACT.

The emission of NO<sub>x</sub> is the result of two chemical processes that occur during combustion. In one case the heat of combustion causes the oxidation of nitrogen in the air, called thermal NO<sub>x</sub>. The second case is when the nitrogen in the fuel becomes oxidized, called fuel NO<sub>x</sub>. Some of the factors influencing the amount of

NO<sub>x</sub> produced are flame temperature, nitrogen content of the fuel and the amount of excess air used.

Several methods are being investigated to control NO<sub>x</sub> emissions during the burning of the fuel or treatment of the flue gas. These methods are in the research and development stage and will require additional testing before being considered as BACT for the control of NO<sub>x</sub> emissions from a resource recovery facility.

Resource recovery facilities have the potential to emit large amounts of HC, VOC's and carbon monoxide. Some of the main contributing factors are; the heterogeneous nature of municipal waste, a fuel feed system that does not maintain a constant firing rate and the use of unregulated combustion temperatures and air.

The applicant has proposed a NO<sub>x</sub> emission limit of 300 pounds per hour and a VOC emission limit of 9 pounds per hour based on test results from a similar facility. These emission limits are determined to be BACT, with the requirement that the applicant set up an Operation and Maintenance (O&M) plan for the combustion controls so as to minimize these emissions.

The facility is to be located in an area classified nonattainment for the pollutant particulate matter. The emission limit for particulates will be subject to a Lowest Achievable Emission Rate (LAER) determination.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, BACT Coordinator  
Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, FL 32301

Recommended By:

*Steve Smallwood*  
for Steve Smallwood, Chief BAQM  
Date: March 17, 1982

Approved:

*Terry Cole*  
Victoria Schinkel, Secretary  
Date: 3/18/82

Lowest Achievable Emission Rate (LAER) Determination  
Amendment

City of Tampa

Hillsborough County

The City of Tampa proposes to construct a facility to incinerate municipal solid waste and use the resulting heat energy to produce electricity as a saleable by-product. The facility is to be located at the site of a previous incinerator installation which has been inoperative since December 1979. This venture, known as the McKay Bay Refuse-to-Energy project, is a two phase plan.

Phase one is the renovation and conversion of the three existing mass burn combustion furnaces into a state-of-the-art resource recovery system. A fourth combustion furnace will be installed plus waste heat boilers, electrostatic precipitators and a condensing steam turbine electric generator. When phase one is completed the facility will have the capability to burn approximately 300,000 tons per year of solid waste and generate 21 megawatts of electricity. This LAER determination applies to phase one of this project.

Phase two will be the installation of two new mass burn combustion furnaces, with heat recovery systems, and will be located adjacent to the renovated system. The new system will be capable of processing 1,000 tons per day of municipal solid waste and, in addition, to producing electricity will allow the recovery of recyclable materials, such as ferrous metals and aluminum. A LAER determination, if applicable, will be made when phase two plans are finalized.

The McKay Bay Refuse-to-Energy project, when completed, will be capable of processing 2,000 tons per day of solid waste. The land area needed for a landfill (dump) will be reduced approximately 90 percent. The residue (ash) to be disposed of in a landfill will be 15 percent of the mass but only 5 percent of the volume of waste collected and incinerated. The facility is scheduled to operate continuously with a 20 percent downtime allowable for maintenance.

Applicant's Estimated net increase in air emissions (tons/year):

Pollutant	Phase I
Particulates	133
SO <sub>2</sub>	745
NO <sub>x</sub>	1314
CO	75
HC (VOC)	39

Page Two

The Refuse-to-Energy complex is located on a 14 acre site adjacent to McKay Bay, south of Route U.S. 60, which is in that portion of Hillsborough County classified nonattainment for the pollutants; particulate matter (17-2.13(1)(a)FAC) and ozone (17-2.16(1)FAC). Therefore the emission limiting standards for the pollutant particulate matter will be subject to a Lowest Achievable Emission Rate (LAER) determination (17-2.17(6)FAC and 17-2.17(3)(a)1.a.(ii)FAC).

LAER Determination Requested by the Applicant:

Pollutant	Emission Limit
Particulates	0.03 grains/DSCF at 50% excess air

Date of Receipt of a LAER Application:

August 24, 1981

Review Group Members:

John Svec, BAQM New Source Review Section  
Tom Rogers, BAQM Air Modeling Section  
Anthony Jones, Hillsborough County Environmental Protection Commission  
Dan Williams, DER Southwest District

Recommendations from the review group and other respondents were the basis for the final determination.

LAER Determination by DER:

Pollutant	Emission Limit
Particulates	0.025 grains/DSCF, corrected to 12% CO <sub>2</sub>

Justification of DER Determination:

The LAER review group members in making the final determination had to cope with the following:

1. Resource recovery facilities have a high potential for severely and adversely affecting air quality. Pollutants of concern are SO<sub>2</sub>, NO<sub>x</sub>, particulates, HC (VOC), HCl and HF acid gases.
2. The thermal destruction of municipal waste is a recognized method of disposal, and A. reduces landfill

area requirements; B. eliminates a breeding ground for rodents; C. reduces possibility of ground water contamination; D. allows for the recovery of various metals for recycle.

3. Air pollution control technology is currently commercially available and capable of achieving the levels of control necessary to reduce most emissions from resource recovery facilities.
4. The construction of a new source, or modification, in a nonattainment area shall apply to the Department for a determination of the Lowest Achievable Emission Rate (LAER) that is applicable to the affected pollutant, which, in this case, is particulate matter (17-2.17(6)(a)FAC).

The Department has determined LAER for particulate matter to be 0.025 grains/DSCF, corrected to 12% CO<sub>2</sub>. The emission limit is deemed to be achievable based on test data from a similar operating facility located in Nashville, Tennessee.

Details of the Analysis May be Obtained by Contacting:

Edward Palagyi, LAER Coordinator  
Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, FL 32301

Recommended By:

*for* *Steven A. George*  
Steve Smallwood, Chief, BAQM

Date:

*March 19, 1982*

Approved:

*Victoria Tschinkel*  
Victoria Tschinkel, Secretary

Date:

*March 23, 1982*





# CITY OF TAMPA

Bob Martinez, Mayor

McKAY BAY REFUSE-TO-ENERGY PROJECT

April 13, 1982

DEP  
PR16 1982  
BA

Mr. Clair Fancy  
Bureau of Air Quality  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301

Dear Mr. Fancy:

The City is in receipt of the preliminary determination for construction of the McKay Bay refuse-to-energy facility AC-29-47277. Upon review of the determination, we feel the addition of language which would recognize the "estimated" nature of emissions and recognize a mechanism for altering these estimates is still an appropriate request. The City asks, therefore, that the following language be added to the specific conditions section of the permit:

The above stated emission limitations are based upon the best estimates of the permittee and the Department of Environmental Regulation. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions.

I wish to thank you for your efforts on behalf of the City of Tampa. If you have any questions concerning our request, please do not hesitate to contact myself or my staff.

Very truly yours,

Richard D. Garrity, Ph.D.  
Urban Environmental Coordinator

RDG/dw

*Jumped to B A Q M  
from Joe Murdoch  
3/22/82*

**Logan**  
borough County, Florida. All lying and being in Section 17, Township 28 South, Range 28 East.

**FRANCES M. DAVIN,**  
CHAIRMAN  
Board of County Commissioners  
Hillsborough County, Florida  
E1327 Mar. 22, 1982

**PUBLIC NOTICE**  
Construction of an air pollution source is being proposed by the City of Tampa to be located in the City of Tampa, Hillsborough County, Florida. The proposed project is the construction of a 1,500 ton per day solid waste resource recovery facility. The construction will increase emission of air pollutants in tons per year, by the following amounts:

PM-10.2: Pb-13.6; SO<sub>2</sub>-74.6;  
NO<sub>x</sub>-314; CO-24.5; VOC-37.4;  
P-16.4; H<sub>2</sub>-1.8; O<sub>3</sub>-0.12;

The proposed construction has been reviewed by the Florida Department of Environmental Regulation (DER) under Federal regulation 40 CFR 52.21, Prevention of Significant Deterioration (PSD) and Chapter 17.2, Florida Administrative Code. The Department has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for the determination and the application for a Federal permit submitted by the City of Tampa are available for public review at the following offices:

Bureau of Air Quality Management, Dept. of Environmental Regulation, 700 Blair Stone Road, Tallahassee, Florida 32311;

Southwest District, Dept. of Env. Regulation, 7601 Highway 98 North, Tampa, Florida 33610;

Hillsborough Co. Environmental Protection Commission, 1900 5th Avenue, Tampa, Florida 33613;

The maximum percentages of allowable PSD increments consumed in the area of the proposed construction will be as follows:

Annual 24-Hour  
PM<sub>10</sub> 11.4% 11.4% 4.1%  
SO<sub>2</sub> 10 10 33

Any person may submit written comments to DER regarding the proposed construction. All comments, postmarked not later than 30 days from the date of notice, will be considered by DER in making a final determination regarding approval for construction of this source. Those comments will be made available for public review on request. Furthermore, a public hearing can be requested by any person. Such request should be submitted within 14 days of the date of this notice. Letters should be addressed to:

Mr. C. H. Fancey  
Bureau of Air Quality Management  
Department of Environmental Regulation  
700 Blair Stone Road  
Tallahassee, Florida 32311  
E 1325 Mar. 22, 1982

QWIP® Systems, Division of Exxon Enterprises Inc.  
1270 Avenue of the Americas, New York, N.Y. 10020

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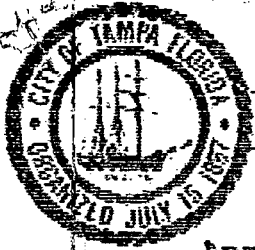


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## CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE TO ENERGY PROJECT

April 15, 1982

Mr. Clair Fancy  
 Department of Environmental Regulation  
 Twin Towers Office Building  
 2600 Blair Stone Road  
 Tallahassee, Florida 32301

Dear Mr. Fancy:

We have reviewed the Federal PSD Preliminary determination (PSD-FL-086) and request that the following changes be incorporated in the permit:

- Specific condition #1 includes emission limitations for Flouride, particulate mercury and vaporous mercury. It appears that these limitations are based on information presented in the McKay Bay Project's Application to Construct an Air Pollution Source, information which was based on average predicted emissions. It was agreed by DER during discussions concerning the Florida PSD permit (AC-29-47277) that such predictions should not be used as an emission limitation, as emissions may exceed these average predicted values. Also, since standard testing methods for mercury will include both a wet catch and dry catch which will combine vaporous and particulate mercury, we feel the emission limitations should be combined. We request, therefore, that the emission limitations be raised to the following levels for these pollutants:

Flouride	6.0 lb/hr
Mercury (vaporous and particulate)	0.6 lb/hr

We do not believe these increases will significantly increase the impact of the facility.

- General Condition #5 requires that the City notify the permitting authority within five (5) days of its failure to comply with emission limitations. We feel that five days is too short a time period and request a ten business day notification period. In addition, we feel the notification period should begin after the City has received test results rather

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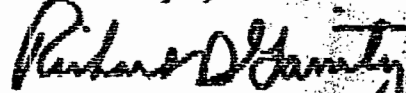
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than immediately after the City does not comply with the emission limitations.

3. The language in general condition #6 is close to language which the City has proposed, with the exception of the last sentence. The sentence beginning "In no case are..." appears to negate the rest of condition #6 and the City requests that this sentence be removed.
4. General condition #8a refers to the right of access by State and EPA representatives. Other items under condition #8 include the term "reasonable". The City requests that 8a be modified to read:
  - a) "be allowed reasonable access to the permittee's premises or premises under the control of the permittee..."

Thank you again for your cooperation and help on our project. If you have questions concerning the City's requests, please contact me or my staff.

Very truly yours,



Richard D. Garrity, M.D.  
Urban Environmental Coordinator

RDG/JDM/dw



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Americas, New York, N.Y. 10020

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## CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT



April 13, 1982

Mr. Clair Faney  
 Bureau of Air Quality  
 Twin Towers Office Building  
 2600 Blair Stone Road  
 Tallahassee, FL 32301

Dear Mr. Faney:

The City is in receipt of the preliminary determination for construction of the McKay Bay refuse-to-energy facility AC-29-47277. Upon review of the determination, we feel the addition of language which would recognize the "estimated" nature of emissions and recognize a mechanism for altering these estimates is still an appropriate request. The City asks, therefore, that the following language be added to the specific conditions section of the permit:

The above stated emission limitations are based upon the best estimates of the permittee and the Department of Environmental Regulation. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions.

I wish to thank you for your efforts on behalf of the City of Tampa. If you have any questions concerning our request, please do not hesitate to contact myself or my staff.

Very truly yours,

*Richard H. Garrity*  
 Richard H. Garrity, Ph.D.  
 Urban Environmental Coordinator

RDG/dw



City of Tampa, Florida

Date: April 12, 1982

To: Clair Fancy  
From: Joe Murdoch  
Subject: Legal Advertisement

DER

APR 15 1982

BAQM

Clair:

Please find the attached legal advertisement. We quipped a copy of the ad to Tallahassee (your attention) two weeks ago, but we just received this notarized copy today. I hope it doesn't cause problems with the permit. Let me know if you need additional information. Thanks.

*Joe*  
Joe

P.S. Another letter is on its way regarding the preliminary determination and the language we talked about.

THE TAMPA TIMES

Published Daily  
Tampa, Hillsborough County, Florida

State of Florida }  
County of Hillsborough } ss.

Before the undersigned authority personally appeared  
R. F. Pittman, who on oath says that he is Publisher of The Tampa Times, a daily  
newspaper published at Tampa in Hillsborough County, Florida; that the attached copy  
of advertisement being a .....

LEGAL NOTICE

.....  
in the matter of Notice of a construction of an air pollution source  
is being proposed by the City of Tampa.

.....  
was published in said newspaper in the issues of March 22, 1982.  
-----

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

*R. F. Pittman*

Sworn to and subscribed before me, this ... 7th ... day

of ..... April, A.D. 19 82

*Steve E. Runyon*

(SEAL)

Notary Public, State of Florida at Large  
My Commission Expires Jan. 25, 1986

date of this notice Letters  
should be addressed to  
Mr. C. H. Fancy  
Bureau of Air Quality  
Management  
Department of  
Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
E6295 Mar 22, 1982

PUBLIC NOTICE  
Construction of an air  
pollution source is being  
proposed by the City of  
Tampa to be located in the  
City of Tampa, Hillsborough  
County, Florida. The pro-  
posed project is the con-  
struction of a 1,000-ton per  
day solid waste resource  
recovery facility. The con-  
struction will increase  
emission of air pollutants, in  
tons per year, by the follow-  
ing amounts:  
PM-122.2; Pb-13.6; SO<sub>2</sub>-744.6;  
NO<sub>x</sub>-1.314; CO-74.5; VOC-39.4;  
P-18.4; H<sub>2</sub>-1.8; Be-0012.  
The proposed con-  
struction has been reviewed  
by the Florida Department  
of Environmental Regulation  
(FDER) under Federal  
regulation 40 CFR 52.21  
Prevention of Significant  
Deterioration (PSD) and  
Chapter 17.2, Florida Ad-  
ministrative Code. The  
Department has made a  
preliminary determination  
that the construction can be  
approved provided certain  
conditions are met. A sum-  
mary of the basis for the  
determination and the ap-  
plication for a federal  
permit submitted by the City  
of Tampa are available for  
public review at the follow-  
ing offices:  
Bureau of Air Quality  
Management, Dept. of En-  
vironmental Regulation, 2600  
Blair Stone Road, Talla-  
hassee, Florida 32301;  
Southwest District, Dept.  
of Env. Regulation, 7601  
Highway 301 North, Tampa,  
Florida 33610;  
Hillsborough Co. En-  
vironmental Protection Com-  
mission, 1900 9th Avenue,  
Tampa, Florida 33605.  
The maximum percen-  
tages of allowable PSD lin-  
crements consumed in the  
area of the proposed con-  
struction will be as follows:  
Annual 24-Hour 3-Hour  
PM<sub>10</sub> N/A N/A N/A  
SO<sub>2</sub> 10 48 38  
Any person may submit  
written comments to FDER  
regarding the proposal con-  
struction. All comments  
postmarked not later than 30  
days from the date of notice  
will be considered by FDER  
in making a final determina-  
tion regarding approval for  
construction of this source.  
Those comments will be  
made available for public  
review on request. Further-  
more, a public hearing can  
be requested by any person.  
Such request should be sub-  
mitted within 14 days of the

*Quipped to BAQM  
from Joe Muddoch  
3/26/82*

**Logals**

Hillborough County, Florida. All  
lying and being in Section 17,  
Township 28 South, Range 18  
East.

