

State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

**INTEROFFICE MEMORANDUM**

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: September 19, 1984  
SUBJ: Approval of Attached Air Construction Permits  
and BACT Determination

Attached for your approval and signature are two Air Construction Permits and a BACT determination for which the applicant is Bay County Energy Resources. The permits are for the construction of two incinerators at a proposed resource recovery facility in Bay County, Florida.

Day 90, after which the permits would be issued by default, is October 17, 1984.

The Bureau recommends your approval and signature.

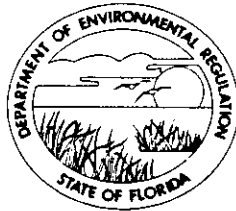
CF/pa

Attachments

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

September 26, 1984

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. F. A. Pollier  
Project Manager  
Westinghouse Waste Technology  
Services Division  
Post Office Box 10864  
Pittsburgh, Pennsylvania 15236

Dear Mr. Pollier:

Enclosed are Permit Numbers AC 03-84703 and AC 03-84704, dated September 24, 1984, to Bay County Energy Resources, issued pursuant to Section 403, Florida Statutes.

Acceptance of these permits constitutes notice and agreement that the department will periodically review these permits 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

Enclosure

cc: Alan F. Richter, P.E., STV Engineers, Inc.  
Peter Cunningham, Hopping Boyd Green & Sams  
James T. Wilburn, EPA Region IV  
Robert V. Kriegel, DER Northwest District

Final Determination

Bay County Energy Resources  
Resource Recovery Facility  
Units No. 1 and 2  
Panama City, Bay County

Permit Numbers:

AC 03-84703  
AC 03-84704

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

September 18, 1984

Final Determination  
Bay County Energy Resources  
(AC 03-84703 and 03-84704)

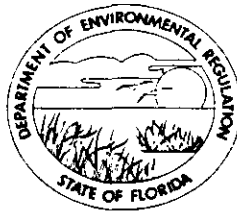
Bay County Energy Resource's permit applications for the construction of two O'Connor incinerators at a new plant site located in the Industrial Park on U.S. Highway 231 has been reviewed by the Bureau of Air Quality Management. Public notice of the department's Intent to Issue was published in the Panama City News Herald on August 9, 1984. Copies of the Preliminary Determination were available for public inspection at DER's Northwest District in Pensacola, Northwest District Branch Office in Panama City and the Bureau of Air Quality Management in Tallahassee.

There were no letters of response as a result of the public notice period.

The final action of the department will be to issue the permits (AC 03-84703 and AC 03-84704) as noticed in the review process.

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

**PERMITTEE:**  
Bay County Energy Resources  
c/o Westinghouse Waste  
Technology Service Division  
P. O. Box 286  
Madison, PA 15663

Permit Number: AC 03-84703  
Date of Issue:  
Expiration Date: March 31, 1987  
County: Bay  
Latitude/Longitude: 30° 15' 54"N/  
85° 30' 08"W  
Project: O'Connor Incinerator  
Unit 1

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

The construction of an O'Connor incinerator with 65.6 million Btu heat input per hour in Panama City, Bay County, Florida. The incinerator only burns municipal solid waste (MSW) and wood wastes. The average daily fuel consumption will be 150 tons of MSW and 89 tons of wood wastes.

Construction shall be in accordance with the attached permit application except as otherwise noted on pages 5 and 6, Specific Conditions.

**Attachments:**

1. Application to Construct Air Pollution Sources, DER Form 17-1.22(16), received on March 26, 1984.
2. DER's incompleteness letter to Westinghouse, dated April 16, 1984.
3. Revised Application to DER, received on May 29, 1984.
4. Additional Information to DER, received on June 18, 1984.
5. Best Available Control Technology (BACT) Determination made by DER.

PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84703  
Date of Issue:  
Expiration Date: March 31, 1987

**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 Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement 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 applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), 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. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use 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.

