

BEFORE THE STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

In Re: Wheelabrator North Broward, Inc.)  
North Broward County Resource )  
Recovery Facility ) DER CASE NO. PA 86-22E  
Modification of Conditions ) OGC Case No. 98-3103  
of Certification )  
Broward County, Florida )  
\_\_\_\_\_)

**PROPOSED FINAL ORDER MODIFYING  
CONDITIONS OF CERTIFICATION**

On March 9, 1987, the Governor and Cabinet, sitting as the Siting Board, issued a final order approving certification for the North Broward County Resource Recovery Facility. That certification order approved the construction and operation of a 55.5 MW, 2,200 tons per day municipal waste fired power plant and associated facilities located in Broward County, Florida.

On January 7, 1999, Wheelabrator North Broward Inc. (Wheelabrator) filed a request to amend their application to reflect installation of improvements to the air pollution control system to comply with the Federal requirements of 40 CFR 60, Subpart Cb.- Emission Guideline and Compliance Schedules for Municipal Waste Combustors That Are Constructed on or Before December 19, 1995, to change monitoring requirements and to allow construction of a metals recovery facility. The Department proposes and the petitioner concurred that the conditions should be updated to reflect the applicants current name, the Department's current name, and current rule citations, and Condition XII. on Modification of Conditions should be modified to allow for conforming conditions of certification to future amendments to federally delegated permits.

Copies of Wheelabrator's proposed modifications were made available for public review on January 7, 1999. On January 8, 1999, a Notice of Receipt of Proposed Modification of Power Plant Certification was published in the *Florida Administrative Weekly*. On December 9, 1998, all parties to the original proceeding were notified of the Wheelabrator's request to modify. The notice in the Florida Administrative Weekly specified that a hearing would be held if a party to the original certification hearing objects within 45 days from receipt of the proposed modifications or any other person, whose interests would be substantially affected, objects in writing within 30 days after issuance of the public notice. No written objection to the proposed modifications has been received by the Department. A public notice of the proposed PSD amendment was published on May 21, 1999. Accordingly, in the absence of any timely objection,

**IT IS ORDERED:**

The proposed changes to the North Broward County Resource Recovery Facility as described in Wheelabrator North Broward Inc.'s December 4, 1998, request for modification are APPROVED. Modification to the conditions correcting the definition of the applicant, correcting the name of the Department and regulatory references from Chapter 17-xx to Chapter 62-xx are Approved. Pursuant to Section 403.516(1)(b), F.S., the conditions of certification for the North Broward County Resource Recovery Facility are **MODIFIED** as follows:

II. NON-COMPLIANCE NOTIFICATION

If, for any reason, the Permittee (defined as the Applicant, Wheelabrator North Broward County Resource Recovery Project, Inc., or assigns) does not comply with or will be unable to comply with any limitation specified in this certification, the Permittee shall notify the Southeast Florida District Office of the Department of Environmental ~~Regulation~~ Protection (Southeast District Office) by telephone within a working day that

said noncompliance occurs and shall confirm this in writing within seventy-two (72) hours of becoming aware of such condition, and shall supply the following information: -

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### III. FACILITIES OPERATION

The Permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or system or used by the Permittee to achieve compliance with the terms and conditions of this certification. In the event of a malfunction of a resource recovery boiler's pollution control system that unit's furnace emissions must be shifted to the extent feasible to the remaining unit having a properly functioning pollution control system. In the event of a prolonged (thirty (30) day or more) equipment malfunction or shutdown of air Ppollution control equipment, operation could be permitted to continue to take place under a consent order, only if the Permittee demonstrates that such operation will be in compliance with all applicable ambient air quality standards and PSD increments, solid waste rules, domestic waste rules and industrial ~~wast~~ waste rules. Additionally, during such malfunction or shutdown, the source shall comply with all other requirements of this certification and all applicable state and federal emission standards not affected by the malfunction or shutdown which is the subject o the consent order. Administrative action will not be initiated in the event of such a malfunction for twenty-five (25) days following a malfunction unless there is an imminent health threat. However, if at thirty (30) days following a malfunction compliance has not been achieved by the source, an Order for Corrective Action may be immediately imposed upon the Applicant, subject to the provisions of Chapter 120 of the Florida Statutes. Unless otherwise authorized by these Conditions of Certification, excess air pollutant emissions during start-up, malfunction or shutdown exceeding the emission limitations set forth herein shall not be permitted to occur for longer than three (3) hours without Southeast District Office approval. Operational stoppages exceeding ~~two hours~~ for air pollution control systems or four (4) hours for other systems or operational malfunctions as noted below exceeding two hours for air pollution control systems or four hours for other systems and as defined in the operational contingency plans as specified in Condition XX. are to be reported as specified in Condition II. Identified

operational malfunctions which do not stop operation but do compromise the integrity of the operation shall be reported to the Southeast District Office as specified in Condition II.