**FRANCES M. DAVIN,**

**CHAIRMAN**

Board of County

Commissioners

Hillborough County, Florida

EG37

Mar. 22, 1982

**PUBLIC NOTICE**

Construction of an air  
pollution source is being  
proposed by the City of  
Tampa to be located in the  
City of Tampa, Hillborough  
County, Florida. The pro-  
posed project is the con-  
struction of a 1,600 ton per  
day solid waste resource  
recovery facility. The con-  
struction will increase  
emission of air pollutants, in  
tons per year, by the follow-  
ing amounts:

PM-10.2; Pb-1.4; SO<sub>2</sub>-74.6;  
NO<sub>x</sub>-2.16; CO-24.5; VOC-37.4;  
P-16.4; H<sub>2</sub>O-1.1; De-2.12;

The proposed con-  
struction has been reviewed  
by the Florida Department  
of Environmental Regulation  
(FDER) under Federal  
regulation 40 CFR 51.21,  
Prevention of Significant  
Deterioration (PSD) and  
Chapter 17.3, Florida Ad-  
ministrative Code. The  
Department has made a  
preliminary determination  
that the construction can be  
approved provided certain  
conditions are met. A sum-  
mary of the basis for the  
determination and the ap-  
plication for a Federal  
permit submitted by the City  
of Tampa are available for  
public review at the follow-  
ing offices:

Bureau of Air Quality  
Management, Dept. of En-  
vironmental Regulation, 2600  
Dale Stone Road, Tallah-  
assee, Florida 32310;

Southwest District, Dept.  
of Env. Regulation, 2601  
Highway 301 North, Tampa,  
Florida 33610;

Hillborough Co. En-  
vironmental Protection Com-  
mission, 1900 5th Avenue,  
Tampa, Florida 33606;

The maximum percent-  
ages of allowable PSD in-  
crements consumed in the  
area of the proposed con-  
struction will be as follows:

**Annual 24-Hour 2-Hour**

PM	11/A	N/A	11/A
SO <sub>2</sub>	10	6	33

Any person may submit  
written comments to FDER  
regarding the proposed con-  
struction. All comments,  
postmarked not later than 30  
days from the date of notice,  
will be considered by FDER  
in making a final determina-  
tion regarding approval for  
construction of this source.  
These comments will be  
made available for public  
review on request. Further-  
more, a public hearing can  
be requested by any person.  
Such request should be sub-  
mitted within 14 days of the  
date of this notice. Letters  
should be addressed to:

Mr. C. H. Fandy  
Bureau of Air Quality  
Management  
Department of  
Environmental Regulation  
2600 Dale Stone Road  
Tallahassee, Florida 32310

EG37 Mar. 22, 1982

STATE CLEARINGHOUSE  
Intergovernmental Coordination  
Office of the Governor  
The Capitol  
Tallahassee, Florida 32301  
904/488-8114

Date received: 3-29-82  
SAI Number: FL8203291028

We have received your recent correspondence concerning the project identified by your title PRE-DETRMNTN-TAMPA- MCKAY BAY  
REFUSE-TO-ENERGY PROJECT

This review begins on the day the item was received in our office, pursuant to U.S. OMB Circular A-95 and/or Section 216.212, F.S. Please refer to the above State Application Identifier (SAI) Number in any future correspondence concerning the project.

The target date for completion of our review and dispatch of comment is this date plus 30 days. Completion of action may be delayed if we need to review the completed application, in which case we will notify you.

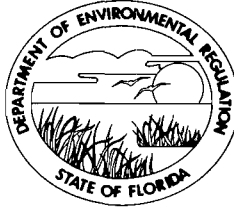
  
Director, Intergovernmental Coordination

\*Copies should also be sent to regional and metropolitan clearinghouses.

(NOTE: Office location - <sup>302</sup> ~~100~~ Carlton Bldg.)

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. Joe Brown  
S.E. Regional Office  
National Park Service  
1895 Phoenix Blvd.  
Atlanta, Georgia 30349

Dear Mr. Brown:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086, AC 29-47277)

I wish to bring to your attention that the City of Tampa proposes to construct a 1000 ton per day solid waste resource recovery facility to be located in the City of Tampa, Hillsborough County, Florida, and that emissions of air pollutants will thereby be increased. The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, has reviewed the proposed construction under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval, with conditions, for this construction. This approval applies only to Federal regulatory requirements and has no bearing on other State or local functions.

Please also be aware that the attached Public Notice announcing the preliminary determination, the availability of pertinent information for public scrutiny and the opportunity for public comment will be published in a local newspaper, the Tampa Tribune, in the near future. This notice has been mailed to you for your information and in accordance with regulatory requirements. You need take no action unless you wish to comment on the proposed construction. If you have any questions, please feel free to call Mr. Bill Thomas or myself at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/pa  
Attachment

PUBLIC NOTICE

Construction of an air pollution source is being proposed by the City of Tampa to be located in the City of Tampa, Hillsborough County, Florida. The proposed project is the construction of a 1000 ton per day solid waste resource recovery facility. The construction will increase emission of air pollutants, in tons per year, by the following amounts:

<u>PM</u>	<u>Pb</u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOC</u>	<u>F</u>	<u>Hg</u>	<u>Be</u>
122.2	13.6	744.6	1314	75	74.5	39.4	1.8	.0012

The proposed construction has been reviewed by the Florida Department of Environmental Regulation (FDER) under Federal regulation 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The Department has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for the determination and the application for a federal permit submitted by the City of Tampa are available for public review at the following offices:

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

Southwest District  
Dept. of Env. Regulation  
7601 Highway 301 North  
Tampa, Florida 33610

Hillsborough County Env. Prot. Commission  
1900 9th Avenue  
Tampa, FL 33605

The maximum percentages of allowable PSD increments consumed in the area of the proposed construction will be as follows:

	Annual	24-Hour	3-Hour
PM	N/A	N/A	N/A
SO <sub>2</sub>	10	48	38

Any person may submit written comments to FDER regarding the proposed construction. All comments, postmarked not later than 30 days from the date of notice, will be considered by FDER in making a final determination regarding approval for construction of this source. Those comments will be made available for public review on request. Furthermore, a public hearing can be requested by any person. Such request should be submitted within 14 days of the date of this notice.

Letters should be address to:

Mr. C. H. Fancy  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO. L

ACTION DUE DATE

KAHEL		<del>PAVLO</del>		STARNES	
BLOMMEL		THOMAS		MARTY HALL	
BARKER		GEORGE		MARSHALL MOTT-SMITH	
J. ROGERS		PALAGYI			

REMARKS

John Snee *PS*

Patty - please cc dist's lp then file

EPA permit

Tampa

INFORMATION

REVIEW & RETURN	
REVIEW & FILE	<input checked="" type="checkbox"/>
INITIAL & FORWARD	

DISPOSITION

REVIEW & RESPOND	
PREPARE RESPONSE	
FOR MY SIGNATURE	
FOR YOUR SIGNATURE	
LET'S DISCUSS	
SET UP MEETING	
INVESTIGATE & REPORT	
INITIAL & FORWARD	
DISTRIBUTE	
CONCURRENCE	
FOR PROCESSING	
INITIAL & RETURN	

FROM

STEVE SMALLWOOD

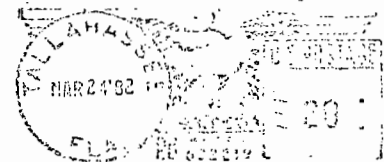
DATE

7-14

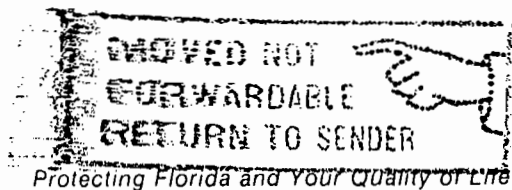
PHONE

*5 for*

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
2600 BLAIR STONE ROAD  
TWIN TOWERS OFFICE BUILDING  
TALLAHASSEE, FLORIDA 32301



Mr. Joe Brown  
S.E. Regional Office  
National Park Service  
1895 Phoenix Blvd.  
Atlanta, G



NAT 95 132622N1 03/26/82  
RETURN TO SENDER  
NOT DELIVERABLE AS ADDRESSED  
UNABLE TO FORWARD



STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

MEMORANDUM

TO: Dan Williams, FDER, Southwest District  
Hooshang Boostani, Hillsborough County Environmental  
Protection Commission

FROM: *APB for* C. H. Fancy, Deputy Chief, Bureau of Air Quality  
Management

DATE: March 23, 1982

SUBJ: Preliminary Determination - McKay Bay Refuse-to-Energy  
Project, Hillsborough County (PSD-FL-086)

Please find enclosed one copy of the Preliminary  
Determination and Public Notice for the City of Tampa's  
application to construct a 1,000 ton per day solid waste  
disposal facility.

This information must be available for public inspection  
for 30 days from the date of public notice, which will appear  
in the Tampa Tribune in the near future.

Should you have any questions, please call Bill Thomas or  
myself.

CF:JS:pa

Enclosure

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

MEMORANDUM

TO: Dan Williams, FDER, Southwest District  
Hooshang Boostani, Hillsborough County Environmental  
Protection Commission

FROM: *APB for* C. H. Fancy, Deputy Chief, Bureau of Air Quality  
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DATE: March 23, 1982

SUBJ: Preliminary Determination - McKay Bay Refuse-to-Energy  
Project, Hillsborough County (PSD-FL-086)

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CF:JS:pa

Enclosure

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. T. Michael Taimi, Chief  
Consolidated Permits Branch  
EPA Region IV  
345 Courtland Street N.E.  
Atlanta, Georgia 30308

Dear Mr. Taimi:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse to Energy Project (PSD FL-086)

Enclosed for your review and comment are the Public Notice and Preliminary Determination for the City of Tampa's proposal to construct a 1,000 ton per day solid waste disposal facility to be located in the City of Tampa, Hillsborough County, Florida. The public notice will appear in a local newspaper, the Tampa Tribune, in the near future.

Please inform my office if you have comments or questions regarding this determination, at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF:JS:pa

Enclosure

PUBLIC NOTICE

Construction of an air pollution source is being proposed by the City of Tampa to be located in the City of Tampa, Hillsborough County, Florida. The proposed project is the construction of a 1000 ton per day solid waste resource recovery facility. The construction will increase emission of air pollutants, in tons per year, by the following amounts:

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122.2	13.6	744.6	1314	75	74.5	39.4	1.8	.0012

The proposed construction has been reviewed by the Florida Department of Environmental Regulation (FDER) under Federal regulation 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The Department has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for the determination and the application for a federal permit submitted by the City of Tampa are available for public review at the following offices:

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Department of Env. Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Southwest District  
Dept. of Env. Regulation  
7601 Highway 301 North  
Tampa, Florida 33610

Hillsborough County Env. Prot. Commission  
1900 9th Avenue  
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The maximum percentages of allowable PSD increments consumed in the area of the proposed construction will be as follows:

	Annual	24-Hour	3-Hour
PM	N/A	N/A	N/A
SO <sub>2</sub>	10	48	38

Any person may submit written comments to FDER regarding the proposed construction. All comments, postmarked not later than 30 days from the date of notice, will be considered by FDER in making a final determination regarding approval for construction of this source. Those comments will be made available for public review on request. Furthermore, a public hearing can be requested by any person. Such request should be submitted within 14 days of the date of this notice.

Letters should be address to:

Mr. C. H. Fancy  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. T. Michael Taimi, Chief  
Consolidated Permits Branch  
EPA Region IV  
345 Courtland Street N.E.  
Atlanta, Georgia 30308

Dear Mr. Taimi:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse to Energy Project (PSD FL-086)

Enclosed for your review and comment are the Public Notice and Preliminary Determination for the City of Tampa's proposal to construct a 1,000 ton per day solid waste disposal facility to be located in the City of Tampa, Hillsborough County, Florida. The public notice will appear in a local newspaper, the Tampa Tribune, in the near future.

Please inform my office if you have comments or questions regarding this determination, at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF:JS:pa

Enclosure

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



**BOB GRAHAM**  
GOVERNOR  
**VICTORIA J. TSCHINKEL**  
SECRETARY

March 23, 1982

Dale H. Twachtmann, Administrator  
Water Resources & Public Works  
City of Tampa  
8th Floor, City Hall Plaza  
Tampa, Florida 33602

Dear Mr. Twachtmann:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse to Energy Project (PSD FL-086)

Please find enclosed two copies of the Preliminary Determination for the Federal air construction permit application as referenced.

A copy of the Preliminary Determination and your application will be open to public review and comment for a period of 30 days. The public can also request a public hearing to review and discuss specific issues. At the end of this period, the Department will evaluate the comments received and make a final determination regarding the proposed construction.

Should you have any questions regarding this information, please contact Mr. Bill Thomas at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF:JS:pa

Enclosures

cc: Ralph Lee Torrens  
Joe Murdoch

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



**BOB GRAHAM**  
GOVERNOR  
**VICTORIA J. TSCHINKEL**  
SECRETARY

March 23, 1982

Dale H. Twachtmann, Administrator  
Water Resources & Public Works  
City of Tampa  
8th Floor, City Hall Plaza  
Tampa, Florida 33602

Dear Mr. Twachtmann:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse to Energy Project (PSD FL-086)

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Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

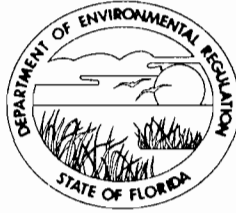
CHF:JS:pa

Enclosures

cc: Ralph Lee Torrens  
Joe Murdoch

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Tampa Bay Regional Planning  
Council  
Box 95067  
9455 Koger Blvd.  
St. Petersburg, Florida 33702

Gentlemen:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086, AC 29-47277)

I wish to bring to your attention that the City of Tampa proposes to construct a 1000 ton per day solid waste resource recovery facility to be located in the City of Tampa, Hillsborough County, Florida, and that emissions of air pollutants will thereby be increased. The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, has reviewed the proposed construction under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval, with conditions, for this construction. This approval applies only to Federal regulatory requirements and has no bearing on other State or local functions.

Please also be aware that the attached Public Notice announcing the preliminary determination, the availability of pertinent information for public scrutiny and the opportunity for public comment will be published in a local newspaper, the Tampa Tribune, in the near future. This notice has been mailed to you for your information and in accordance with regulatory requirements. You need take no action unless you wish to comment on the proposed construction. If you have any questions, please feel free to call Mr. Bill Thomas or myself at (904) 488-1344.

Sincerely,

for  
C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/pa  
Attachment



STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Dale H. Twachtmann, Administrator  
Water Resources & Public Works  
City of Tampa  
8th Floor, City Hall Plaza  
Tampa, Florida 33602

Dear Mr. Twachtmann:

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Refuse to Energy Project (PSD FL-086)

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A copy of the Preliminary Determination and your application will be open to public review and comment for a period of 30 days. The public can also request a public hearing to review and discuss specific issues. At the end of this period, the Department will evaluate the comments received and make a final determination regarding the proposed construction.

Should you have any questions regarding this information, please contact Mr. Bill Thomas at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF:JS:pa

Enclosures

cc: Ralph Lee Torrens  
Joe Murdoch

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. John Christiano  
Chief, Permit Review Unit  
National Park Service - AIR  
Post Office Box 25287  
Denver, Colorado 80225

Dear Mr. Christiano:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086)

Please find enclosed one copy of the Preliminary Determination and Public Notice for the City of Tampa's application to construct a 1,000 ton per day solid waste disposal facility. The public notice will appear in a local newspaper, the Tampa Tribune, in the near future.

Since this source is within 100 kilometers of the Chassahowitzka Class I area, please review the analyses summarized in the attached Preliminary Determination Summary and comment as you see fit. We are especially interested in any comment you may have regarding air quality impacts to the Chassahowitzka area.

If you have any questions, please contact Mr. Bill Thomas at (904) 488-1344.

Sincerely,

*John P. Svec*  
for

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF:pa  
Enclosure

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. T. Michael Taimi, Chief  
Consolidated Permits Branch  
EPA Region IV  
345 Courtland Street N.E.  
Atlanta, Georgia 30308

Dear Mr. Taimi:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse to Energy Project (PSD FL-086)

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Please inform my office if you have comments or questions regarding this determination, at (904) 488-1344.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF:JS:pa

Enclosure

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Hillsborough County Commissioners  
Hillsborough County Courthouse  
Tampa, Florida 33601

Gentlemen:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086, AC 29-47277)

I wish to bring to your attention that the City of Tampa proposes to construct a 1000 ton per day solid waste resource recovery facility to be located in the City of Tampa, Hillsborough County, Florida, and that emissions of air pollutants will thereby be increased. The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, has reviewed the proposed construction under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval, with conditions, for this construction. This approval applies only to Federal regulatory requirements and has no bearing on other State or local functions.