5. 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, unless specifically authorized by an order from the department.

PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84703  
Date of Issue:  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. 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 noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84703  
Date of Issue:  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

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.

9. 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 Sections 403.73 and 403.111, Florida Statutes.

10. The 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.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the department, during the course of any unresolved enforcement action.



PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84703  
Date of Issue:  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurements;
  - the date(s) analyses were performed;
  - the person responsible for performing the analyses;
  - the analytical techniques or methods used; and
  - the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

**SPECIFIC CONDITIONS:**

1. Except as required pursuant to DER's BACT determination (attachment 5) and these specific conditions, the proposed incinerator construction shall be carried out in accordance with the statements in the revised application submitted by the permittee.

2. Allowable fuels to be fired in the incinerator are solid waste and wood waste. The maximum municipal solid waste is limited to 175 tons per day. Municipal sewage sludge may not be fired in the incinerator.

PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84703  
Date of Issue:  
Expiration Date: March 31, 1987

**SPECIFIC CONDITIONS:**

3. The electrostatic precipitator shall be operated during firing of the incinerator on solid waste, or solid and wood wastes. No flue gas bypass of the precipitator shall be permitted.
4. The emission limit for particulates is 0.03 gr/dscf, corrected to 12 percent CO<sub>2</sub>. Compliance with the particulate limitation shall be demonstrated in accordance with 40 CFR 60, Appendix A, Methods 1, 2, 3, and 5.
5. Visible emissions shall not be greater than 10 percent opacity, except that no more than 20 percent opacity may be allowed for up to three minutes in any one hour. Opacity compliance shall be demonstrated in accordance with FAC Rule 17-2.700(6)(a)9., DER Method 9.
6. A continuous monitoring system to measure the opacity shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710, Continuous Monitoring Requirements. The system shall be installed and operational prior to compliance testing.
7. The incinerator with the electrostatic precipitator is allowed to operate up to 8,760 hours annually.
8. The tests of particulate and visible emissions shall be accomplished at 90% to 100% of the incinerator's design capacity. The permittee shall notify DER's Northwest District 14 days prior to source testing.
9. Reasonable precautions to prevent fugitive particulate emissions during construction, such as coating or spraying roads and the construction area, shall be taken by the permittee.
10. Prior to 90 days before the expiration of this permit, a complete application for an operating permit shall be submitted to the District office. Full operation of the source may then be conducted in compliance with the terms of this permit until expiration of this permit or receipt of an operating permit.

PERMITTEE:

Bay County Energy Resources

Permit Number: AC 03-84703

Date of Issue:

Expiration Date: March 31, 1987

SPECIFIC CONDITIONS:

Issued this 24 day of Sept., 1987

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
VICTORIA J. TSCHINKEL, Secretary

\_\_\_ pages attached.

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

**PERMITTEE:**  
Bay County Energy Resources  
c/o Westinghouse Waste  
Technology Service Division  
P. O. Box 286  
Madison, PA 15663

Permit Number: AC 03-84704  
Date of Issue:  
Expiration Date: March 31, 1987  
County: Bay  
Latitude/Longitude: 30° 15' 54"N/  
85° 30' 08"W  
Project: O'Connor Incinerator  
Unit 2

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the department and made a part hereof and specifically described as follows:

The construction of an O'Connor incinerator with 65.6 million Btu heat input per hour in Panama City, Bay County, Florida. The incinerator only burns municipal solid waste (MSW) and wood wastes. The average daily fuel consumption will be 150 tons of MSW and 89 tons of wood wastes.

Construction shall be in accordance with the attached permit application except as otherwise noted on pages 5 and 6, Specific Conditions.

**Attachments:**

1. Application to Construct Air Pollution Sources, DER Form 17-1.22(16), received on March 26, 1984.
2. DER's incompleteness letter to Westinghouse, dated April 16, 1984.
3. Revised Application to DER, received on May 29, 1984.
4. Additional Information to DER, received on June 18, 1984.
5. Best Available Control Technology (BACT) Determination made by DER.

PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84704  
Date of Issue:  
Expiration Date: March 31, 1987

**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 Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the department will review this permit periodically and may initiate enforcement 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 applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the department.

3. As provided in Subsections 403.087(6) and 403.722(5), 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. This permit does not constitute a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use 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.

5. 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, unless specifically authorized by an order from the department.

PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84704  
Date of Issue:  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

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7. The permittee, by accepting this permit, specifically agrees to allow authorized department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. 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 noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84704  
Date of Issue:  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

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.

9. 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 Sections 403.73 and 403.111, Florida Statutes.

10. The 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.

11. This permit is transferable only upon department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

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- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards.

14. The permittee shall comply with the following monitoring and record keeping requirements:

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PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84704  
Date of Issue:  
Expiration Date: March 31, 1987

**GENERAL CONDITIONS:**

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by department rule.
- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurements;
  - the date(s) analyses were performed;
  - the person responsible for performing the analyses;
  - the analytical techniques or methods used; and
  - the results of such analyses.

15. When requested by the department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the department, such facts or information shall be submitted or corrected promptly.

**SPECIFIC CONDITIONS:**

1. Except as required pursuant to DER's BACT determination (attachment 5) and these specific conditions, the proposed incinerator construction shall be carried out in accordance with the statements in the revised application submitted by the permittee.
2. Allowable fuels to be fired in the incinerator are solid waste and wood waste. The maximum municipal solid waste is limited to 175 tons per day. Municipal sewage sludge may not be fired in the incinerator.



PERMITTEE:  
Bay County Energy Resources

I. D. Number:  
Permit Number: AC 03-84704  
Date of Issue:  
Expiration Date: March 31, 1987

**SPECIFIC CONDITIONS:**

3. The electrostatic precipitator shall be operated during firing of the incinerator on solid waste, or solid and wood wastes. No flue gas bypass of the precipitator shall be permitted.
4. The emission limit for particulates is 0.03 gr/dscf, corrected to 12 percent CO<sub>2</sub>. Compliance with the particulate limitation shall be demonstrated in accordance with 40 CFR 60, Appendix A, Methods 1, 2, 3, and 5.
5. Visible emissions shall not be greater than 10 percent opacity, except that no more than 20 percent opacity may be allowed for up to three minutes in any one hour. Opacity compliance shall be demonstrated in accordance with FAC Rule 17-2.700(6)(a)9., DER Method 9.
6. A continuous monitoring system to measure the opacity shall be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710, Continuous Monitoring Requirements. The system shall be installed and operational prior to compliance testing.
7. The incinerator with the electrostatic precipitator is allowed to operate up to 8,760 hours annually.
8. The tests of particulate and visible emissions shall be accomplished at 90% to 100% of the incinerator's design capacity. The permittee shall notify DER's Northwest District 14 days prior to source testing.
9. Reasonable precautions to prevent fugitive particulate emissions during construction, such as coating or spraying roads and the construction area, shall be taken by the permittee.
10. Prior to 90 days before the expiration of this permit, a complete application for an operating permit shall be submitted to the District office. Full operation of the source may then be conducted in compliance with the terms of this permit until expiration of this permit or receipt of an operating permit.


PERMITTEE:  
Bay County Energy Resources

Permit Number: AC 03-84704  
Date of Issue:  
Expiration Date: March 31, 1987

SPECIFIC CONDITIONS:

Issued this 24 day of Sept, 1984

STATE OF FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION

  
\_\_\_\_\_  
VICTORIA J. TSCHINKEL, Secretary

\_\_\_\_\_ pages attached.