#### IV. ADVERSE IMPACT

No change.

#### V. RIGHT OF ENTRY

The Permittee shall allow during operational hours the Secretary of the Florida Department of Environmental ~~Regulation~~ Protection and/or authorized representatives, upon the presentation of credentials: ---

#### XII. MODIFICATION OF CONDITIONS

##### A. Board Delegation

Pursuant to subsection 403.516(1), F.S., the Board hereby delegates the authority to the Secretary to modify any condition of this certification dealing with sampling, monitoring, reporting, specification of control equipment, boiler capacity, related time schedules, emission limitations (subject to notice and opportunity for hearing), or any special studies conducted, as necessary to attain the objectives) of Chapter 403, Florida Statutes. Requests for modifications of monitoring requirements shall not be unreasonably withheld by the Department.

##### B. Federal Permits

This certification shall be automatically modified to conform to any subsequent amendments, modifications, or renewals made by DEP under a federally delegated or approved program to any separately issued Prevention of Significant Deterioration (PSD) permit, Title V Air Permit, or National Pollutant Discharge Elimination System (NPDES) permit for the certified facility. Wheelabrator North Broward, Inc. (Wheelabrator) shall send each party to the original certification proceedings (at the party's last known address

as shown in the record of such proceeding) notice of requests for modifications or renewals of the above listed permits if the request involves a relief mechanism (e.g., mixing zone, variance, etc.) from standards, a relaxation of conditions included in the permit due to state permitting requirements, or the inclusion of less restrictive air emission limitations in the air permits. DEP shall notify all parties to the certification proceeding of any intent to modify conditions under this section prior to taking final agency action

C. Other

All other modification to these conditions shall be made in accordance with Section 403.516, Florida Statutes.

IV. OPERATION

A. Air

The operation of the Resource Recovery Facility shall be in accordance with all applicable provisions of Chapters ~~17-2, 17-5, and 17-7~~ 62-4, 62-204 through 62-297, 62-701, and 62-702, Florida Administrative Code and permit PSD-FL-112, as amended. In addition to the foregoing, the Permittee shall comply with the following specific conditions of certification:

1. Emission Limitations upon Operation of Units 1-4

~~a. Stack emissions from each unit shall not exceed the following, assuming a Btu content of 4500 Btu/lb of MSW:~~

~~(1) Particulate Matter: 0.015 grains per standard cubic foot dry gas corrected to 12% CO<sub>2</sub>.~~

~~(2) SO<sub>2</sub>: 0.140 lb/mmBtu 701 u heat input and 60 ppm (3-hr rolling average, dry volume, corrected to 12% CO<sub>2</sub>); or 65% reduction of uncontrolled SO<sub>2</sub> emissions. In no case shall SO<sub>2</sub> emissions exceed~~

~~0.310 lb/mmBtu heat input and 124 ppm (3-hr rolling average, dry volume, corrected to 12% CO<sub>2</sub>). The 124 ppm limit above shall be modified to reflect a new emission limit a new emission limit (in ppm) from the control device at 65% control efficiency. Within 18 months of start-up of operation the County shall submit a compliance test that will be used to determine the new SO<sub>2</sub> emission limit (in ppm.). The limit will be determined by observed average emission rate (u) from the submitted compliance tests and will be statistically analyzed using the one-tailed student T test ( $t_{0.05} = (X - u) \sqrt{n} / 0.5/s$ ) at the 95% confidence level to derive an emission rate (X) where s is the standard deviation of observed values n. The Final SO<sub>2</sub> emission limit (in ppm) shall be this mean emission rate (X). This value shall be restricted to no more than 124 ppm or less 60 ppm (3-hr rolling average, dry volume corrected to 12% CO<sub>2</sub>).~~

~~(3) Nitrogen Oxides: 350 ppm (3-hr rolling average, dry volume, corrected to 12% CO<sub>2</sub>).~~

~~(4) Carbon Monoxide: 0.090 lb./mmBtu heat input; 400 ppm (1-hr rolling average, dry volume, corrected to 12% CO<sub>2</sub>); and 88 ppm (4-day rolling average, dry volume corrected to 12% CO<sub>2</sub>).~~