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Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/pa  
Attachment

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Ms. Carolyn Dekle  
State A-95 Coordinator  
Florida State Planning and  
Development Clearinghouse  
Office of Planning and Budget  
The Capitol  
Tallahassee, Florida 32301

Dear Ms. Dekle:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086, AC 29-47277)

I wish to bring to your attention that the City of Tampa proposes to construct a 1000 ton per day solid waste resource recovery facility to be located in the City of Tampa, Hillsborough County, Florida, and that emissions of air pollutants will thereby be increased. The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, has reviewed the proposed construction under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval, with conditions, for this construction. This approval applies only to Federal regulatory requirements and has no bearing on other State or local functions.

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Sincerely,

C. H. Fancy, P.E.

Deputy Chief

Bureau of Air Quality Management

CHF/pa  
Attachment

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. Kenneth E. Black  
U.S. Fish and Wildlife Service  
Box 95067  
17 Executive Park Drive  
Atlanta, Georgia 36347

Dear Mr. Black:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086, AC 29-47277)

I wish to bring to your attention that the City of Tampa proposes to construct a 1000 ton per day solid waste resource recovery facility to be located in the City of Tampa, Hillsborough County, Florida, and that emissions of air pollutants will thereby be increased. The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, has reviewed the proposed construction under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval, with conditions, for this construction. This approval applies only to Federal regulatory requirements and has no bearing on other State or local functions.

Please also be aware that the attached Public Notice announcing the preliminary determination, the availability of pertinent information for public scrutiny and the opportunity for public comment will be published in a local newspaper, the Tampa Tribune, in the near future. This notice has been mailed to you for your information and in accordance with regulatory requirements. You need take no action unless you wish to comment on the proposed construction. If you have any questions, please feel free to call Mr. Bill Thomas or myself at (904) 488-1344.

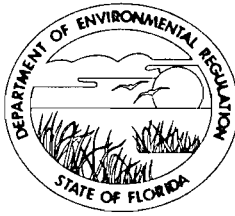
Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/pa  
Attachment

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. Joe Brown  
S.E. Regional Office  
National Park Service  
1895 Phoenix Blvd.  
Atlanta, Georgia 30349

Dear Mr. Brown:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086, AC 29-47277)

I wish to bring to your attention that the City of Tampa proposes to construct a 1000 ton per day solid waste resource recovery facility to be located in the City of Tampa, Hillsborough County, Florida, and that emissions of air pollutants will thereby be increased. The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, has reviewed the proposed construction under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval, with conditions, for this construction. This approval applies only to Federal regulatory requirements and has no bearing on other State or local functions.

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Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
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BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

March 23, 1982

Mr. Edward Collinsworth  
Refuge Manager  
National Wildlife Refuge  
Route 2, Box 44  
Homosassa, Florida 32646

Dear Mr. Collinsworth:

RE: Preliminary Determination - City of Tampa, McKay Bay  
Refuse-to-Energy Project (PSD-FL-086, AC 29-47277)

I wish to bring to your attention that the City of Tampa proposes to construct a 1000 ton per day solid waste resource recovery facility to be located in the City of Tampa, Hillsborough County, Florida, and that emissions of air pollutants will thereby be increased. The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, has reviewed the proposed construction under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21) and reached a preliminary determination of approval, with conditions, for this construction. This approval applies only to Federal regulatory requirements and has no bearing on other State or local functions.

Please also be aware that the attached Public Notice announcing the preliminary determination, the availability of pertinent information for public scrutiny and the opportunity for public comment will be published in a local newspaper, the Tampa Tribune, in the near future. This notice has been mailed to you for your information and in accordance with regulatory requirements. You need take no action unless you wish to comment on the proposed construction.

You will note that the source is within 100 kilometers of the Chassahowitzka Class I area under your responsibility. Please review the analyses summarized in the attached Preliminary

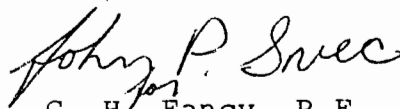


Mr. Edward Collinsworth  
March 23, 1982  
Page Two

Determination Summary and comment as you see fit. We are especially interested in any comment you may have regarding air quality impacts to the Chassahowitzka area.

If you have any questions, please feel free to call Mr. Bill Thomas or myself at (904) 488-1344.

Sincerely,

A handwritten signature in cursive script that reads "C. H. Fancy".

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality Management

CHF/pa

Attachment

Technical Evaluation  
and  
Preliminary Determination

McKay Bay Refuse-to-Energy Project  
1000 Ton Per day Solid Waste Disposal Facility  
Hillsborough County, Florida

Federal Permit Number:

PSD-FL-086

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting  
March 17, 1982

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PUBLIC NOTICE

Construction of an air pollution source is being proposed by the City of Tampa to be located in the City of Tampa, Hillsborough County, Florida. The proposed project is the construction of a 1000 ton per day solid waste resource recovery facility. The construction will increase emission of air pollutants, in tons per year, by the following amounts:

<u>PM</u>	<u>Pb</u>	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>CO</u>	<u>VOC</u>	<u>F</u>	<u>Hg</u>	<u>Be</u>
122.2	13.6	744.6	1314	75	74.5	39.4	1.8	.0012

The proposed construction has been reviewed by the Florida Department of Environmental Regulation (FDER) under Federal regulation 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The Department has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for the determination and the application for a federal permit submitted by the City of Tampa are available for public review at the following offices:

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

Southwest District  
Dept. of Env. Regulation  
7601 Highway 301 North  
Tampa, Florida 33610

Hillsborough County Env. Prot. Commission  
1900 9th Avenue  
Tampa, FL 33605

The maximum percentages of allowable PSD increments consumed in the area of the proposed construction will be as follows:

	Annual	24-Hour	3-Hour
PM	N/A	N/A	N/A
SO <sub>2</sub>	10	48	38

Any person may submit written comments to FDER regarding the proposed construction. All comments, postmarked not later than 30 days from the date of notice, will be considered by FDER in making a final determination regarding approval for construction of this source. Those comments will be made available for public review on request. Furthermore, a public hearing can be requested by any person. Such request should be submitted within 14 days of the date of this notice.

Letters should be address to:

Mr. C. H. Fancy  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

I. SYNOPSIS OF APPLICATION

A. Name and Address of Applicant

City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

B. Source Location

The proposed source is located on a fourteen acre site adjacent to McKay Bay, south of Florida Route 60 in Tampa, Hillsborough County, Florida. The UTM coordinates are: Zone 17 - 360.0 km East and 3091.9 km North.

C. Project Description

The applicant proposes to rehabilitate the old municipal incinerator into a 1,000 tons per day solid waste resource recovery facility capable of generating electricity for sale to Tampa Electric Company.

The existing incinerator system consists of three mass burn combustion trains, without energy recovery, based upon the Volund technology. Each unit is rated at 250 tons per day. A fourth unit is to be added, thus increasing the design capacity of the facility to 1,000 tons per day. The incinerator will be rehabilitated into a resource recovery facility by the addition of waste heat boilers, electrostatic precipitators and turbine generators. Ash produced by the combustion process will be handled by a wet system. The wet ash will be dewatered and loaded into trucks for subsequent disposal in the City's designated residue disposal site.

## II. APPLICABILITY

The proposed project is subject to preconstruction review under federal Prevention of Significant Deterioration (PSD) regulations, Section 52.21 of Title 40 of the Code of Federal Regulations as amended in the Federal Register of August 7, 1980 (45 FR 52676). Specifically, the McKay Bay Refuse-to-Energy Project is a major stationary source (40 CFR 52.21(b)(1)) located in an area currently designated in accordance with 40 CFR 81.310 as nonattainment for the criteria pollutants particulate matter (PM) and ozone (O<sub>3</sub>), as unclassified for the criteria pollutant sulfur dioxide (SO<sub>2</sub>) and as attainment for the criteria pollutants nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO) and lead (Pb). Emissions of PM, SO<sub>2</sub>, NO<sub>x</sub>, Pb, fluoride (F), mercury (Hg) and beryllium (Be) will increase above the significant criteria set in the PSD regulations. Emissions of PM and VOC are exempt from PSD requirements according to 40 CFR 52.21 (i)(5) since the area is designated nonattainment for particulate matter and ozone. The nonattainment pollutants are permitted according to the new source review requirements for nonattainment areas contained in 17-2.17, Florida Administrative Code. Therefore, the proposed project is subject to PSD review for the pollutants SO<sub>2</sub>, NO<sub>x</sub>, Pb, F, Hg and Be.

This review consists of a determination of Best Available Control Technology (BACT) and, unless otherwise exempted, an analysis of the air quality impact of the increased emissions. The review also includes an analysis of the project's impacts

on soils, vegetation and visibility along with air quality impacts resulting from associated commercial, residential and industrial growth.

The proposed project is also subject to the provisions of the federal New Source Performance Standard (NSPS) for incinerators, 40 CFR 60, Subpart E.

### III. SOURCE IMPACT ANALYSIS

#### A. Emissions Limitations

The operation of the proposed resource recovery facility will produce emissions of particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compounds, (VOC), lead (Pb), fluoride (f), mercury (Hg), and beryllium (Be).

Table 1 summarizes the potential to emit of all pollutants regulated under the Act which are emitted by the proposed source.

Best Available Control Technology (BACT) has been determined for SO<sub>2</sub>, NO<sub>x</sub>, Pb, F, Hg and Be. The emission limiting standards selected as BACT and made a condition of the permit are listed in Table 2. Justification for the standards selected is included in Technical Appendix A.

The permitted emissions, including those determined as BACT, are in compliance with the New Source Performance Standard (NSPS) requirements of 40 CFR 60, Subpart E.

#### B. Air Quality Analysis

An air quality impact analysis has been performed to evaluate the impact of the proposed project on ambient concentrations of



Table 1  
Summary of Emissions  
 (tons per year)

Pollutant	Potential Emissions <sup>(a)</sup>		Significance Level <sup>(c)</sup>
	Facility 1		
	Before Controls	After Controls	
PM <sup>(b)</sup>	19970.0	122.2	25
SO <sub>2</sub>	744.6	744.6	40
NOx	1314.0	1314.0	40
CO	74.5	74.5	100
VOC <sup>(b)</sup>	39.4	39.4	40
Pb	13.6	13.6	0.6
F	18.4	18.4	3
Hg (vaporous)	1.8	1.8	0.1
Hg (particulate)	0.067	0.067	
Be	0.0012	0.0012	0.0004

- (a). Potential emissions in accordance with federal definition as estimated by the applicant.
- (b). Subject to Lowest Achievable Emission Rate (LAER) requirements for nonattainment areas.
- (c). 40 CFR 52.21(b)(23).

Table 2  
Allowable Emission Limits

1000 ton per day solid waste resource recovery facility

Pollutant	Standard	Facility 1 (lb/hr)	<i>changed to:</i>	Basis
PM	0.025 grain/dscf	27.9		LAER
SO <sub>2</sub>	0.453 lb/MMBTU	170.0		BACT
NO <sub>x</sub>	-	300.0		BACT
VOC	-	9.0		BACT
Pb	-	3.1		BACT
F	-	4.2	6.0	BACT
Hg (vaporous)	-	0.4	} 0.6	BACT
Hg (particulate)	-	0.015		BACT
Be	5 grams/24/hr period	0.00026	.00046	BACT

SO<sub>2</sub>, NO<sub>2</sub>, Pb, F, Be and Hg. Dispersion modeling was used to evaluate the impacts.

Results of the analysis provide reasonable assurance that the project, as described in this permit and subject to the conditions of approval proposed herein, will not lead to any violation of National Ambient Air Quality Standards or PSD increments. Details of the analysis are discussed in the Technical Appendix B.

#### C. Additional Impacts Analysis

An additional impact analysis has been performed to assess (1) the impact of the proposed project on soils, vegetation, and visibility and (2) any air quality impacts resulting from associated commercial, residential, or industrial growth. No adverse impacts are expected; details of the analysis are discussed in Technical Appendix C.

#### IV. CONCLUSIONS

Based on review of the data submitted by the City of Tampa for the construction and operation of the 1,000 ton per day solid waste resource recovery facility, the FDER concludes that compliance with all applicable federal air quality regulations will be achieved provided certain specific conditions are met. The allowable emissions in Table 2 have been determined to be Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) for the respective pollutants for this source. The impact of emissions from the resource recovery facility will not cause or contribute to a violation of any ambient air quality standard or PSD increment. Appendix D includes the proposed general and specific conditions of approval for the federal permit (PSD-FL-086).

TECHNICAL APPENDIX A  
FEDERAL BACT ANALYSIS

The applicant is required, under the provisions of 40 CFR 52.21, as revised August 7, 1980 (45 FR 52676), to apply BACT to all criteria and noncriteria pollutants emitted in significant levels. BACT is determined for each pollutant on a case-by-case review taking into account energy, environmental and economic impacts.

The applicant has proposed BACT for each applicable pollutant and has presented justification for the standards selected. The Florida Department of Environmental Regulation (FDER) has reviewed and accepted the technology and emission limits proposed as BACT. The federal PSD permit shall include these limits or any more stringent emission standards that are imposed by the State of Florida. These limits are summarized in Table 2. A discussion of the BACT for each pollutant follows:

Sulfur Dioxide Control

The BACT limitation proposed for sulfur dioxide (SO<sub>2</sub>), 170.0 lb/hr, is based upon the highest stack test results obtained from information supplied by Waste Management, Inc. (WMI), the current Volund technology licensee.

The sulfur dioxide emissions from the mass burners depend on the sulfur content of the waste being fed to the burners. The sulfur content estimated by the applicant is the equivalent of low sulfur fuel (0.453lb/MMBTU).

Both wet and dry scrubbing systems were investigated as representing BACT. In addition to controlling SO<sub>2</sub>, the scrubbers could also reduce the emission of nitrogen oxides, hydrogen chloride and the other gaseous pollutants. Both scrubbing systems were rejected for the following reasons. The wet system would create problems with the water retention pond and increased corrosion from the wet stack conditions. A dry scrubbing system with a baghouse for particulate control was rejected since this technology is still unproven for this application. The applicant also stated that bond financing would be difficult to obtain with scrubbing systems unproven in practice.

Since the air quality dispersion modeling indicates no problems meeting the ambient air quality standard and the PSD increment, add-on controls could not be economically justified. Additional room for control equipment is available if future problems occur. Therefore, FDER feels the applicant's proposed limitation of 170.0 lb/hr is reasonable as BACT for sulfur dioxide emissions.

#### Nitrogen Oxides Control

The applicant proposes an emission level for nitrogen oxides (NO<sub>x</sub>) based on emission estimates from the highest stack test results obtained from WMI.

NO<sub>x</sub> emissions are a function of combustion efficiency and excess air present. NO<sub>x</sub> emissions are also dependent on the nitrogen content of the waste and the heat of combustion temperature which oxidizes the nitrogen in the air. Another factor is

that combustion temperature and dwell time is higher in order to eliminate odor.

Several methods are being investigated to control NO<sub>x</sub> during the burning of the fuel or the treatment of the flue gas. These methods are in the research and development stage and will require additional testing before being considered as representing BACT.

Therefore, FDER agrees with the applicant that the proper boiler design and operating procedures represent BACT for NO<sub>x</sub>. For the facility, maximum emission of 300.0 lb/hr for NO<sub>x</sub> constitutes BACT at this emission level, the ambient air quality standard will not be threatened.

#### Lead, Beryllium and Mercury Control

The applicant proposes emission limits based upon the WMI emission estimates from stack tests. These have been recalculated to reflect the particulate matter reduction used in the LAER determination from 0.03 to 0.025 grains/dscf.

Since the particulate matter emissions are being controlled by LAER, additional controls are not feasible for a BACT determination. Therefore, FDER has determined that 3.1 lb/hr of lead emissions, 0.015 lb/hr of particulate mercury emissions, and 0.00026 lb/hr of beryllium emissions represent BACT for the facility.

#### Fluoride and Gaseous Mercury Control

The equipment available to remove the fluoride and gaseous mercury emissions is the same type as that used to control sulfur dioxide emissions. Therefore, the same deter-

mination applies for these pollutants. FDER concurs with the applicant that 4.2 lb/hr of fluoride emissions and 0.4 lb/hr of gaseous mercury emissions represent BACT for the facility.

APPENDIX B  
AIR QUALITY IMPACT ANALYSIS

A. Summary

The PSD review process requires an air quality impact analysis for all applicable pollutants. This analysis includes the use of EPA-approved air quality dispersion models in conjunction with ambient air monitoring data. Estimates of maximum ground-level concentrations are determined for comparison with state and federal standards. The analysis requires:

- o An analysis of existing air quality;
- o A PSD increment analysis (for PM and SO<sub>2</sub> only);
- o A National Ambient Air Quality Standards (NAAQS) analysis;
- o An analysis of impact on soils, vegetation, and visibility and growth-related air quality impacts; and
- o A good engineering practice stack height evaluation.