Best Available Control Technology (BACT) Determination  
 Bay County Energy Resources  
 Bay County

The applicant plans to construct a resource recovery facility at Panama City, Florida. The facility will contain two O'Connor RC 120 combustor units that in combination will fire a total of 485 tons per day of municipal solid waste (MSW) and wood waste. The wood waste will be fired as necessary to produce the steam required to maintain the designed output of electrical power. The ratio of fuels to be fired is estimated to be 300 tons per day of MSW and 178 tons per day of wood wastes.

Total Potential Air Pollutant Emissions (tons/year)

Particulate	50	25*
Sulfur Dioxide	192	40*
Nitrogen Oxides	214	40*
Carbon Monoxide	1010	100*
Lead	0.3	0.6*

\* Regulated Air Pollutants - Significant Emission Rates, Florida Administrative Code Rule 17-2.500, Table 500-2.

The proposed facility is number nine on the major facility categories list of 28, Table 500-1, and therefore subject to Rule 17-2.500, Prevention of Significant Deterioration (PSD). A Best Available Control Technology (BACT) determination is required for all regulated air pollutants that are equal to or greater than the significant emission rates as listed in Table 500-2, Rule 17-2.500(5)(c). The regulated air pollutants from this facility subject to a BACT determination are: particulate matter, sulfur dioxide, nitrogen oxides, and carbon monoxide.

BACT Determination Requested by the Applicant:

Pollutant	Emission Limit
Particulates	.03 grain/dscf corrected to 12% CO <sub>2</sub>
CO	115.4 lb/hr
NOx	24.5 lb/hr
SO <sub>2</sub>	22.1 lb/hr

An electrostatic precipitator (ESP) will be installed to control the discharge of particulate matter. The ESP will also control lead, beryllium and mercury emissions. Sulfur dioxide will be limited by the inherent low sulfur content of MSW and wood wastes. Unit design and operating procedures will be the methods used to limit NOx and CO emissions.

Date of Receipt of a BACT Application:

June 4, 1984

Date of Publication in the Florida Administrative Weekly:

June 15, 1984

Review Group Members:

The resultant air pollutant emission limitations are based upon comments obtained from the New Source Review Section, Air Modeling Section and the NW District Office.

BACT Determination by DER:

Pollutant	Emission Limit
Particulates	0.03 grain/dscf, corrected to 12 percent CO <sub>2</sub>
Sulfur Dioxide	Fuel limited to solid waste and wood waste [1]
Nitrogen Oxides	Combustor design
Carbon Monoxide	Combustion control procedures
Mercury	3200 grams/day [2]
Visible Emissions	10 percent opacity

[1] "Solid Waste" means refuse, more than 50% of which is municipal type waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustibles, and noncombustible materials such as glass and rock. (40 CFR 60.51(a))

"Wood Waste" means bark, sawdust, slabs, chips, shavings, mill trim, and other wood products derived from wood processing and forest management operations.

[2] If more than 2205 lb/day of municipal sewage sludge is fired, compliance with the mercury emission limit shall be demonstrated in accordance with 40 CFR 61, Subpart E.

Compliance with the particulate emission limitation will be demonstrated in accordance with 40 CFR 60, Appendix A, Methods 1, 2, 3, and 5.

A continuous monitoring system to measure the opacity of emissions will be installed, calibrated, and maintained in accordance with the provisions of Rule 17-2.710 - Continuous Monitoring Requirements. The continuous emission monitor must be installed and operational prior to compliance testing.

Compliance with the opacity limit will be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6)9., DER Method 9.

BACT Determination Rationale:

The proposed two rotary combustion units will have a charging rate of more than 50 tons per day and, therefore, be subject to the provisions of 40 CFR 60.50, Subpart E, New Source Performance Standards (NSPS). The NSPS for particulate matter emissions is a rate not to exceed 0.08 grain/dscf corrected to 12 percent CO<sub>2</sub>. The applicant has proposed to limit the particulate emissions rate not to exceed 0.03 grain/dscf corrected to 12 percent CO<sub>2</sub>. An electrostatic precipitator (ESP) will be installed on each unit to control particulate emissions.