~~(5) Lead: 0.00056 lbs/mmBtu heat input.~~

~~(6) Mercury:  $7.5 \times 10^{-4}$  lbs/mmBtu heat input.~~

~~(7) Odor: There shall be no objectionable odor at the site boundary.~~

~~(8) Visible emissions: opacity shall be no greater than 15% except that visible emissions of no more than 20% opacity may be allowed for up to three consecutive minutes in any one hour except during start-up or upsets when the provisions of 17.2.250, F.A.C., shall apply, provided that: (1) best operation practices to minimize emissions are adhered to, and (2) the duration of excess opacity is minimized but in no case allowed to exceed two hours in any 24-hour period, unless specifically authorized by EPA for longer duration. Opacity requirement shall be demonstrated in accordance with 17.2.700-  
(6)(a)9., F.A.C., Method 9.~~

(9) Fluoride: 0.0040 lb/mmBtu heat input

(10) Beryllium: 9.3xE-7 lb/mmBtu heat input

(11) VOC: 0.013 lb/MMBTU heat input

(12) Arsenic: 3.1 x E-5 lb/MMBTU heat input

(13) Sulfuric Acid Mist: 4.7 x E-1 lb/MMBTU heat input

\* Subject to change in accordance with current state rule making for resource recovery facilities or by petition under 403.516.

1. EMISSIONS LIMITATIONS

a. The following emissions standards apply to the following emissions units after improvements to comply with 40 CFR Subpart Cb are completed and the initial performance tests are completed.

<u>Emissions Unit No.</u>	<u>Emissions Units Description</u>
001	302.5 MMBtu/hr (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit No.1
002	302.5 MMBtu/hr (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit No.2
003	302.5 MMBtu/hr (maximum) Municipal Waste Combustor & Auxiliary Burners - Unit No.3

{Permitting Note: Each of the three municipal waste combustor (MWCs) has a *nominal* design rate capacity of 747 tons MSW per day (a maximum of 807 tons per day), 280 MMBtu per hour with MSW having a heating value of 4,500 Btu per pound. Short-term capacity is limited by limiting steam production (maximum of 186,000 lb/hr), which effectively limits heat input.

	<b><u>EQUIVALENT EMISSIONS</u></b>
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<u>POLLUTANT</u>	<u>EMISSIONS STANDARDS</u>	<u>LB/MMBtu</u>	<u>LB/HR</u>	<u>TON/YR</u>
<u>PM</u> <sup>(1)</sup> Particulate Matter	27 mg/dscm or 0.012 gr/dscf corrected to 7% O <sub>2</sub>	0.024	7.35	32.24
<u>VE</u> Visible Emissions	10 % (6 min. block avg.)			
<u>Cd</u> Cadmium	0.040 mg/dscm corrected to 7% O <sub>2</sub>	3.6E-05	0.011	0.048
<u>Be</u> <sup>(2)</sup> Beryllium	0.001 mg/dscm corrected to 7 % O <sub>2</sub>	9.3E-07	0.0003	0.0012
<u>Pb</u> Lead	0.44 mg/dscm corrected to 7% O <sub>2</sub>	4.4E-04	0.133	0.58

<b>Hg</b> Mercury	70 ug/dscm or 85% reduction by weight or volume corrected to 7% O <sub>2</sub> (whichever is less stringent)	6.3E-05	0.019	0.08
<b>SO<sub>2</sub></b> Sulfur Dioxide	29 ppm <sub>dv</sub> or 75% reduction by weight or volume corrected to 7% O <sub>2</sub> (whichever is less stringent)	0.11	32.8	143.5
<b>HCl</b> Hydrochloric Acid	29 ppm <sub>dv</sub> or 95% reduction corrected to 7% O <sub>2</sub> (whichever is less stringent)	0.04	11.7	51.3
<b>Dioxins/Furans</b>	30 ng/dscm corrected to 7% O <sub>2</sub>	2.7 E-08	8.2E-06	3.6E-05
<b>CO</b> Carbon Monoxide	100 ppm <sub>dv</sub> corrected to 7% O <sub>2</sub>	0.105	31.8	139.1
<b>NO<sub>x</sub></b> <sup>(2)</sup> Nitrogen Oxides	205 ppm <sub>dv</sub> corrected to 7% O <sub>2</sub>	0.35	106.5	466.4

<b>F</b> Fluorides	Not to exceed 0.0040 lb/MMBtu (BACT limit from original permit)	0.0040	1.21	5.29
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(1) These maximum allowable emission standards are applicable to each MWC combustor unit and shall be used in demonstrating compliance with the compliance procedures specified in conditions d.3. [Rules 62-4.070, and 62-296.416, F.A.C., 40 CFR 60.33b and 40 CFR 60.34b]

(2) Permitting note: These equivalent emissions are listed for providing information on the potential to emit for each MWC and not in determining compliance with applicable emission standards.