In addition, preconstruction monitoring may be necessary to establish existing air quality conditions if valid monitoring data do not presently exist.

The proposed project is subject to PSD review for SO<sub>2</sub>, NO<sub>2</sub>, Pb, F, Hg (vaporous and particulate), and Be. Because the project is located in an area that is nonattainment for PM, it is exempt from PSD review for PM and is reviewed under the more stringent State nonattainment process. Only SO<sub>2</sub>, NO<sub>2</sub>, and Pb are criteria pollutants for which NAAQS are established.



Based on these required air quality impact analyses, FDER has reasonable assurance that the subject facility, as described in this permit and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A discussion of the required analyses follows.

B. Discussion

1. Modeling Methodology

The EPA-approved Single-Source CRSTER dispersion model was used in the air quality impact analyses.

This model was used to determine the maximum predicted annual and short-term ground-level ambient concentrations of the subject pollutants. Receptors were located in 36 azimuthal directions surrounding the facility in concentric rings ranging from 0.5 to 9.0 kilometers. All emission stacks (2) were collocated. The stack parameters used in the modeling are given in Table B-1.

The surface and upper air meteorological data used in the model were National Weather Service data collected at Tampa, Florida during the period 1970-1974.

Table B-1

Stack Parameters for McKay Bay Refuse-to-Energy Project

<u>Emissions Unit</u>	<u>Stack Height (m)</u>	<u>Stack Diameter (m)</u>	<u>Exit Velocity (m/s)</u>	<u>Exit Temperature (K)</u>
1	45.72	1.75	23.40	500
2	45.72	1.75	23.40	500

## 2. Analysis of Existing Air Quality

In order to evaluate existing air quality in the area of a proposed project, FDER may require a period of continuous preconstruction monitoring for any pollutant subject to PSD review. An exemption from this requirement may be obtained if the net emissions increase of the pollutant would cause an air quality impact less than a certain de minimum level as defined in 40 CFR 52.21(i)(8) or current monitoring data of sufficient quantity and quality already exist within the area of maximum impact of the proposed project.

Table B-2 lists the subject pollutants and their maximum projected impacts in comparison with the de minimus levels mentioned above.

Table B-2

### Projected Air Quality Impacts from Proposed Project

<u>Pollutant</u>	<u>Averaging Time</u>	<u>Projected Impact (ug/m<sup>3</sup>)</u>	<u>De Minimus Level (ug/m<sup>3</sup>)</u>
SO <sub>2</sub>	24-hour	9	13
NO <sub>2</sub>	Annual	2	14
Pb	24-hour	0.2	0.1
Hg	24-hour	0.02	0.25
Be	24-hour	0.00003	0.0005
F	24-hour	0.23	0.25

Table B-2 shows that NO<sub>2</sub>, Hg, Be, and F have projected maximum impacts less than the de minimus levels and therefore are not subject to preconstruction monitoring. Since the proposed facility is located near the Tampa urban area, existing monitoring data for Pb were available for use by the applicant.

Two continuous SO<sub>2</sub> monitors, four Pb monitors and one NO<sub>2</sub> monitor within several kilometers of the proposed site were used in the air quality analysis. Table B-3 lists the highest recorded monitored values for these pollutants at these sites for the previous year (1980).

Table B-3

Monitoring Results, SO<sub>2</sub> and Pb (ug/m<sup>3</sup>)

<u>Station</u>	<u>Pollutant</u>	<u>3-hour*</u>	<u>24-hour*</u>	<u>90-day</u>	<u>Annual</u>
Davis Island	SO <sub>2</sub>	496/465	89/87		21
Hookers Pt.	SO <sub>2</sub>	476/469	132/106		20
Davis Island	Pb			0.24	
Hookers Pt.	Pb			0.28	
Health Dept.	Pb			0.43	
Hwys. 60 & 41	Pb			0.93	
Hookers Pt.	NO <sub>2</sub>				33

\*Values represent the highest and the highest and second-highest for the year.

### 3. PSD Increment Analysis

PSD increment analysis pertains to PM and SO<sub>2</sub> for which maximum allowable increases (increments) are defined. The proposed project is located in an area designated as nonattainment for PM and therefore not subject to PSD review for that pollutant. The area is classified as Class II for SO<sub>2</sub>. The nearest Class I area is the Chassahowitzka National Wilderness Area approximately 77 kilometers to the north-northwest.

All SO<sub>2</sub> emissions from the proposed project will consume increment. In addition, all other increment consuming sources that might impact the project area were included in the analysis. Table B-4 lists the maximum increment consumption expected in the project area.

Table B-4  
Maximum Increment Consumption (SO<sub>2</sub>)

<u>Avering Time</u>	<u>Class II Increment Consumed (ug/m<sup>3</sup>)</u>	<u>Allowable Class II Increment (ug/m<sup>3</sup>)</u>
3-hour	193	512
24-hour	44	91
Annual	2	20

The SO<sub>2</sub> significant impact area of the proposed project is the area encompassing all predicted concentrations greater than 1 ug/m<sup>3</sup> on an annual average. The greatest distance to the edge of this area is less than 10 kilometers. No significant impact on the nearest Class I area, 77 kilometers away, is expected as a result of this project.

#### 4. Ambient Air Quality Standards Analysis

The PSD regulations require the permit applicant to demonstrate that, given existing air quality in an area, a proposed emissions increase subject to PSD review will not cause or contribute to any violation of ambient air quality standards. For the proposed project, an ambient air quality standards analysis is required for SO<sub>2</sub>, NO<sub>2</sub>, and Pb.

A conservative estimate of the maximum concentration to be expected, for comparison with the National Ambient Air Quality Standards (NAAQS), is obtained by adding the maximum (highest, second-high) predicted ground-level concentration as modeled for the proposed project to the maximum monitored value in the vicinity for each respective pollutant. These maximum background values for SO<sub>2</sub>, NO<sub>2</sub>, and Pb have been established in Section 2 of this appendix. Table B-5 lists the maximum predicted concentrations expected to occur in project area for comparison with the NAAQS.

Table B-5

##### Maximum Predicted Concentrations

<u>Pollutant</u>	<u>Predicted Impact (ug/m<sup>3</sup>)</u>	<u>NAAQS (ug/m<sup>3</sup>)</u>
SO <sub>2</sub>		
Annual	22	80
24-hour	141	365
3-hour	524	1300
NO <sub>2</sub>		
Annual	35	100
Pb		
90-day	1.0	1.5

Estimates of the maximum concentrations from the proposed project for F, Hg, and Be are given in Table B-2. These substances do not have an ambient air quality standard to compare with. However, all have maximum estimated impacts below the de minimus values as set forth in section 2. These de minimus levels are determined to be below that which could be detected accurately. As such, F, Hg, and Be are not expected to pose any threat to public health or welfare in the area.

#### 5. Good Engineering Practice Stack Height Evaluation

The good engineering practice (GEP) stack height is defined as:

$$H(\text{GEP}) = H_b + 1.5L$$

where  $H_b$  is the building height, and  $L$  is the lesser dimension of the building height or width.

The proposed project will have a building height of 60 feet with greater than 60 feet horizontal dimensions. The GEP stack height is calculated to be 150 feet. This is the proposed stack height and the stack height that was in the modeling.

## APPENDIX C

### Analysis of Impact on Soils, Vegetation and Visibility and Growth-Related Air Quality Impacts

The maximum impact of the proposed project, as demonstrated through the air quality analysis, will be below the national secondary air quality standards for SO<sub>2</sub>. These standards were established to protect public welfare related values. Also, the maximum impact of NO<sub>2</sub>, Hg, F, and Be by the facility were shown to be less than de minimus, in terms of monitoring detection. As such, these low level additions to the ambient air are expected to have no adverse effect on soils, vegetation, and visibility. Addition of Pb is shown to have ambient impacts greater than the de minimus values associated with monitoring. In the case of Pb, the maximum additional impact to the ambient air is approximately two percent of the standard. Since this addition will not cause a violation to occur, no significant adverse effect is expected.

A visibility analysis was performed to determine any impact on the nearest Class I area, the Chassahowitzka National Wilderness Area. A Level I analysis, as defined the EPA "Workbook for Estimating Visibility Impairment", showed no potential visibility impact.

A construction work force of between 150 to 300 persons will be needed for the project. Nearly all of this work force will be available in the Tampa area. There should be little to no secondary residential, commercial or industrial growth associated with the proposed project that would cause adverse effects to air quality.

APPENDIX D  
SPECIFIC CONDITIONS

FDER proposes a preliminary determination of approval with conditions for the project (construction of a 1,000 ton per day solid waste resource recovery facility) requested by the City of Tampa in the complete permit application submitted on October 26, 1981.

The proposed specific and general conditions of approval follow.



SPECIFIC CONDITIONS

1. The maximum allowable emissions from the resource recovery facility no. 1 shall be:

<u>Pollutant</u>	<u>Emission Limitation</u>
Sulfur dioxide	170.0 lb/hr
Nitrogen Oxides	300.0 lb/hr
Lead	3.1 lb/hr
Fluoride	4.2 lb/hr
Mercury (vaporous)	0.4 lb/hr
Mercury (particulate)	0.015 lb/hr
Beryllium	5 grams/24-hr period 0.00026 lb/hr

2. Municipal waste only shall be burned in the facility. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.

3. Electric output for sale to Tampa Electric Company (TECO) shall not exceed 25 MW.

4. Hours of operation for the facility shall be 24 hours per day, 7 days per week, 52 weeks per year.

5. An operation and maintenance plan shall be submitted with the state operating permit application and be made part of this permit.

6. Compliance testing for all criteria and NESHAPS pollutants shall be conducted in accordance with the methods contained in 40 CFR 60 and 61. A source testing plan shall be submitted to the Department of Environmental Regulation for approval 90 days prior to testing. The Department shall be notified of compliance testing at least 30 days prior to the testing.

## GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.
2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.
3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.
4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.
5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall immediately notify the State District Manager by telephone and provide the District Office and the permitting authority with the following information in writing within four (4) days of such conditions:
  - (a) description for noncomplying emission(s),
  - (b) cause of noncompliance,
  - (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,

(d) steps taken by the permittee to reduce and eliminate the noncomplying emission,

and

(e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

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

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.
7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.
8. The permittee shall allow representatives of the State environmental control agency or representatives of the Environmental Protection Agency, upon the presentation of credentials:
  - (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;
  - (b) to have access to any copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;
  - (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

(d) to sample at reasonable times any emission of pollutants;

and

(e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted to this permit to the permitting agency shall be mailed to:

Mr. James T. Wilburn  
Chief, Air Management Branch  
Air & Waste Management Division  
U.S. EPA, Region IV  
345 Courtland Street, NE  
Atlanta, GA 30365

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

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

## CITY OF TAMPA

Rob Martinez, Mayor

HICKAY BAY RE-USE-TO-ENERGY PROJECT

March 15, 1982

DER

MAR 16 1982

BAQM

Mr. Clair Pancy  
 State of Florida  
 Department of Environmental Regulation  
 2600 Blair Stone Road  
 Tallahassee, Florida 32301

Dear Mr. <sup>Clair</sup>Pancy:

I am writing pursuant to our recent phone conversation concerning the City of Tampa's air quality permit application (AC 79-47771). As you are aware, the vendor for our resource recovery facility has requested that we allow a two stack as opposed to a one stack configuration. Each stack would vent two incinerator units and each would have the following stack parameters:

TABLE 1

## Stack Parameters Per Stack

Stack Diameter* I.D.	5.75 ft.	1.75 m
Stack Height	150 ft.	45.73 m
Exit Gas Temperature	440°F	500 K
Exit Gas Velocity	76.9 ft./sec.	26.43 m/s
Exit Gas Volume	119,000 ACFM	56.63 m <sup>3</sup> /sec
*Stack O.D.	6.8 ft.	2.07 m

It is our understanding that preliminary modeling, ramp and investigations by your staff show that this change in configuration will not increase the predicted impact of the facility on ambient air quality. The City requests, therefore, that the permit application for Facility I be changed to include the two stack configuration with the parameters listed in Table 1. Please contact me if you require further information. Thank you for your time and consideration.

Very truly yours,

*Jc*  
 Joseph D. Murdoch  
 Resource Recovery Management Analyst

JHM/dv

THE TAMPA TRIBUNE

Published Daily  
Tampa, Hillsborough County, Florida

County of Hillsborough } ss.

Before the undersigned authority personally appeared  
C. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily  
newspaper published at Tampa in Hillsborough County, Florida; that the attached copy  
of advertisement being a

LEGAL NOTICE

in the matter of Notice that the Fla. Dept. of Environmental Regulation  
has received applications from and intends to issue construction  
permits to the City of Tampa for the construction/modification  
of two solid waste incinerators. was published in said newspaper in the issues of January 22, 1982

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

*C. T. Gleason*

Sworn to and subscribed before me, this 24th day  
of February A.D. 1982

(SEAL)

*Jay L. ...*  
My Commission Expires Oct. 25, 1982.

TIM FAWELL

NOTICE OF PROPOSED AGENCY ACTION  
The Florida Department of Environmental Regulation (DER) has received applications from and intends to issue Construction Permits to the City of Tampa for the construction/modification of two solid waste incinerators equipped for electric generation to be located near McKay Bay in Hillsborough County, Florida. A determination of Best Available Control Technology and Lowest Achievable Emission Rate was required. Copies of the applications, BACT and LAER Determination, Technical Evaluation, and Departmental Intent are available for inspection at the following offices:  
Florida Department of Environmental Regulation, Southwest District, 7601 Highway 301 North, Tampa, Florida 33610  
Department of Environmental Regulation, Bureau of Air Quality Mgmt., 2600 Blair Stone Road, Tallahassee, Florida 32301  
Hillsborough County Environmental Protection Commission, 1900 9th Avenue, Tampa, Florida 33610  
Comment on this action shall be submitted in writing to Mr. Bill Thomas of the Tallahassee office, within 30 days of this notice.  
M2113 Jan. 22, 1982



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

February 22, 1982

DER

MAR 1 1982

BAQM

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. Fancy:

By this letter and attached waiver form, the City is waiving its right to have its application for an air quality permit for the McKay Bay Refuse-to-Energy Facility I (AC 29-47277) approved or denied within 90 days of its completeness as prescribed in Section 120.60(2)F.S.

It is our understanding that a final determination will be issued by D.E.R. as soon as possible, on or before April 25, 1982.

Thank you again for your time and consideration.

Very truly yours,

Richard D. Garrity, Ph.D.  
Urban Environmental Coordinator

RDG/dw

Attachment



BEST AVAILABLE COPY

WAIVER OF 90 DAY TIME LIMIT  
UNDER SECTION 120.60(2), FLORIDA STATUTES

License (Permit, Certification) Application No. AC 29-47277  
Applicant's Name: City of Tampa

The undersigned has read Section 120.60(2), Florida Statutes, and fully understands the Applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the Applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Section 120.60(2), Florida Statutes, waives the right under Section 120.60(2), Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Section 120.60(2), Florida Statutes. Said waiver is made freely and voluntarily by the Applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 25th day of April 1982.

The undersigned is authorized to make this waiver on behalf of the applicant.

Dale H. Twachtman  
Signature

Dale H. Twachtman  
Name of Signee

February 22, 1982  
Date

*Alison*  
Sworn to and subscribed before me this 10 day of April 1982.  
Notary Public, State of Florida at Large  
My Commission Expires January 21, 1985

**BEST AVAILABLE COPY**

Please accept this form as a replacement for the previously submitted waiver.

WAIVER OF 90 DAY TIME LIMIT  
UNDER SECTION 120.60(2), FLORIDA STATUTES

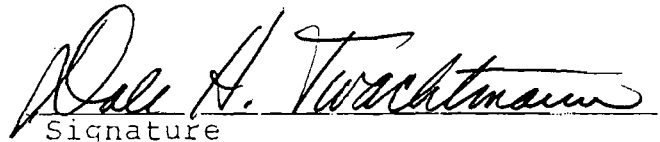
License (Permit, Certification) Application No. AC-29-47273  
Applicant's Name: City of Tampa

The undersigned has read Section 120.60(2), Florida Statutes, and fully understands the Applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the Applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Section 120.60(2), Florida Statutes, waives the right under Section 120.60(2), Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Section 120.60(2), Florida Statutes. Said waiver is made freely and voluntarily by the Applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 1st day of June 1982.

The undersigned is authorized to make this waiver on behalf of the applicant.