The Department agrees that the use of an ESP is a control technology currently capable of achieving the 0.03 grain/dscf particulate emission limit, and is considered BACT. The baghouse is another control device capable of achieving the particulate emission limit determined as BACT. The applicant has opted to use the ESP, a control technique widely used at existing MSW incinerator plants.

The mercury emission limit is the National Emission Standard for Hazardous Air Pollutants (NESHAPS), 40 CFR 61.50, Subpart E, for municipal waste water sludge incineration plants. The proposed source would be subject to the provisions of NSPS, 40 CFR 60.150, Sewage Treatment Plants, if more than 2205 pounds per day (dry basis) municipal sewage sludge is charged. The Department has determined the emissions limit for mercury to be 3200 grams per day applicable only if more than 2205 pounds per day (dry basis) municipal sewage sludge is fired in the two rotary combustors. The applicant has stated that no sludge will be fired in the proposed incinerators; therefore, unless future conditions change the current plans, Subpart E will not apply to this facility.

The department has determined that SO<sub>2</sub> emissions will be limited by fuel type, that is, municipal solid waste and wood waste. Test data obtained from existing Florida MSW incinerators indicate that SO<sub>2</sub> emissions are less than the emissions from the combustion of distillate oil containing 0.3 percent sulfur. The applicant has stated that only Type O, I, II, and III waste will be consumed. The various waste classifications are as defined by the Incinerator Institute of America (IIA).

NSPS Subpart E, Subsection 60.53, requires the owner or operator to record the daily charging rates and hours of operation. Adding the statement "only MSW and wood waste was fired" would be sufficient to show compliance with the SO<sub>2</sub> emission limit determined as BACT.

During combustion of municipal solid waste, NOx is formed in high temperature zones in and around the furnace flame by oxidation of atmospheric nitrogen and nitrogen containing compounds in the waste. The two primary variables that affect the formation of NOx are temperature and concentration of oxygen. Techniques such as the method of fuel firing, the distribution of combustion air between overfire and underfire air, exhaust gas recirculation and decreased heat release rates have been used to reduce NOx emissions. A few add-on control techniques such as the catalytic reduction with ammonia process and the thermal de-NOx are still experimental, and are not considered to be demonstrated technology for the proposed project.

The two O'Connor rotary combustor units are designed to provide intimate mixing of the tumbling waste and combustion air. The need for high excess air is minimized. The amount of excess air averages about 50 percent. The low excess air requirement and high moisture content of the fuel will limit NOx emissions. The department has determined that specified type of fuel and combustor design are BACT.

Lead emissions from the incinerator occur because this element is present in varying amounts in the solid waste. The inlet temperature of the ESP is estimated at 425-475 °F. At these temperatures the lead emissions should be in a nonvaporous state, and will be removed in the ESP along with the rest of the particulates.

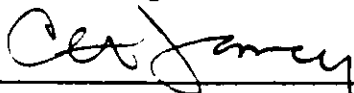
Carbon monoxide is a product of incomplete combustion where there is insufficient air. Incomplete combustion will also result in the emissions of solid carbon particulates in the form of smoke or soot and unburned and/or partially oxidized hydrocarbons. Incomplete combustion results in the loss of heat energy to the boiler. The department agrees with the applicant that BACT is the use of state-of-the-art boiler controls to insure sufficient underfire and overfire air so that the emissions of products of incomplete combustion are minimized. Since CO emissions represent lost heat energy, thereby affecting the return on investment, the department believes the financial inducement will minimize CO emissions.

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

Details of the Analysis May be Obtained by Contacting:

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

Recommended by:



\_\_\_\_\_  
C. H. Fancy, Deputy Bureau Chief

Date: 9/20/84

Approved:



\_\_\_\_\_  
Victoria J. Tschinkel, Secretary

Date: Sept 27, 1984

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