(3) This limit for PM is more restrictive than the emission limit for PM in 40 CFR 60.43b

(4) Beryllium: PSD original permit limit. Not to exceed applicable NESHAP, 40 CFR 61.32 (a)(Subpart C).

Basis: Equivalent emissions calculations (lb/hr and ton/yr) are based on the maximum heat input rate of 3302.5 MMBtu/hr and 186,000 lb steam/hr [108 % rated capacity] per unit and 8760 hours of operation. Short-term capacity is limited by limiting steam production (186,000 lb steam/hr) which effectively limits heat input.

Averaging Times

SO<sub>2</sub>: 24-hour daily block geometric mean (midnight to midnight)

NO<sub>x</sub>: 24-hour daily block arithmetic mean (midnight to midnight)

CO: 4-hour block arithmetic mean beginning at midnight

Opacity: 6 minutes block arithmetic mean

Abbreviations

ug/dscm: Micrograms per dry standard cubic meter

mg/dscm: Milligrams per dry standard cubic meter

ppm<sub>dv</sub>: Part per million dry volume



ng/dscm: Nanograms per dry standard cubic meter

Dioxins/ furans: Total tetra through octa-chlorinated dibenzo-p dioxins and dibenzofurans

F: Fluorides as hydrogen fluoride

Temperature: 17° C above maximum demonstrated PM control device inlet

(1) Visible Emissions

(a) Excess Emissions

Excess opacity resulting from startup or shutdown shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess opacity shall be minimized but in no case exceed two hours in any 24-hour period unless specifically authorized by the Department for longer duration. Emission standards apply at all times except during periods of startup/shutdown and malfunction as stated in 40 CFR 60.58b(a).

(b) Fugitive Ash Emissions From Ash Conveying System:

No owner or operator of this facility shall cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 % of the observation period (i.e., 9 minutes per 3-hour period) as determined by EPA Reference Method 22. The 5 percent visible ash emission limit does not cover visible ash emissions discharged inside a building or ash conveying systems, but the visible emission limit does cover visible emissions discharged to the atmosphere from buildings of enclosures of ash conveying systems. [Rule 62-204.800(8), F.A.C., 40 CFR 60.36b; 60.55b and 62-4-070(3) F.A.C.]

(c) Applicable Requirements:

These units are subject to all applicable requirements of 40 CFR 60 Subpart Cb, Emissions Control Guidelines and Compliance Schedules for Municipal Solid Waste Combustors, Subpart E, NSPS for Incinerators, Subpart Db NSPS for Industrial-Commercial-Institutional Steam Generating Units, 40CFR61 Subpart C, NESHAP for Beryllium and Rule 62-296.416 F.A.C., Waste-to-Energy Facilities, except that where requirements in this permit are more restrictive, the requirements in this permit shall

apply. [PSD-FL-112, 40CFR60 Subparts Cb, E, Db and 40CFR61 Subpart C]

(d) Ash Handling Facilities:

The potential for dust generation by ash handling activities will be mitigated by quenching or conditioning the ash prior to loading in ash transport trucks. Ash handling facilities shall be enclosed (including the proposed future metal recovery area). Unprocessed refuse storage areas which must be open for operational purposes (e.g., tipping floor of the refuse bunker while trucks are entering and leaving) will be under negative air pressure. Residue from the grates, and grate siftings shall be discharged into the flyash conditioning system, and ash from the combustor/boiler and fabric filter hoppers shall be discharged into the flyash conditioning system during normal operations to minimize visible dust generation. The ash/residue in the Ash Handling Building shall remain sufficiently moist to minimize dust during storage and handling operations. Compliance with this condition shall be determined in accordance with Condition XIV.A.1.a.(1)(b). [Rule 62-204.800(8), F.A.C., 40 CFR 60.36b; 60.55b and 62-4-070(3) F.A.C.]

b. No change.

c. (1) Operating Rates:

The maximum individual MWC throughput shall not exceed 807 tons MSW per day (2420 tons per day entire facility), and 302.5 MMBtu per hour (108% rated capacity) Nor produce in excess of 186,000 pounds steam per hour based on a 4-hour block arithmetic average.

[Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b, and 60.58b(j)]

[PSD-FL-121(B)/PA 85-21 and Rule 62-4.030(3), F.A.C.]