  
Signature

Dale H. Twachtmann  
Name of Signee

2-19-82  
Date

**RECEIVED**

MAR 4 1982

Dept. of Environmental Regulation  
Office of General Counsel

 3-1-82

Notary Public, State of Florida at Large  
My Commission Expires January 21, 1985

City of Tampa, Florida

Date: March 2, 1982

To: Martha Hall *John*  
From: Joe Murdoch  
Subject: Waiver for McKay Bay Facility II

RECEIVED

MAR 4 1982

Dept. of Environmental Regulation  
Office of General Counsel

Ms. Hall:

Attached is the notarized waiver form you requested,  
with the proper application number. Please excuse the  
typo. Thank you.

*Joe*



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

February 18, 1982

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32301

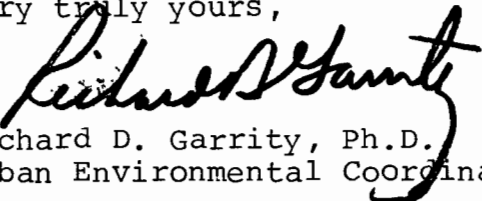
DER  
FEB 22 1982  
BAQM

Dear Mr. Fancy:

By this letter and attached waiver form, the City is waiving its right to have its application for an air quality permit for the McKay Bay Refuse-to-Energy Facility II (AC 29-47278) approved or denied within 90 days of its completeness as prescribed in Section 120.60(2)F.S. It is our understanding that the City will maintain its right to appeal DER's preliminary BACT and LAER determinations during the waiver time period (ending 1 June, 1982). If it is the interpretation of DER that our appeal right is not extended by this waiver request, the City asks to be notified of the procedures by which its appeal right can be preserved and requests a further extension of the appeal time limit (granted 10 February, 1982) to institute such procedures.

Thank you again for your time and consideration.

Very truly yours,

  
Richard D. Garrity, Ph.D.  
Urban Environmental Coordinator

RDG/dw

Attachment

D.E.R.

FEB 19 1982

SOUTHWEST DISTRICT  
TAMPA

WAIVER OF 90 DAY TIME LIMIT  
UNDER SECTION 120.60(2), FLORIDA STATUTES

License (Permit, Certification) Application No. AC-29-47478  
Applicant's Name: City of Tampa

The undersigned has read Section 120.60(2), Florida Statutes, and fully understands the Applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the Applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Section 120.60(2), Florida Statutes, waives the right under Section 120.60(2), Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Section 120.60(2), Florida Statutes. Said waiver is made freely and voluntarily by the Applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 1st day of June 19 82.

The undersigned is authorized to make this waiver on behalf of the applicant.

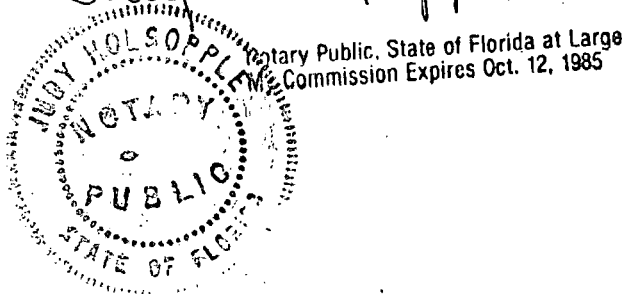
Dale H. Twachtmann  
Signature

Dale H. Twachtmann  
Name of Signee

2-19-82  
Date

Sworn to and subscribed  
before me this 19th day  
of February 1982.

Judy A. Holsopple



D.E.R.

FEB 19 1982

SOUTHWEST DISTRICT  
TAMPA



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

February 18, 1982

D.E.R.

FEB 19 1982

SOUTHWEST DISTRICT  
TAMPA

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. Fancy:

I am writing in response to our meeting of February 12, 1982 to formally request changes to the preliminary BACT/LAER determination issued for permit number AC 29-47277 for the McKay Bay Refuse-to-Energy Project. The emission levels presented in the original permit application were "expected emission" averages which do not reflect the highest emissions possible from the facility. The City has subsequently received revised estimates which more accurately predict the facility's possible emissions. Because these revised estimates will not significantly increase the impact of the facility, the City requests that the following agreed-to values be used as emission limitations under the specific conditions section of the permit application:

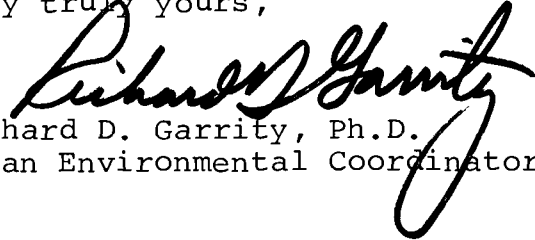
<u>Pollutant</u>	<u>Emission Limitation</u>
Particulate 0.025g/DSCF at 12% CO <sub>2</sub>	30.4 lb/hr
Sulfur Dioxide	170 lb/hr
Nitrogen Oxide	300 lb/hr
Carbon Monoxide	17 lb/hr
VOC	9.0 lb/hr
Lead	3.1
Beryllium	5 gr/24 hr period

The City recognizes that the requested changes in emission limitations may require issuance of a revised preliminary determination. Additionally, the City requests that language be added to the permit (see attached) reflecting agreed-to procedures for resolving circumstances which might arise should stack emissions exceed limitations for permitted pollutants.

Clair Fancy  
Page 2  
February 18, 1982

I wish to thank you and your staff for the time and effort you have put forth for the City's permit application. I believe the resulting permit will allow operation of the McKay Bay Refuse-to-Energy facility with minimal impact to the air quality of our City, allowing the citizens of Tampa to realize an environmentally sound technique for solid waste disposal.

Very truly yours,



Richard D. Garrity, Ph.D.  
Urban Environmental Coordinator

RDG/dw

D.E.R.  
FEB 19 1982  
SOUTHWEST DISTRICT  
TAMPA

PROPOSED ATTACHMENT TO PERMIT NUMBER AC 29-47277

It is recognized that emission limitations placed on emissions for the McKay Bay Refuse-to-Energy facility (AC 29-47277) reflect best estimates and may not precisely portray actual emissions. In the event DER determines that the emissions for any pollutant\* exceed the limits described in the permit, the following procedures will be instituted.

1. DER shall notify the City of the amount by which the permitted limit is exceeded.
2. If the amount by which the permitted limit is exceeded is less than or equal to 10% of the permitted limit, no regulatory action will be initiated.
3. If the amount by which the permitted limit is exceeded is greater than 10% of the permitted limit, DER shall determine whether the excess emissions will cause a violation of FAAQS, NAAQS, PSD increments, or NESHAP Standards. If the excess emission does not cause violation of NAAQS, FAAQS, PSD increments or NESHAP standards then the emission limit will be adjusted to the higher emission level.
4. If the excess emissions are determined to violate FAAQS, NAAQS, PSD increments or NESHAP Standards, DER will notify the City and the City will take actions to attempt to correct the emission violation.

\*Particulate emissions will not be subject to this procedure.

D.E.R.

FEB 19 1992

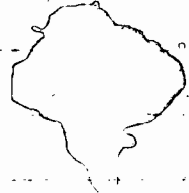
SOUTHWEST DISTRICT  
TAMPA



Tampa Incinerator Meeting

2/12/82

Bill Thomas	DER/BAQM	488-1344
Ray Moreau	DER/solid waste	488-0300
Easel Roberts	HDR	402-399-1374
John Svec	DER - BAQM	488-1344
Ed Palagyi	" "	"
Tom Rogers	" "	"
Clain Jarvey	" "	"
Joe Murdoch	City of Tampa	813-223-0771
Rik Garity	"	813-223-8216



*Smallwood  
p.h.*



# CITY OF TAMPA

Bob Martinez, Mayor

Water Resources and Public Works

Dale Twachmann  
Administrator

February 5, 1982

**RECEIVED**  
FEB 8 1982

Victoria J. Tschinkel  
Secretary  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Office of the Secretary

Dear Ms. Tschinkel:

I am sending this letter as a supplement to my letter of 3 February, 1982 concerning DER's preliminary BACT and LAER determinations for the City of Tampa's applications to construct air pollution sources. Subsequent to the transmittal of the 3 February letter, it was brought to our attention that the City's request for an informal meeting and extension of our appeal time limit would require specific language and reference to the Florida Administrative Code.

By our letter of 3 February, therefore, the City is requesting an extension of the 14 day appeal period to appeal the DER preliminary BACT and LAER determinations. We are requesting an extension of 15 days (to 19 February, 1982), under section 17-1.29, to provide time to hold meetings with the DER Bureau of Air Quality staff. The City has several concerns over the determinations and we feel these concerns may be addressed by an informal meeting rather than through the administrative hearing process. As stated previously, should the Department refuse our request for a time extension to address these concerns, the City wishes the letter of 3 February, 1982 to be considered a petition for administrative hearing as stipulated under section 28-5.15FAC.

**DER**  
**FEB 10 1982**  
**BAQM**

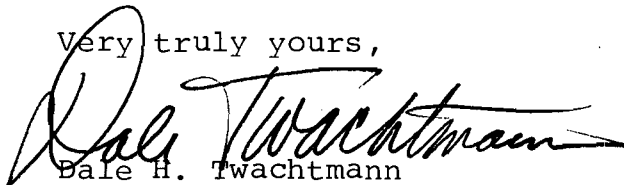
Victoria J. Tschinkel

Page 2

February 5, 1982

Again, my staff will be contacting the Bureau of Air Quality shortly to arrange for the meeting mentioned above. Thank you for your time and consideration.

Very truly yours,



Dale H. Twachtman

Administrator, Water Resources and Public Works

DHT/dw

cc Dan Williams  
Martha Hall  
Lee Torens  
Clair Fancy



E. Robert S

February 4, 1982

Water Resources and Public Works  
City of Tampa  
City Hall Plaza - Eighth Floor, North  
Tampa, Fl. 33602

RECEIVED  
FEB 5 1982  
156476

Attention: Mr. Dale Twachtmann, Administrator

Subject: MCKAY BAY REFUSE-TO-ENERGY PROJECT  
AIR QUALITY PERMITTING - WMI COMMENTS

Dear Mr. Twachtmann:

Waste Management, Inc. has reviewed the Preliminary Determination package received at our February 1st, 1982 meeting. We have requested some additional documentation (including the original permit applications), in order to complete our evaluation. However, at this point due to the relatively short period remaining in the final approval cycle, we feel that we must go on record with respect to the following items:

1. The emission limitations imposed by the Preliminary Determination differ significantly from the best estimates offered by WMI in our October 12th, 1981 and December 21st, 1981 proposals.

The following table indicates the variances for Facility 1:

Pollutant	Permit Limitations		WMI Proposal Form 9	
	Maximum Hourly Rate (lb./hr.)	Maximum Annual Rate (TPY)	Best Estimate (@ 1000 TPD) lb./hr.	Range (@ 1000 TPD) lb./hr.
Particulate	30.4	133.3	20.83	16.0-25.0 <sup>23.5</sup>
Sulfur Dioxide	165.1	722.0	145.8	120-170 <sup>21.7</sup>
Nitrogen Oxides	206.4	903.0	258.3	210-300 <sup>70</sup>
Carbon Monoxide	13.3	58.0	16.6	12.5-17.0 <sup>16.2</sup>
VOC	7.3	32.0	8.33	- <sup>4.5</sup>
Lead	3.1	13.6	N.A.	-
Mercury (Vaporous)	0.4	1.8	N.A.	-

John Svec Steve Smallwood  
p.A.



# CITY OF TAMPA

C.F. - For File 503-8-82

Bob Martinez, Mayor

Water Resources and Public Works

RECEIVED  
FEB 8 1982

Dale Twachtmann  
Administrator

D.E.R.

February 3, 1982

Office of the Secretary

FEB 8 1982

SOUTHWEST DISTRICT  
TAMPA

Victoria J. Tschinkel  
Secretary  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Ms. Tschinkel:

By this letter the City requests an informal meeting with the Bureau of Air Quality to discuss the Department's Preliminary BACT and LAER Determinations for the City's applications to construct an air pollution source. In requesting this meeting, the City wishes to maintain its right to appeal the determinations and understands that the time period during which the City can appeal the decision will be extended to a point in time after the informal meeting.

Should the Department determine that the informal meeting procedure is not appropriate, the City wishes this letter to be considered as a petition for an administrative hearing as stipulated under Section 28-5.15 FAC.

My staff will be contacting DER shortly to arrange for the informal meeting addressed above. Thank you for your time and consideration.

Very truly yours,

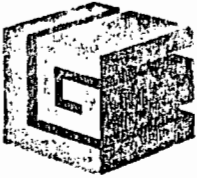
Dale H. Twachtmann  
Administrator, Water Resources and Public Works

DHT/dw

cc Dan Williams  
Martha Hall  
Lee Torens  
Clair Fancy

DER  
FEB 10 1982  
BAQM

Best Available Copy



GARDINIER INC.

Post Office Box 3209

Tampa, Florida 33602

Telephone 813-282-0900

Telex 151111

January 28, 1982

Mr. Joe Murdoch  
Resource Recovery Management Analyst  
McKay Bay Refuse to Energy Project  
City Hall Plaza 5N  
Tampa, Florida 33602

Re: TSP Offsets

Dear Joe:

This is to confirm our phone conversation of January 28, 1982 and to respond to the letter from Mr. Richard Garrity, dated October 14, 1982.

Gardiner has been making a number of changes that will greatly reduce particulate emissions. However, during the permitting process, Gardiner did not officially ask for offsets to be banked. Assuming there were none, then we have no offsets available.

I apologize for not answering sooner, however, I did not think a negative reply would be of help.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'A. E. Morrison', is written over a horizontal line.

A. E. Morrison  
Manager, Environmental Services

AEM:rw  
cc: Mr. Rudy J. Cabina

STATE OF FLORIDA  
**DEPARTMENT OF ENVIRONMENTAL REGULATION**

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

January 20, 1982

MEMORANDUM

TO: Dale H. Twachtmann  
Ralph L. Torrens  
Dan Williams  
Hooshang Boostani  
Record Center

FROM: *pre* H. Fancy, Deputy Chief, Bureau of Air  
Quality Management

DATE: January 21, 1982

SUBJ: Preliminary Determination - McKay Bay Refuse-To-  
Energy Project (AC 29-47277 and AC 29-47278)

Attached is one copy of the application, Technical Evaluation and Preliminary Determination, BACT and LAER Determinations, and proposed permit to rehabilitate the old municipal incinerator to a resource recovery facility and to construct another 1000 tons per day solid waste resource recovery facility at the existing site in Tampa.

Please submit any comments which you wish to have considered concerning this action in writing to Bill Thomas of the Bureau of Air Quality Management.

CF/bjm

### Proposed Department Action

The Department intends to issue the requested permits to the City of Tampa for the rehabilitation of the old municipal incinerator to a resource recovery facility which will produce steam to generate electricity and for the construction of another 1000 ton per day solid waste resource recovery facility at the existing site in Hillsborough County.

Any person wanting to comment on this action may do so by submitting such comments in writing to:

Mr. Clair Fancy  
Department of Environmental Regulation  
Bureau of Air Quality Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Any comments received within thirty days after publication of this notice will be considered and noted in the Department's final determination.

Any person whose substantial interest would be affected by the issuance or denial of this permit may request an administrative hearing by filing a petition for hearing as set forth in Section 28-5.15 FAC (copy attached). Such petition must be filed within 14 days of the date of this notice with:

Ms. Martha Hall  
Department of Environmental Regulation  
Office of General Counsel  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301



Technical Evaluation  
and  
Preliminary Determination

McKay Bay Refuse-To-Energy Project

Permit Numbers

AC 29-47277  
AC 29-47278

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

January 19, 1982

## I. PROJECT DESCRIPTION

### A. Applicant

City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

### B. Project and Location

The applicant's proposed project consists of rehabilitating the municipal incinerator into a 1000 ton per day solid waste resource recovery facility capable of generating electricity for sale to Tampa Electric Company. The second phase of the project consists of constructing a second 1000 ton per day solid waste resource recovery unit. The facility is to be located on a fourteen acre site adjacent to McKay Bay, south of Florida Route 60 in Tampa, Hillsborough County, Florida. The UTM coordinates are 360.0 km East and 3091.9 km North.

### C. Process Description and Controls

The existing incinerator system consists of three mass burn combustion trains, without energy recovery, based upon the Volund technology. Each unit is rated at 250 ton per day. A fourth unit is to be added, thus increasing the design capacity of the facility to 1000 tons per day. The incinerator will be rehabilitated into a resource recovery facility by the addition of waste heat boilers, electrostatic precipitators and turbine generators. Ash produced by the combustion process will be handled by a wet system. The wet ash will be dewatered and loaded into trucks for subsequent disposal in the City's designated residue disposal site.

The second phase of the project is to construct another 1000 ton per day solid waste resource recovery facility. The facility will also be of the mass burn type, using either the rotary kiln or water wall technology.

## II. RULE APPLICABILITY

The proposed project is located in the particulate and ozone nonattainment areas in Hillsborough County. For the remaining criteria pollutant, Hillsborough County is listed as unclassifiable for sulfur dioxide and attainment for carbon monoxide and nitrogen oxides. The project is also in the area of influence for the Pinellas County sulfur dioxide nonattainment area.

The uncontrolled emissions and the controlled emissions for the facility are:

Contaminant	Uncontrolled Tons per year	Controlled Tons per year
Particulate	27,350	226.0
Sulfur Dioxide	1,444	1,444
Nitrogen Oxides	1,233	1,233
Carbon Monoxide	258	258
VOC	64	64
Lead	27.2	27.2
Fluoride	36.8	36.8
Hydrogen Chloride	1,646	1,646
Mercury (vaporous)	3.6	3.6
Mercury (particulate)	0.13	0.13
Beryllium	0.0023	0.0023

The proposed project is a major emitting facility for the criteria pollutants, sulfur dioxide, nitrogen oxides, carbon monoxide, and particulate. Since the project will increase sulfur dioxide concentrations over the baseline, it is subject to the requirements of 17-2.04, FAC, prevention of significant deterioration (PSD). PSD review consists of a determination of best available control technology (BACT) and an air quality impact analysis to demonstrate that the project would not cause or contribute to a violation of Florida ambient air quality standards (FAAQS) or PSD increments. Since the project is a major emitting facility for nitrogen oxides and carbon monoxide, a BACT determination is required by 17-2.03, FAC, for those pollutants.

In addition, since construction is in the particulate (PM) and ozone nonattainment areas in Hillsborough County, the project is subject to the new source review (NSR) requirements of 17-2.17, FAC, for PM and VOC emissions. The nonattainment review consists of a determination of Lowest Achievable Emission Rate (LAER) for PM and VOC emissions, emission offsets for PM and VOC, and statewide compliance requirement for multiple facility ownership. Particulate emission offsets are exempted from immediate obtainment according to 17-2.17(3)1.c., FAC, since all available offsets have been secured and other sources of offsets are being explored.

In addition, the project is subject to emission limiting standards for PM under the adopted federal new source performance standards (NSPS) for incinerators (17-2.21(2)(a), FAC). The LAER determination must be at least as stringent as the applicable NSPS. The project is also subject to the requirements of 17-2.22, FAC, Emission Standards for Hazardous Air Pollutants. The hazardous air pollutant include Mercury, Beryllium, asbestos, and vinyl chloride.

Although, the project is in the area of influence of the Pinellas County sulfur dioxide nonattainment area, emission

modeling for SO<sub>2</sub> demonstrates that the SO<sub>2</sub> nonattainment area will not be significantly impacted by the project. Therefore, that the project is exempt from the NSR requirements (17-2.17, FAC) for the SO<sub>2</sub> nonattainment area.

### III. SUMMARY OF EMISSIONS AND AIR QUALITY ANALYSIS

#### A. Emission Limitations

The emission limitations determined to be Lowest Achievable Emission Rate (LAER) are presented in Attachment A. The emission limitations determined to represent Best Available Control Technology are presented in Attachment B. The projected emissions from the facility are given below..

#### Facility 1

Pollutant	Emission Limitation	Maximum Hourly Rate (lb/hr)	Maximum Annual Rate (TPY)
Particulate	0.025 gr/dscf @ 12% CO <sub>2</sub>	30.4	133.3
Sulfur Dioxide	BACT	165.1	722.0
Nitrogen Oxides	BACT	206.4	903.0
Carbon Monoxide	BACT	13.3	58.0
VOC	LAER	7.3	32.0
Lead		3.1	13.6
Mercury (vaporous)		0.4	1.8
Mercury (particulate)		0.015	0.067
Beryllilum		0.00026	0.00116
Fluoride		4.2	18.4
Hydrogen Chloride		188.1	823.0

#### Facility 2.

Pollutant	Emission Limitation	Maximum Hourly Rate	Maximum Annual Rate
Particulate	0.025 gr/dscf @ 12% CO <sub>2</sub>	21.2	92.7
Sulfur Dioxide		165.1	722.0
Nitrogen Oxides		75.4	330.0
Carbon Monoxide		46.0	200.0
VOC		7.3	32.0

Lead	3.1	13.6
Mercury (vaporous)	0.4	1.8
Mercury (particulate)	0.015	0.067
Beryllium	0.00026	0.00116
Fluoride	4.2	18.4
Hydrogen Chloride	188.1	823.0

The emission information was based on data from Waste Management, Inc. the current Volund technology license. The data represent the highest values obtained from stack tests done worldwide.

## B. Air Quality Impacts

The PSD increment and FAAQS analyses required for SO<sub>2</sub> depend on air quality modeling carried out in accordance with FDER-approved methods. Based on these required analyses, FDER has reasonable assurance that the resource recovery facilities, as described in this permit and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A discussion of the required analyses follows.

### 1. Modeling Methodology

The CRSTER atmospheric dispersion model, an FDER and EPA-approved model, was used to determine the maximum predicted annual and short-term impacts of the proposed project. The impacts of surrounding facilities were evaluated and added to the project's impact using monitoring and modeling data. Five years (1970-1974) of meteorological data collected by the National Weather Service Tampa office were used in the model. The monitoring data included four sites with measurements of sulfur dioxide and nitrogen dioxide.

### 2. Analysis of Existing Air Quality

Air quality monitors already existing in the immediate surroundings of the project site were used to assess the existing conditions. Maximum monitored concentrations of SO<sub>2</sub> are 25.6 ug/m<sup>3</sup>, annual average, 126 ug/m<sup>3</sup> 24-hour average, and 597 ug/m<sup>3</sup>, 3-hour average. These values are not background values. They include the impact of existing major sources in the area. A highest quarterly average of 0.93 ug/m<sup>3</sup> for lead has been monitored. A value of 68 ug/m<sup>3</sup> for nitrogen dioxide has been recorded as the highest annual concentration. All of these values are well within the FAAQS.

### 3. PSD Increment Analysis

The Tampa resource recovery facilities are located in an area that is nonattainment for particulate and therefore not subject to PSD review for that pollutant. The area is designated Class II for SO<sub>2</sub>. The nearest Class I area is the Chassahowitzka National Wilderness Area approximately 77 kilometers to the north-northwest.

All increment consuming sources that might have an impact in the project area were included in the analysis. As shown in the following table, the predicted maximum SO<sub>2</sub> increment consumption due to the new facilities plus all other increment consuming sources will not exceed allowable increments. The highest, second-highest short-term predicted concentrations are given in the table since five years of meteorological data were used in the analysis.

Maximum SO<sub>2</sub> PSD Increment Consumption (ug/m<sup>3</sup>)

	<u>Averaging Time</u>		
	<u>Annual</u>	<u>24-hour</u>	<u>3-hour</u>
Class II Increment Consumed	3.7	59	246
Allowable Class II Increment	20	91	512

The SO<sub>2</sub> significant impact area of the new facility is the area encompassing all predicted concentrations greater than 1 ug/m<sup>3</sup> on an annual average. The greatest distance for which this occurs is approximately 10 kilometers. No significant impact on the nearest Class I area, 77 kilometer away, is expected as a result of the resource recovery facilities.

### 4. Ambient Air Quality Standards Analysis

State PSD regulations require the permit applicant to demonstrate that, given existing air quality in an area, a proposed emissions increase subject to PSD review will not cause or contribute to any violation of ambient air quality standards. As shown in the following table, predicted maximum ground-level concentrations of SO<sub>2</sub>, NO<sub>2</sub> and CO resulting from emissions of the proposed facilities will be below the FAAQS. Also included is the predicted impact of lead for which there is both a state standard and a Federal standard of 1.5 ug/m<sup>3</sup>., 90-day average.

Maximum Predicted Concentrations<sup>1</sup>(ug/m<sup>3</sup>)

	<u>Predicted Impact</u>	<u>FAAQS</u>
SO <sub>2</sub>		
Annual	29.3	60
24-hour	185	260
3-hour	843	1300
CO		
8-hour	2,518	10,000
1-hour	2,522	40,000
NO <sub>2</sub>		
Annual	71	100
Pb		
90-day	1.0	1.5

1. Includes existing air quality levels except for CO which includes background estimate of 2,500 ug/m<sup>3</sup>.

5. Impact on SO<sub>2</sub> Nonattainment Area

The proposed project is located approximately 40 kilometers from the boundary of the SO<sub>2</sub> nonattainment area in northwest Pinellas County. Because the maximum distance of the significant impact area extends only to 10 kilometers, no significant impact on the SO<sub>2</sub> nonattainment area is expected as a result of the proposed project.

IV Conclusions

The emission limitations stated previously are based upon the applicant's estimated combustion rates. The emission limitations proposed will not violate any ambient air quality standard, PSD increment, NSPS emission limitation or NESHAP limitation. All new source review requirements for nonattainment areas and all PSD requirements have been met in the application.

The General and Specific Conditions listed in the proposed permits will assure compliance with all applicable requirements of Chapter 17-2, FAC.

TECHNICAL ATTACHMENT A

LAER ANALYSIS

A determination of LAER for the two resource recovery facilities were made by the Department on December 18, 1981. A copy of the December 18, 1981, LAER determination follows.



Lowest Achievable Emission Rate (LAER) Determination  
City of Tampa  
Hillsborough County

The City of Tampa proposes to construct a facility to incinerate municipal solid waste and use the resulting heat energy to produce electricity as a saleable by-product. The facility is to be located at the site of a previous incinerator installation which has been inoperative since December 1979. This venture, known as the McKay Bay Refuse-to-Energy project, is a two phase plan.

Phase one is the renovation and conversion of the three existing mass burn combustion furnaces into a state-of-the-art resource recovery system. A fourth combustion furnace will be installed plus waste heat boilers, electrostatic precipitators and a condensing steam turbine electric generator. When phase one is completed the facility will have the capability to burn approximately 300,000 tons per year of solid waste and generate 21 megawatts of electricity.

Phase two is the installation of two new mass burn combustion furnaces, with heat recovery systems, and will be located adjacent to the renovated system. The new system will be capable of processing 1,000 tons per day of municipal solid waste and, in addition, to producing electricity will allow the recovery of recyclable materials, such as ferrous metals and aluminum.

The McKay Bay Refuse-to-Energy project, when completed, will be capable of processing 2,000 tons per day of solid waste. The land area needed for a landfill (dump) will be reduced approximately 90 percent. The residue (ash) to be disposed of in a landfill will be 15 percent of the mass but only 5 percent of the volume of waste collected and incinerated. The facility is scheduled to operate continuously with a 20 percent downtime allowable for maintenance.

Applicant's Estimated net increase in air emissions (tons/year):

Pollutant	Phase I	Phase II	Total
Particulates	160	109	269
SO <sub>2</sub>	722	420	1142
NO <sub>2</sub>	903	330	1233
CO <sup>x</sup>	58	200	258
HC	32	32	64

area requirements; B. eliminates a breeding ground for rodents; C. reduces possibility of ground water contamination; D. allows for the recovery of various metals for recycle.

3. Air pollution control technology is currently commercially available and capable of achieving the levels of control necessary to reduce most emissions from resource recovery facilities.
4. The construction of a new source, or modification, in a nonattainment area shall apply to the Department for a determination of the Lowest Achievable Emission Rate (LAER) that is applicable to the affected pollutant, which, in this case, the particulates and ozone (17-2.17(6)(a)FAC).

The Department has determined LAER for particulate matter to be 0.025 grains/DSCF, corrected to 12% CO<sub>2</sub>. The emission limit is deemed to be achievable based on test data from a similar operating facility located in Nashville, Tennessee.

Resource recovery facilities have the potential to emit large amounts of hydrocarbons and carbon monoxide. Some of the main contributing factors are; the heterogeneous nature of municipal waste, a fuel feed system that does not maintain a constant firing rate and the use of unregulated combustion temperatures and air.

LAER is determined to be furnace design and combustion techniques that minimize HC and CO emissions without appreciatively increasing NO<sub>x</sub> emission rates. A VOC emission rate of 9.13 pounds per hour per facility, as requested by the applicant, has been designated in order to determine and assign the VOC offsets required. The facility is to be located in an area designated unclassified for the pollutant sulfur dioxide. The emission limit for SO<sub>2</sub> will be determined by a Best Available Control Technology (BACT) evaluation.

The Refuse-to-Energy complex is located on a 14 acre site adjacent to McKay Bay, south of Route U.S. 60, which is in that portion of Hillsborough County classified nonattainment for the pollutants; particulate matter (17-2.13(1)(a)FAC) and ozone (17-2.16(1)(d)FAC). Therefore the emission limiting standards for the pollutants, particulate matter and ozone, will be subject to a Lowest Achievable Emission Rate (LAER) determination (17-2.17(6) (FAC)).

LAER Determination Requested by the Applicant:

Pollutant	Emission Limit
Particulates	0.03 grains/DSCF at 50% excess air
Hydrocarbons	Facility Design

Date of Receipt of a LAER Application:

August 24, 1981

Review Group Members:

Carl Bock, BAQM New Source Review Section  
John Svec, BAQM New Source Review Section  
Tom Rogers, BAQM Air Modeling Section  
Anthony Jones, Hillsborough County Environmental Protection Commission  
Dan Williams, DFR Southwest District

Recommendations from the review group and other respondents were the basis for the final determination.

LAER Determination by DFR:

Pollutant	Emission Limit
Particulates	0.025 grains/DSCF, corrected to 12% CO <sub>2</sub>
Hydrocarbons (VOC)	7.3 lb/hr per facility

Justification of DER Determination:

The LAER review group members in making the final determination had to cope with the following:

1. Resource recovery facilities have a high potential for severely and adversely affecting air quality. Pollutants of concern are SO<sub>2</sub>, NO<sub>x</sub>, particulates, HC(VOC), HCl and HF acid gases.
2. The thermal destruction of municipal waste is a recognized method of disposal, and, A. reduces landfill

Page Four

Details of the Analysis May be Obtained by Contacting:

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

Recommended By:

*Attorney*

*TS* \_\_\_\_\_  
Steve Smallwood, Chief, BAQM

Date:

*12/16/81*

Approved:

*Victoria Tschinkel*

\_\_\_\_\_  
Victoria Tschinkel, Secretary

Date:

*12/18/81*

SS:caa

TECHNICAL ATTACHMENT B.

BACT ANALYSIS

A determination of BACT for the two resource recovery facilities was made by the Department on December 18, 1981. A copy of the December 18, 1981, BACT determination follows.

Best Available Control Technology (BACT) Determination

City of Tampa

Hillsborough County

The City of Tampa proposes to construct a facility to incinerate municipal solid waste and use the resulting heat energy to produce electricity as a saleable by-product. The facility is to be located at the site of a previous incinerator installation which has been inoperative since December 1979. This venture, known as the McKay Bay Refuse-to-Energy project, is a two phase plan.

Phase one is the renovation and conversion of the three existing mass burn combustion furnaces into a state-of-the-art resource recovery system. A fourth combustion furnace will be installed plus waste heat boilers, electrostatic precipitators and a condensing steam turbine electric generator. When phase one is completed the facility will have the capability to burn approximately 300,000 tons per year of solid waste and generate 21 megawatts of electricity.

Phase two is the installation of two new mass burn combustion furnaces, with heat recovery systems, and will be located adjacent to the renovated system. The new system will be capable of processing 1,000 tons per day of municipal solid waste and, in addition, to producing electricity will allow the recovery of recyclable materials, such as ferrous metals and aluminum.

The McKay Bay Refuse-to-Energy project, when completed, will be capable of processing 2,000 tons per day of solid waste. The facility is scheduled to operate continuously with a 20 percent downtime allowance for maintenance.

Applicant's estimated net increase in air emissions (tons/year):

Pollutant	Phase I	Phase II	Total
Particulates	160	109	269
SO <sub>2</sub>	722	420	1142
NO <sub>x</sub>	903	330	1233
CO	58	200	258
HC	32	32	64

The Refuse-to-Energy complex is located on a 14 acre site adjacent to McKay Bay, south of Route U.S. 60, which is in that portion of Hillsborough County classified nonattainment for the pollutants: particulate matter (17-2.13(1)(a) FAC) and ozone (17-2.16(1)(d)FAC). This area is unclassified for the pollutant sulfur dioxide and classified attainment for the pollutant NO<sub>x</sub>. Therefore the emission limiting standards for the pollutants, particulate matter and ozone, will be subject to a Lowest Achievable Emission Rate (LAER) determination (17-2.17(6)FAC), and a Best Available Control Technology (BACT) determination for the pollutants SO<sub>2</sub> and NO<sub>x</sub> (17-2.04(6)(c)FAC).