(2) Compliance with the Continuous Charging Rate:

The daily solid waste charging rate and hours of operation shall be determined and

recorded for each MWC unit. The daily charging rate shall be determined each month on an average daily basis for each MWC unit using the Facility's truck scale weight data, refuse pit inventory, and MWC operating data for the preceding calendar month. Monthly truck scale weight records on the weight of solid waste received and processed at the Facility and refuse pit inventory shall be used to determine the amount of solid waste charged during the preceding calendar month on an average daily basis. The MWC load level measurements or other operating data shall be used to determine the number of operating hours per MWC unit for each day during the preceding calendar month. [Rule 62-204.800(8), F.A.C., and 40 CFR 60.53(a)]

(3) Load Level :

Unit load means the steam load of the municipal waste combustor (MWC) measured as specified in 40 CFR 60.58b(i)(6). Each MWC unit shall not operate at a load level greater than 110 percent of the unit's "maximum demonstrated unit load." The maximum demonstrated unit load is the highest 4-hour arithmetic averaged MWC unit load achieved during four consecutive hours during the most recent dioxin/furan performance stack test in which compliance with the dioxin/furan emission limit was achieved. Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b). [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b; 60.51b; 60.53b(b); and 60.58b(i)(8)]

(4) Compliance With Load Level Requirements:

The owner or operator of an affected facility with steam generation capability shall install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in kilograms per hour (or pounds per hour) on a continuous basis; and record the output of the monitor (in accordance with the ASME method described in 40 CFR 60.58b(i)(6). Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages. Higher loads are allowed for testing purposes as specified at 40 CFR 60.53b(b). [Rule 62-204.800(8), F.A.C., 40 CFR 60.31b; 60.38b;

60.51b; 60.53b(b); and 60.58b(i)(6)]

d. The incinerator boilers shall have a metal nameplate affixed in a conspicuous place on the shell showing manufacturer, model number, type waste, rated capacity and certification number.

e. Compliance Tests

(1) ~~Compliance with the limitations for particulates, sulfur oxides, nitrogen oxides, carbon monoxide, fluoride, sulfuric acid mist, VOC, and lead shall be determined in accordance with Florida Administrative Code Rule 17-2.700, DER Methods 1, 2, 3, 4, and 6 and 40 CFR Part 60, Appendix A, Methods 5, 7, 8, (modified with prefilter), 10, 12, 13A or 13B (or modified Method 5 for fluorides), and 18 or other methods as approved by the DER. The stack test for each unit shall be performed at +10% of the maximum heat input rate of  $302.5 \times 10^6$  Btu per hour or the maximum charging rate of 67,250 pounds of MSW per hour. Compliance with the beryllium emission limitation shall be determined in accordance with 40 CFR Part 61, Method 103 or 104, Appendix B. Particulate testing include one run during representative soot blowing which shall be averaged proportionally to normal daily operations. Visible emission testing shall be conducted simultaneously with soot blowing and non soot blowing runs. Compliance with the opacity limit shall be demonstrated in accordance with Florida Administrative Code Rule 17-2.700(6)(a)9, DER Method 9.~~

Initial compliance tests for each combustion unit shall be conducted within 60 days after achieving maximum boiler capacity, but not later than 180 days after startup of the Selective Non-Catalytic Reduxtion (SNCR) system. Compliance tests shall be performed according to 40 CFR 60.38.b. Annual tests shall be conducted within one year after initial compliance tests, unless otherwise approved by the Department. A test protocol shall be submitted to the Department's Southeast District Office (DEPSED) and the Broward County Department of Planning and Environmental Protection(BCDPEP) at least 45 days prior to initial testing. [40 CFR 60.8, 40 CFR 60.11, Rule 62-204.800(8)(b), and Chapter 62-297, F.A.C.]

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

- a. Method 1 for selection of sample site and sample traverses.
- b. Method 2 for determining stack gas flow rate when converting concentrations to or from mass emission limits.
- c. Method 3 for analysis for calculation of percent O<sub>2</sub> and CO<sub>2</sub>.
- d. Method 4 for determining stack gas moisture content to convert the flow rate from actual standard cubic feet to dry standard cubic feet for use in converting concentrations in dry gases to or from mass emission limits.
- e. Method 5, Determination of Particulate Matter Emissions (front half catch only) from Stationary Sources (I) and (A). Pursuant to 40 CFR 60.58b(c)(3) EPA Reference Method 5 shall be used for determining compliance with the particulate emission limit. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 + 14° C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Method 5 run.
- f. Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources (I) and (A).
- g. Method 13B or 13A, Determination of Total Fluoride Emissions from Stationary Sources (I) and (A).
- h. Method 23, Determination of Dioxin/furan concentration from Stationary Sources (I) and (A). Dioxin/Furan emission limit shall be expressed as the total mass of tetra through octa chlorinated dibenzo-p-dioxins and dibenzofurans. The facility may perform less frequent

testing for dioxin/furan emissions as allowed by 40 CFR 60.38b(b) and with prior notice to the Department, if the emission unit's dioxin/furan emissions do not exceed 15ug/dscm corrected to 7% O<sub>2</sub> or less.