BACT Determination Requested by the Applicant:

Pollutant	Emission Limit
SO <sub>2</sub>	Low sulfur content waste
NO <sub>x</sub>	Boiler design and operating procedures

Date of Receipt of a BACT Application:

August 24, 1981

Date of Publication in the Florida Administrative Weekly:

September 4, 1981

Review Group Members:

Carl Bock, BAQM New Source Review Section  
John Svec, BAQM New Source Review Section  
Tom Rogers, BAQM Air Modeling Section  
Anthony Jones, Hillsborough County Environmental Prot. Commission  
Dan Williams, DER Southwest District

Recommendations from the review group and other respondents were the basis for the final determination.

BACT Determination by DER:

Pollutant	Emission Limit
SO <sub>2</sub>	330 pounds per hour
NO <sub>x</sub>	Not specified at this time

Justification of DER Determination:

The BACT review group members in making the final determination

had to cope with the following:

- 1) Resource recovery facilities have a high potential for severely and adversely affecting air quality. Pollutants of concern are  $\text{SO}_2$ ,  $\text{NO}_x$ , particulates, HC, HCL and HF acid gases.
- 2) The thermal destruction of municipal waste is a recognized method of disposal, and A. reduces land-fill area requirements; B. eliminates a breeding ground for rodents; C. reduces possibility of ground water contamination; D. allows for the recovery of various metals for recycle.
- 3) Air pollution control technology is currently commercially available and capable of achieving the levels of control necessary to reduce most emissions from resource recovery facilities.
- 4) Calculation of sulfur dioxide emission factors for solid waste based upon the amount of  $\text{SO}_2$  generated per million Btu of solid waste burned show the high value of the solid waste  $\text{SO}_2$  emission to be slightly higher than the  $\text{SO}_2$  emission factor for residue fuel oil containing 0.5 percent sulfur.
- 5) The technology for controlling  $\text{NO}_x$  emissions from resource recovery facilities is still in the experimental stage.
- 6) The land area needed for a landfill (dump) will be reduced approximately 90 percent. The residue (ash) to be disposed of in a landfill will be 15 percent of the mass but only 5 percent of the volume of waste collected and burned.

The BACT emission limit for  $\text{SO}_2$  from a boiler in this size range is usually the use of fuel having a low sulfur content. The review group questioned how this would be implemented when burning municipal solid waste. The applicant stated the  $\text{SO}_2$  emission would be 330 pounds per hour. Atmospheric dispersion modeling predicts no violation of the  $\text{SO}_2$  increment at this level of  $\text{SO}_2$  emissions. The  $\text{SO}_2$  emission limit of 330 pounds per hour, is therefore, determined to be BACT.

The emission of  $\text{NO}_x$  is the result of two chemical processes that occur during combustion. In one case the heat of combustion causes the oxidation of nitrogen in the air, called thermal  $\text{NO}_x$ . The second case is when the nitrogen in the fuel



becomes oxidized, called fuel NO<sub>x</sub>. Some of the factors influencing the amount of NO<sub>x</sub> produced are flame temperature, nitrogen content of the fuel and the amount of excess air used.

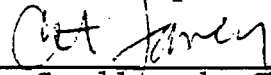
Several methods are being investigated to control NO<sub>x</sub> emissions during the burning of the fuel or treatment of the flue gas. These methods are in the research and development stage and will require additional testing before being considered as BACT for the control of NO<sub>x</sub> emissions from a resource recovery facility.

The applicant recommends as BACT the use of proper boiler design and operating procedures. The review group agrees that BACT for a NO<sub>x</sub> emission limit not be specified at this time. The applicants Operation and Maintenance (O&M) plan for the burner is determined as the BACT to minimize NO<sub>x</sub> emission.

Details of the Analysis May be Obtained by Contacting:

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

Recommended By:

  
Steve Smallwood, Chief, BAQM

Date:

12/16/81

Approved:

  
Victoria Tschinkel, Secretary

Date:

12/18/81

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR  
VICTORIA J. TSCHINKEL  
SECRETARY

APPLICANT: City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

PERMIT/CERTIFICATION  
NO. AC 29-47277

COUNTY: Hillsborough

PROJECT: McKay Bay Refuse-  
to-Energy Facility No. 1

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

Rehabilitation of the three combustion chambers at the Tampa Municipal Incinerator and the construction of a fourth 250 TPD combustion chamber and the modification of the facility to a resource recovery facility.

Attachments:

1. McKay Bay Refuse-to-Energy Project, Application to Construct an Air Pollution Source, July, 1981.
2. McKay Bay Refuse-to-Energy Project, Application to Construct an Air Pollution Source, October, 1981.
3. Letter of Richard Garrity to Steve Smallwood, December 10, 1981, concerning effort to obtain emission offsets.

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions", and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.
3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.
4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.
5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.
6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.
7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.
8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.
9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.
10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.
11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.
12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.
13. This permit also constitutes:
  - Determination of Best Available Control Technology (BACT)
  - Determination of Prevention of Significant Deterioration (PSD)
  - Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

SPECIFIC CONDITIONS:

1. The maximum allowable emissions from the resource recovery facility No. 1 shall be:

Pollutant	Emission Limitation	
Particulate	0.025 gr/dscf @12% CO <sub>2</sub>	30.4 lb/hr
Sulfur dioxide		165.1 lb/hr
Nitrogen oxides		206.4 lb/hr
VOC		7.3 lb/hr
Lead		3.1 lb/hr
Carbon monoxide		13.3 lb/hr
Beryllium	5 grams/24 hr period	0.00026 lb/hr

2. Municipal waste only shall be burned in the facility. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.
3. Hours of operation for the facility shall be 24 hours per day, 7 days per week, 52 weeks per year.
4. Emission offsets for VOC shall be assigned from the New Source allowance available for Hillsborough County. Particulate emission offsets shall be obtained as soon as possible according to Section 17-2.17(3)(a)1.C., FAC.
5. An operation and maintenance plan as contained in 17-2.13(7), FAC, shall be submitted with the operating permit application and be made part of the operating permit.
6. Compliance testing for all criteria and NESHAPS pollutants shall be conducted in accordance with the methods contained in 40 CFR 60 and 61. A source testing plan shall be submitted to the Department for approval 90 days prior to testing. The Department shall be notified of compliance testing at least 30 days prior to the testing.
7. During the particulate compliance testing, a visible emission standard shall be established by 40 CFR 60, Appendix A, Method 9, as a surrogate compliance method as contained in 17-2.23(3), FAC, and be made a condition of the operating permit.
8. Prior to ninety days before the expiration of this permit, a complete application for an operating permit shall be submitted to the DER Southwest District Office or its designee.

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

Expiration Date: September 30, 1984

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_.

\_\_\_\_\_ Pages Attached.

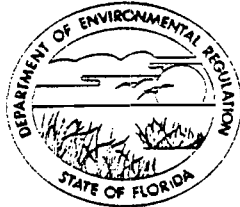
STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

\_\_\_\_\_  
Signature

PAGE 4 OF 4

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING  
2600 BLAIR STONE ROAD  
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM  
GOVERNOR

VICTORIA J. TSCHINKEL  
SECRETARY

APPLICANT: City of Tampa  
306 East Jackson Street  
Tampa, Florida 33602

PERMIT/CERTIFICATION  
NO. AC 29-47278

COUNTY: Hillsborough

PROJECT: McKay Bay  
Refuse-To-Energy  
Facility No. 2

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2  
and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to  
perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and  
made a part hereof and specifically described as follows:

Construction of two 500 TPD combustion chambers and associated  
equipment of a resource recovery facility.

Attachments:

1. McKay Bay Refuse-to-Energy Project, Application to Construct  
an Air Pollution Source, July, 1981.
2. McKay Bay Refuse-to-Energy Project, Application to Construct  
an Air Pollution Source, October, 1981.
3. Letter of Richard Garrity to Steve Smallwood, December 10, 1981,  
concerning effort to obtain emission offsets.

PERMIT NO.: AC 29-47278  
APPLICANT: City of Tampa

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions", and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

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

3. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the department for penalties or revocation of this permit.

4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive-privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.

6. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the department, may be used by the department as evidence in any enforcement case arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.

7. In the case of an operation permit, permittee agrees to comply with changes in department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or department rules.

8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.

9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.

10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.

11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.

12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

13. This permit also constitutes:

- Determination of Best Available Control Technology (BACT)
- Determination of Prevention of Significant Deterioration (PSD)
- Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 29-47277  
APPLICANT: City of Tampa

SPECIFIC CONDITIONS:

1. The maximum allowable emissions from the resource recovery facility shall be:

Pollutant	Emission Limitation	
Particulate	0.025 gr/dscf @ 12% CO <sub>2</sub>	21.2 lb/hr
Sulfur dioxide		165.1 lb/hr
Nitrogen oxide		75.4 lb/hr
VOC		7.3 lb/hr
Carbon monoxide		46.0 lb/hr
Lead		3.1 lb/hr
Beryllium	5 gram/24 hr. period	0.00026 lb/hr

2. Municipal waste only shall be burned in the facility. Wastewater treatment plant sludges or hazardous wastes shall not be incinerated.
3. Hours of operation for the facility shall be 24 hours per day, 7 days per week, 52 weeks per year.
4. Emission offsets for VOC shall be assigned from the New Source allowance available for Hillsborough County. Particulate emission offsets shall be obtained as soon as possible according to Section 17-2.17(3)(a)1.C., FAC.
5. An operation and maintenance plan as contained in 17-2.13(7), FAC, shall be submitted with the operating permit application and be made part of the operating permit.
6. Compliance testing for all criteria and NESHAPS pollutants shall be conducted in accordance with the methods contained in 40 CFR 60 and 61. A source testing plan shall be submitted to the Department for approval 90 days prior to testing. The Department shall be notified of compliance testing at least 30 days prior to the testing.
7. During the particulate compliance testing, a visible emission standard shall be established by 40 CFR 60, Appendix A, Method 9, as a surrogate compliance method as contained in 17-2.23(3), FAC, and be made a condition of the operating permit.
8. Prior to ninety days before the expiration of this permit, a complete application for an operating permit shall be submitted to the DER Southwest District Office or its designee.



PERMIT NO.: AC 29-47278  
APPLICANT: City of Tampa

9. If construction has not commenced by eighteen months after issuance of this permit, information shall be submitted for the reassessment of the BACT/LAER emission limitations and these emission limitations shall be made as permit conditions.

Expiration Date: April 30, 1985

Issued this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_.

\_\_\_\_\_ Pages Attached.

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

\_\_\_\_\_  
Signature



# CITY OF TAMPA

Bob Martinez, Mayor

MCKAY BAY REFUSE-TO-ENERGY PROJECT

December 10, 1981

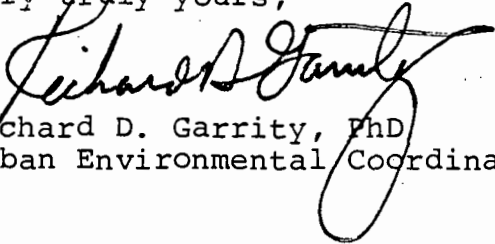
Mr. Steve Smallwood, Chief  
Bureau of Air Quality Management  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Dear Mr. Smallwood:

The attached letters are responses to the City of Tampa's inquiries concerning available offsets for Total Suspended Particulate emissions from the proposed resource recovery facilities. The only remaining source of offsets which has not responded to our inquiries is Gardinier, Inc. We will be sending Gardinier a third letter of inquiry in the near future.

We hope these letters portray to you the continuing efforts of the City of Tampa to obtain offsets for our proposed resource recovery facilities. If you have questions concerning this issue, please contact me at (813) 223-8071. Thank you for your continued efforts on our behalf.

Very truly yours,

  
Richard D. Garrity, PhD  
Urban Environmental Coordinator

RDG/dw

Attachments



POST OFFICE BOX 111 TAMPA, FLORIDA 33601 TELEPHONE (813) 879-4111

October 16, 1981

Dale H. Twachtmann, Administrator  
Water Resources and Public Works  
City of Tampa  
City Hall Plaza  
Tampa, FL 33602

Dear Mr. Twachtmann:

We have received your request for total suspended particulate (TSP) matter offsets in connection with the planned refuse-to-energy facilities at the Tampa Municipal Incinerator Site. As we have indicated in our discussions with Mr. Joe Murdoch, Tampa Electric Company, at this time, has no available TSP emission offsets from our facilities.

Should you have any questions concerning this matter, please contact Mr. John Ramil at 228-4038.

Sincerely,

Jerry L. Williams  
Manager,  
Environmental Planning

cc: Joe Murdoch



Florida Division

**General Portland Inc.**

October 20, 1981

Mr. Joe Murdock  
McKay Bay Refuse Project  
City Hall Plaza  
Tampa, Florida 33602

Re: Tampa's Request for Particulate Emission Offsets

Dear Mr. Murdock:

This is in response to your July 10, 1981 request for our company's assistance in providing the City of Tampa Particulate Emissions to offset and allow permitting a new refuse incinerator to generate heat and electricity. General Portland Inc. supports the City of Tampa in its continuing efforts to fund and build a refuse incinerator. We believe the facility could prove both cost effective and a better use of available resources than other concepts.

General Portland's Tampa plant has been proposed as a facility to "bubble" its emissions under recent U.S. Environmental Protection Agency policy and rule-making. We have proceeded with this plan to "bubble" our emissions and have received approvals, as of this date, from the Hillsborough County Environmental Protection Commission and the Florida Department of Environmental Regulation. The plan is presently in review and concurrence at EPA's Regional office in Atlanta. The package is expected to be finalized as a revision to Florida's State Implementation Plan late this year.

General Portland, while supporting the City in its efforts to produce electricity by waste incineration cannot, at this time, provide the offset emission assistance you request due to the ongoing review, approval and proposed rule-making process in which we are actively engaged. However, we wish you success in your efforts.

If we can be of assistance in other areas, please feel free to call on us.

Yours truly,

William H. Winders  
Environmental Manager

WHW:ld

Please accept this form as a replacement for the previously submitted waiver.

WAIVER OF 90 DAY TIME LIMIT  
UNDER SECTION 120.60(2), FLORIDA STATUTES

License (Permit, Certification) Application No. AC-29-47273  
Applicant's Name: City of Tampa

The undersigned has read Section 120.60(2), Florida Statutes, and fully understands the Applicant's rights under that section.

With regard to the above referenced license (permit, certification) application, the Applicant hereby with full knowledge and understanding of (his) (her) (its) rights under Section 120.60(2), Florida Statutes, waives the right under Section 120.60(2), Florida Statutes, to have the application approved or denied by the State of Florida Department of Environmental Regulation within the 90 day time period prescribed in Section 120.60(2), Florida Statutes. Said waiver is made freely and voluntarily by the Applicant, is in (his) (her) (its) self-interest, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Regulation.

This waiver shall expire on the 1st day of June 19 82.

The undersigned is authorized to make this waiver on behalf of the applicant.

*Dale H. Twachtman*  
Signature

Dale H. Twachtman  
Name of Signee

2-19-82  
Date

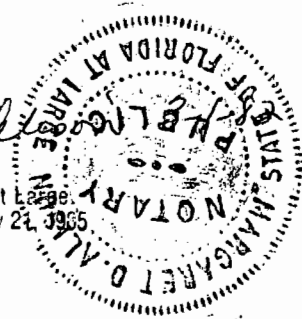
RECEIVED

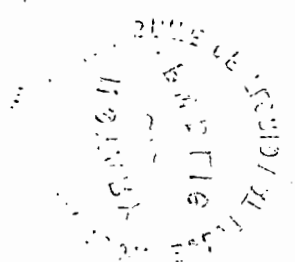
MAR 4 1982

Dept. of Environmental Regulation  
Office of General Counsel

*Margaret D. Allen*

Notary Public, State of Florida at Large  
My Commission Expires January 21, 1985





City of Tampa, Florida

Date: March 2, 1982

To: Martha Hall *John*  
From: Joe Murdoch  
Subject: Waiver for McKay Bay Facility II

RECEIVED

MAR 4 1982

Dept. of Environmental Regulation  
Office of General Counsel

Ms. Hall:

Attached is the notarized waiver form you requested, with the proper application number. Please excuse the typo. Thank you.