i. Method 26 or 26A, Determination of HCl emissions (I) and (A). HCL stack tests upstream and downstream of the control device(s) shall be conducted to calculate percent control to demonstrate compliance with the alternate removal limit.

j. Method 29, Determination of Metals Emissions from Stationary Sources (I) and (A). Mercury emissions testing shall be conducted semiannually. Mercury emission testing shall be conducted semiannually.

or  
compliance Mercury stack tests shall be performed downstream of control devices upstream and downstream of control devices when determining with the alternative removal requirement

f. k. Combustion efficiency calculated by:

$\%CE = \{1/[1+(CO/CO_2)]\} \times 100$  shall be at least 99.8% for an 8 hour average.

### (3) Continuous Compliance with Emission Limits:

Continuous compliance with the emission limits for opacity, carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>) listed above and the operational parameters (including but not limited to: oxygen measurements, steam production [lb/hr, pressure, and temperature] or feedwater flowrate [lb/hr], device to measure temperature of flue gas at the fabric filter inlet, carbon injection system operating parameters, temperature of the combustion zone, slake lime utilization, power generation, etc ) shall be demonstrated by continuous emission monitoring systems (CEMS) operated in accordance with 40 CFR 60.58b and 60.59b(f). SO<sub>2</sub> monitors shall be located both upstream of the scrubber and downstream of the baghouse, in order to calculate percent removal efficiency. [Rule 62-204.800(8), F.A.C. and 40 CFR 60.38 (40 CFR 60.58b) and 62-4.070 F.A.C.]

## 2. Emission Control Equipment

a. Each boiler is equipped with a particulate control device for the control of particulates and each particulate emission control device shall be designed and constructed to achieve a maximum emission rate of ~~0.015~~ 0.012 grains per dscf corrected to 12% CO<sub>2</sub>, 7% O<sub>2</sub>. All other particulate control devices shall be designed to meet the provisions of section ~~17-2.610~~ 62-296, F.A.C.

b. Each boiler shall be equipped with an acid gas control device designed to ~~remove at least 90% of the acid gases~~ comply with the emission limitations of Condition XIV.A.1. above. The temperature of the flue gases exiting the acid gas control equipment shall not exceed 300 degrees F. Each MWC unit is required to continuously monitor and record the flue gas temperature at the inlet to the PM control device in accordance with the requirements at 40 CFR 60.58b(i)(7). The PM control device temperature shall be calculated in 4-hour block arithmetic averages. Each MWC unit shall be allowed to operate up to 17°C (30° F) above the unit's maximum demonstrated PM control device temperature. The maximum demonstrated PM control device temperature is the highest 4-hour arithmetic block-averaged measurement of temperature at the inlet to the PM control device recorded for 4 consecutive hours during the most recent dioxin/furan performance test which complied with the limits given above. The PM control device inlet temperature and the steam (or feedwater) flow for each unit during the stack test shall be continuously monitored and recorded in accordance with 40 CFR 60, Subpart Cb. Higher temperatures are allowed for testing purposes, as specified at 40 CFR 60.53b(c). [Rule 62-204.800(8), F.A.C. and 40 CFR 60.38b, 40 CFR 60.53b(c) and 60.58b(i)(7) and (9)]

c. The Permittee must submit to the Department within thirty (30) days after it become available, copies of technical data pertaining to the selected emissions control systems. These data should include, but not be limited to, guaranteed efficiency and emission rates, and major design parameters. The data shall be processed and approved or denied in accordance with F.S. 120.60.

d. Each boiler shall be equipped with a selective non-catalytic reduction system to control nitrogen oxides emissions.

e. Mercury is controlled by source separation techniques pursuant to rule 62-296.416, F.A.C.

### 3. ~~Air~~ Continuous Emission Monitoring Program

a. The Permittee shall install, and continuously operate, and maintain the following continuous monitoring systems for each boiler exhaust stack:

~~a. on each boiler monitoring devices for the final combustion chamber temperature, steam production, flue gas temperature at the exit of the acid gas removal equipment, flue~~ Continuous emission monitoring (CEM) systems to monitor stack gas opacity and SO<sub>2</sub>, O<sub>2</sub>, CO, CO<sub>2</sub>, and NO<sub>x</sub> SO<sub>2</sub>, and opacity for each unit. ~~The monitoring devices shall be installed, calibrated and maintained in accordance with the applicable requirements of Chapter 17-2, section 17-2.710, F.A.C., and 40 CFR 60.45, and 40 CFR 60.13, including certification of each device in accordance with 40 CFR Part 60, Appendix B, Performance Specifications and 40 CFR 60.7 The Facility shall be designed to allow installation of an acid gas scrubbing system if such a system should become required by regulation (a)(5). The CEM's (continuous emission monitors) must be installed and operational prior to compliance testing. Re-certification shall be conducted annually from initial certification. Data on monitoring equipment specifications, manufacturer, type, calibration and maintenance needs, and its proposed location after the economizer or in the air pollution control equipment shall be provided to the Department for approval prior to installation.~~

Continuous monitors for SO<sub>2</sub> shall be installed after the acid gas control device for each unit. The systems shall meet the EPA monitoring performance specifications of 40 CFR 60.13 and 40 CFR 60, Appendix B, during initial compliance testing and annually thereafter. Additionally CEM's shall meet the



quality control requirements of 40 CFR 60, Appendix F.

b. CEM data recorded during periods of startup, shutdown, and malfunction shall be reported but excluded from compliance averaging periods for CO, NOx, and opacity.

c. CEM data recorded during periods of startup and shutdown shall be excluded from compliance averaging periods for SO<sub>2</sub>. CEM data recorded during periods of acid gas control device malfunctions shall be excluded from compliance averaging periods for SO<sub>2</sub> provided that the preceding thirty day period, which ends on the last day of malfunction period, meets an average SO<sub>2</sub> emission limit equal to the SO<sub>2</sub> limit specified in conditions IV.A.1. CEM data must be available for 90% of the operating time for this exemption to apply. A malfunction as used in this certification means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

d. An excess emissions report shall be submitted to EPA for every calendar quarter. The report shall include the following:

(1) The magnitude of excess emissions computed in accordance with 40(CFR 60.13(h), any conversion factors used, and the date, and time of commencement and completion of each period of excess emissions (60.6(c)(1)).

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the furnace boiler system. The nature and cause of any malfunction (if known) and the corrective action taken or preventative measures adopted shall also be reported (60.6(c)(2)).

(3) The date and time identifying each period during which the

continuous monitoring system was inoperative except for zero and span checks, and the nature of the system repairs or adjustments (60.6(c)(3)).

(4) When no excess emissions have occurred or the continuous emission monitoring system has not been inoperative, repaired, or adjusted, such information shall be stated in the report (60.6(c)(4)).

(5) The permittee shall maintain a file of all measurements, including continuous emission monitoring systems performance evaluations; all continuous monitoring systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this permit recorded in a permanent form suitable for inspection (60.6(d)).

(6) Excess emissions shall be defined as any applicable period during which the average emissions of CO, NO<sub>x</sub> and/or SO<sub>2</sub>, as measured by the CEMs, exceeds the CO, NO<sub>x</sub> and/or SO<sub>2</sub> maximum emission limit (in ppm) set for each pollutant in Condition XIV.A.1. above.

e. Excess emissions indicated by the CEM systems shall be considered violations of the applicable opacity limit or operating emission limits (in ppm) for the purposes of this certification provided the data represents accurate emission levels and the CEM's do not exceed the calibration drift (as specified in the respective performance specification tests) on the day when initial and subsequent compliance is determined. The burden of proof to demonstrate that the data does not reflect accurate emission readings shall be the responsibility of the permittee.

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

b-g. The Permittee shall provide sampling ports in the air pollution control equipment outlet duct or stack and shall provide access to the sampling ports in accordance with ~~Section 17-2.700~~ Chapter 62-297, F.A.C. Drawings of testing facilities including sampling port locations as required by ~~Section 17-2.700~~ Chapter 62-297, F.A.C. shall be submitted to the Department for approval at least ninety (90) days prior to construction of the sampling ports and stack.

e h. The Permittee shall have a sampling test of the emissions performed by a commercial testing firm within sixty (60) days after achieving the maximum rate at which the boilers will be operated but not later than 180 days of the start of operation of the boilers and annually from the date of testing thereafter. Thirty days' prior notice of the initial sampling test shall be provided to the Southeast District Office and Broward County Environmental Quality Control Board (BCEQCB). Fifteen days' prior notice shall subsequently be provided for annual sampling tests.