*Joe*

# Best Available Copy

## DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP				ACTION NO.
				ACTION DUE DATE
KAHEL		<del>PAVLO</del> <i>PAVLO</i>		STARNES
BLOMMEL		THOMAS		MARTY HALL
BARKER		GEORGE		MARSHALL MOTT-SMITH
J. ROGERS		PALAGYI		

REMARKS	INFORMATION
<p><i>John Sweeney</i> <i>PPS</i></p> <p><i>Patty - please cc dist's l p then file</i></p> <p style="text-align: center;"><i>EPA permit</i></p> <p style="text-align: center;"><i>Tampa</i></p>	<input type="checkbox"/> REVIEW & RETURN <input checked="" type="checkbox"/> REVIEW & FILE <input type="checkbox"/> INITIAL & FORWARD <hr/> <input type="checkbox"/> REVIEW & RESPOND <input type="checkbox"/> PREPARE RESPONSE <input type="checkbox"/> FOR MY SIGNATURE <input type="checkbox"/> FOR YOUR SIGNATURE <input type="checkbox"/> LET'S DISCUSS <input type="checkbox"/> SET UP MEETING <input type="checkbox"/> INVESTIGATE & REPT <input type="checkbox"/> INITIAL & FORWARD <input type="checkbox"/> DISTRIBUTE <input type="checkbox"/> CONCURRENCE <input type="checkbox"/> FOR PROCESSING <input type="checkbox"/> INITIAL & RETURN

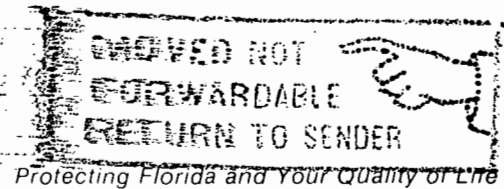
FROM: STEVE SMALLWOOD	DATE: <i>7-14</i>
<i>SK</i>	PHONE: _____

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
2600 BLAIR STONE ROAD  
TWIN TOWERS OFFICE BUILDING  
TALLAHASSEE, FLORIDA 32301



Mr. Joe Brown  
S.E. Regional Office  
National Park Service  
1895 Phoenix Blvd.  
Atlanta, C

NAT 95 132622N1 03/26/82  
RETURN TO SENDER  
NOT DELIVERABLE AS ADDRESSED  
UNABLE TO FORWARD





4-16-82

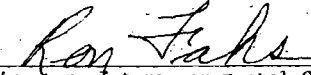
STATE CLEARINGHOUSE  
Intergovernmental Coordination  
Office of the Governor  
The Capitol  
Tallahassee, Florida 32301  
904/488-8114

Date received: 3-29-82  
SAI Number: FL8203291028

We have received your recent correspondence concerning the project identified by your title PRE-DETRMNTN-TAMPA- MCKAY BAY  
**REFUSE-TO-ENERGY PROJECT**

This review begins on the day the item was received in our office, pursuant to U.S. OMB Circular A-95 and/or Section 216.212, F.S. Please refer to the above State Application Identifier (SAI) Number in any future correspondence concerning the project.

The target date for completion of our review and dispatch of comment is this date plus 30 days. Completion of action may be delayed if we need to review the completed application, in which case we will notify you.

  
\_\_\_\_\_  
Director, Intergovernmental Coordination

\*Copies should also be sent to regional and metropolitan clearinghouses.

(NOTE: Office location - <sup>302</sup> ~~403~~ Carlton Bldg.)

THE TAMPA TIMES

Published Daily  
Tampa, Hillsborough County, Florida

State of Florida }  
County of Hillsborough } ss.

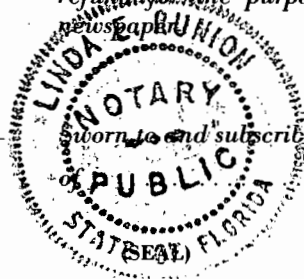
Before the undersigned authority personally appeared  
R. F. Pittman, who on oath says that he is Publisher of The Tampa Times, a daily  
newspaper published at Tampa in Hillsborough County, Florida; that the attached copy  
of advertisement being a .....

LEGAL NOTICE

.....  
in the matter of Notice of a construction of an air pollution source  
is being proposed by the City of Tampa.

.....  
was published in said newspaper in the issues of March 22, 1982.  
-----

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



*Linda E. Runyon*

subscribed before me, this ... 7th ... day  
April ... A.D. 19 82  
*Linda E. Runyon*

Notary Public, State of Florida at Large  
My Commission Expires Jan. 25, 1986

date of this notice. Letters  
should be addressed to:  
Mr. C. H. Fancy  
Bureau of Air Quality  
Management  
Department of  
Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
E6295 Mar. 22, 1982

PUBLIC NOTICE

Construction of an air  
pollution source is being  
proposed by the City of  
Tampa to be located in the  
City of Tampa, Hillsborough  
County, Florida. The pro-  
posed project is the con-  
struction of a 1,000 ton per  
day solid waste resource  
recovery facility. The con-  
struction will increase  
emission of air pollutants, in  
tons per year, by the follow-  
ing amounts:

PM-122.2; Pb-13.6; SO<sub>2</sub>-744.6;  
NO<sub>x</sub>-1,314; CO-74.5 VOC-39.4;  
P-18.4; H<sub>2</sub>-1.8; Be-.0012;

The proposed con-  
struction has been reviewed  
by the Florida Department  
of Environmental Regulation  
(FDER) under Federal  
regulation 40 CFR 52.21,  
Prevention of Significant  
Deterioration (PSD) and  
Chapter 17-2, Florida Ad-  
ministrative Code. The  
Department has made a  
preliminary determination  
that the construction can be  
approved provided certain  
conditions are met. A sum-  
mary of the basis for the  
determination and the ap-  
plication for a federal  
permit submitted by the City  
of Tampa are available for  
public review at the follow-  
ing offices:

Bureau of Air Quality  
Management, Dept. of En-  
vironmental Regulation, 2600  
Blair Stone Road, Tallah-  
hassee, Florida 32301;

Southwest District, Dept.  
of Env. Regulation, 7601  
Highway 301 North, Tampa,  
Florida 33610;

Hillsborough Co. En-  
vironmental Protection Com-  
mission, 1900 9th Avenue,  
Tampa, Florida 33605;

The maximum percent-  
ages of allowable PSD in-  
crements consumed in the  
area of the proposed con-  
struction will be as follows:

Annual 24-Hour 3-Hour

PM	N/A	N/A	N/A
SO <sub>2</sub>	10	48	38

Any person may submit  
written comments to FDER  
regarding the proposal con-  
struction. All comments,  
postmarked not later than 30  
days from the date of notice,  
will be considered by FDER  
in making a final determina-  
tion regarding approval for  
construction of this source.  
Those comments will be  
made available for public  
review on request. Further-  
more, a public hearing can  
be requested by any person.  
Such request should be sub-  
mitted within 14 days of the

City of Tampa, Florida

Date: April 12, 1982

To: Clair Fancy  
From: Joe Murdoch  
Subject: Legal Advertisement

DER

APR 15 1982

BAQM

Clair:

Please find the attached legal advertisement. We quipped a copy of the ad to Tallahassee (your attention) two weeks ago, but we just received this notarized copy today. I hope it doesn't cause problems with the permit. Let me know if you need additional information. Thanks.

  
Joe

P.S. Another letter is on its way regarding the preliminary determination and the language we talked about.

P16 7682486

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL  
(See Reverse)

PS Form 3800, Apr. 1976

SENT TO		<i>Dale H. Swacktmann</i>	
STREET AND NO.		<i>306 E. Jackson St.</i>	
P.O., STATE AND ZIP CODE		<i>Tampa, FL 33602</i>	
POSTAGE		\$	
CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	c
		SPECIAL DELIVERY	c
	RESTRICTED DELIVERY	c	
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	c
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	c
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	c
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY		c	
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE			
<i>4/26/82</i>			

PS Form 3811, Jan. 1979

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

The following service is requested (check one.)

Show to whom and date delivered..... c

Show to whom, date and address of delivery..... c

RESTRICTED DELIVERY

    Show to whom and date delivered..... c

RESTRICTED DELIVERY.

    Show to whom, date, and address of delivery. \$ \_\_\_\_\_

(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:

*Dale H. Swacktmann*  
*City of Tampa*  
*306 E. Jackson Street*  
*Tampa, Florida 33602*

3. ARTICLE DESCRIPTION:

REGISTERED NO.	CERTIFIED NO.	INSURED NO.
	<i>7682496</i>	

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE  Addressee  Authorized agent

*C. Sampson*

4. DATE OF DELIVERY

5. ADDRESS (Complete only if requested)

POSTMARK

*APR 29 1982*

6. UNABLE TO DELIVER BECAUSE:

CLERK'S INITIALS

*Lov*

☆ GPO : 1979-300-459



ADDRESS ONLY THE DIRECTOR,  
FISH AND WILDLIFE SERVICE

# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
WASHINGTON, D.C. 20240

APR 23 1982

Mr. C. H. Fancy  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

DER

APR 30 1982

BAQM

Dear Mr. Fancy:

The City of Tampa proposes to rehabilitate a municipal incinerator and to add an additional unit to increase the combustion design capacity to 1000 tons of refuse per day. The project will result in allowable emission increases of 27.9 lb/hr of particulate matter (PM) and 170.0 lb/hr of sulfur dioxide (SO<sub>2</sub>) and is subject to PSD review.

The proposed site is approximately 77 km south-southeast of Chassahowitzka National Wildlife Refuge, a class I area administered by the Fish and Wildlife Service (FWS). Air quality estimates made by the applicant, using the EPA approved Single Source (CRSTER) Model with five years of hourly meteorological data from Tampa, indicate the SO<sub>2</sub> and PM concentrations should be less than one microgram per cubic meter on an annual average at distances greater than 10 km from the source. A screening analysis performed for the FWS by the Air Quality Division of the National Park Service indicated one hour concentration estimates of less than one microgram per cubic meter at Chassahowitzka. Therefore, we do not expect an adverse effect on this class I area due to the emissions of the proposed project alone.

The proposed emission control technology was also evaluated and we concur with the State of Florida's determination that the best available control technology (BACT) will be applied. However, we recommend that the emission limitations in the permit be expressed in terms of lb pollutant/ton refuse in addition to the lb pollutant/hr limitations contained in the draft. This will ensure that BACT will be used at all levels of operation.

We appreciate this opportunity to provide comments.

Sincerely yours,

  
Acting Associate  
Director

**UNITED STATES  
DEPARTMENT OF THE INTERIOR**

FISH AND WILDLIFE SERVICE  
WASHINGTON, D. C. 20240

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

POSTAGE AND FEES PAID  
U. S. DEPARTMENT OF THE INTERIOR  
INT 423



Mr. C. H. Fancy  
Bureau of Air Quality Management  
Department of Environmental Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32301

87

PS Form 3811, July 1983 447-845

**SENDER: Complete items 1, 2, 3 and 4.**

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1.  Show to whom, date and address of delivery.

2.  Restricted Delivery.

3. Article Addressed to:  
 Ms. Nancy McCann  
 Urban Environmental Coord.  
 City Hall Plaza, 5N  
 Tampa, Florida 33602

4. Type of Service:      Article Number  
 Registered       Insured  
 Certified       COD      P 408 532 060  
 Express Mail

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
 X

6. Signature of Agent  
 X *[Signature]*

7. Date of Delivery  
 NOV 14 1986

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

DOMESTIC RETURN RECEIPT

P 408 532 060

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Ms. Nancy McCann	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date  11/12/86	

PS Form 3800, Feb. 1982

PS Form 3811, July 1983

**SENDER: Complete items 1, 2, 3 and 4.**

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1.  Show to whom, date and address of delivery.  
 2.  Restricted Delivery.

3. Article Addressed to:  
 Mr. Joseph D. Murdoch  
 City of Tampa  
 City Hall Plaza, 5N  
 Tampa, FL 33602

4. Type of Service:	Article Number
<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail	P 408 533 217

Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
 X

6. Signature - Agent  
 X *A Barton*

7. Date of Delivery

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

DOMESTIC RETURN RECEIPT

P 408 533 217  
 RECEIPT FOR CERTIFIED MAIL  
 NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

Sent to	
Mr. Joseph D. Murdoch	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	
2/26/86	

PS Form 3800, Feb. 1982



P 408 533 657

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

Sent to Mr. Joseph D. Murdoch	
Street and No.	
P.O., State and ZIP Code	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return Receipt Showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date 1/16/86	

PS Form 3800, Feb. 1982

PS Form 3811, July 1983

**SENDER: Complete items 1, 2, 3 and 4.**

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1.  Show to whom, date and address of delivery.  
 2.  Restricted Delivery.

3. Article Addressed to:  
 Mr. Mike Salmon  
 City of Tampa  
 City Hall Plaza, 5 North  
 Tampa, FL 33602

4. Type of Service:      Article Number  
 Registered       Insured      0155814  
 Certified       COD  
 Express Mail

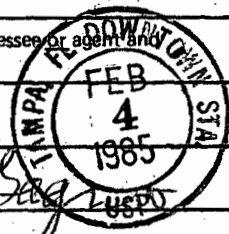
Always obtain signature of addressee or agent and **DATE DELIVERED.**

5. Signature - Addressee  
 X

6. Signature - Agent  
 X *Robert [Signature]*

7. Date of Delivery  
 02-04-85

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



DOMESTIC RETURN RECEIPT

No. 0155814  
 RECEIPT FOR CERTIFIED MAIL  
 NO INSURANCE COVERAGE PROVIDED—  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

SENT TO  
 Mr. Mike Salmon  
 STREET AND NO.

P.O., STATE AND ZIP CODE

POSTAGE \$

CONSULT POSTMASTER FOR FEES	OPTIONAL SERVICES	CERTIFIED FEE	\$
		SPECIAL DELIVERY	¢
		RESTRICTED DELIVERY	¢
	RETURN RECEIPT SERVICE	SHOW TO WHOM AND DATE DELIVERED	¢
		SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
		SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
	SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢	
TOTAL POSTAGE AND FEES		\$	
POSTMARK OR DATE		1/30/85	

PS Form 3800, Apr. 1976

PS Form 3811, Jan. 1978

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

SENDER: Complete items 1, 2, and 3. Add your address in the "RETURN TO" space on reverse.

1. The following service is requested (check one.)
[checked] Show to whom and date delivered.
[ ] Show to whom, date and address of delivery.
[ ] RESTRICTED DELIVERY
Show to whom and date delivered.
[ ] RESTRICTED DELIVERY.
Show to whom, date, and address of delivery.
(CONSULT POSTMASTER FOR FEES)

2. ARTICLE ADDRESSED TO:
Mr. Mike Salmon
City Hall Plaza, 5 North
Tampa, Florida 33602

3. ARTICLE DESCRIPTION:
REGISTERED NO. CERTIFIED NO. INSURED NO.
0156557
(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [checked] Addressee [ ] Authorized agent
[Signature]

4. DATE OF DELIVERY

5. ADDRESS (Complete only if requested)
SEP 13 1984

6. UNABLE TO DELIVER BECAUSE:
POSTMARK TAMP A FLA SEP 13 1984
CLERK'S INITIALS

THE TAMPA TRIBUNE

Published Daily  
Tampa, Hillsborough County, Florida

State of Florida }  
County of Hillsborough } ss.

Before the undersigned authority personally appeared  
G. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily  
newspaper published at Tampa in Hillsborough County, Florida; that the attached copy  
of advertisement being a

LEGAL NOTICE

in the matter of Notice that the Department of Environmental  
Regulation gives notice of its intent to modify a permit to  
the City of Tampa to allow the incinerating of infectious  
waste and waste oil recovered at the Port of Tampa.  
was published in said newspaper in the issues of  
April 11, 1983

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



*G. T. Gleason*

Subscribed before me, this 19th day

April, A.D. 19 83

*Linda E. Runyon*

Notary Public, State of Florida at Large  
My Commission Expires Jan. 25, 1985

Notice of Proposed Agency Action  
The Department of Environmental Regulation gives notice of its intent to modify a permit to the City of Tampa to allow the incinerating of infectious waste and waste oil recovered from oil spills occurring at the Port of Tampa at its McKay Bay Refuse-to-Energy Project in Hillsborough County. A determination of Best Available Control Technology (BACT) was not required.  
A person who is substantially affected by the Department's proposed permitting decision may request a hearing in accordance with Section 120.57, Florida Statutes, and Chapters 171 and 285, Florida Administrative Code. The request for hearing must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Twin Towers Office Building, Tallahassee, Florida 32301, within fourteen (14) days of publication of this notice. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.  
The application, technical evaluation and Department's intent are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the following locations:  
DER Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32301  
Hillsborough County Environmental Protection Commission  
1900 Ninth Avenue  
Tampa, Florida 33605  
DER Southwest District  
7601 Highway 301  
North  
Tampa, Florida 33610  
Comments on this action shall be submitted in writing to Bill Thomas of the DER Tallahassee office within thirty (30) days of this notice.  
M2785 4/11/83