#### 4. Reporting

a. ~~Two~~ A copy ~~ies~~ of the results of the emissions compliance tests ~~for the pollutants listed in Condition XIV A.1.e.g.~~ shall be submitted within forty-five day of the ~~last sampling run testing~~ to the DEP Bureau of Air Regulation, New Source Review Section, MS5505, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, the DEP Southeast District Office 400 North Congress Avenue, West Palm Beach, Florida 33416-5425, and the Broward County Environmental Quality Control Board Department of Natural Resources Protection Air Quality Division, 218 Southwest First Avenue, Ft. Lauderdale, Florida 33301.

b. Continuous emission monitoring data shall be reported to the DEP Southeast District, Broward County offices and EPA Region IV on a quarterly basis in accordance with Rile 62-204.800(8), F.A.C. and 40 CFR 60.7. The EPA address for submitting reports is:

Chief, Air Radiation Technology Branch, U.S. EPA-Region IV, 61 Forsyth Street, Atlanta, Georgia 30303.

b c. Excess emissions monitoring for opacity, CO, NO<sub>x</sub>, and SO<sub>2</sub> shall be reported to the Southeast District Office and BCEQCB on a quarterly basis in accordance with Section 17-2.710, F.A.C., and 40 CFR, Part 60, Subsection 60.7.

e d. Notice of anticipated and actual start-up dates of each incinerator boiler shall be submitted to the DEP Southeast District Office and BCEQCB.

## 5. Unconfined Emissions

Proper dust control techniques such as water sprays or chemical wetting agents or other containment method shall be used to control visible unconfined (fugitive) emissions to the outside air at no more than 10% opacity as determined by DEP Method 9 for unconfined resource recovery processes. Proper techniques shall also be used to control such emissions to prevent them from crossing the property line to no more than three (3) minutes (cumulative) in any fifteen (15) minute period as determined by 40 CFR, Part 60, Appendix A, Method 22, with observations being made along the property line. Visible emissions shall not include uncombined water vapor or engine exhausts.

### B. Fuel

The primary fuel for this facility is municipal solid waste (MSW), including the items and materials that fit within the definition of MSW contained in either 40CFR60.51b or Section 403.706 (5), F.A.C., Florida Statutes (1998).

1. Subject to the limitations contained in this permit, the authorized fuels for the facility also include the other solid wastes that are not MSW which are described below. However, the facility shall not burn:

- a. those materials that are prohibited by state or federal law;
- b. those materials that are prohibited by this permit;
- c. those materials that are not authorized by this permit;
- d. lead acid batteries;
- e. hazardous waste;

- f. nuclear waste;
- g. radioactive waste;
- h. sewage sludge;
- I. explosives; and
- j. asbestos containing materials..

2. The fuel may be received either as a mixture or as a single-item stream (segregated load) of discarded materials. If the facility intends to use an authorized fuel that is segregated non-MSW material, the fuel shall be either:

- a. well mixed with MSW in the refuse pit; or
- b. alternately charged with MSW in the hopper.

3. The facility owner/operator shall prepare and maintain records concerning the description and quantities of all segregated loads of non-MSW material which are received and used as fuel at the facility, and subject to a percentage weight limitation, below (6. and 7.). For the purposes of this permit, a segregated load is defined to mean a container or truck that is almost completely or exclusively filled with a single item or homogenous composition of waste material, as determined by visual inspection.

4. To ensure that the facility's fuel does not adversely affect the facility's combustion process or emissions, the facility operator shall:

- a. comply with good combustion operating practices in accordance with 40 CFR 60.53b;
- b. install, operate and maintain continuous emissions monitors (CEMS) for oxygen, carbon monoxide, sulfur dioxide, oxides of nitrogen and particulate control device inlet temperature in accordance with 40 CFR 60.58b; and
- c. record and maintain the CEMS data in accordance with 40 CFR 60.59b.

These steps shall be used to ensure and verify continuous compliance with the

emissions limitations in this permit.

Natural gas may be used as fuel during warm-up, startup, shutdown, and malfunction periods, and at other times when necessary and consistent with good combustion practices.

5. Subject to the conditions and limitations contained in this permit, the following other solid waste may be used as fuel at the facility:

a. Confidential, proprietary or special documents (including but not limited to business records, lottery tickets, event tickets, coupons, credit cards, magnetic tape and microfilm);

b. Contraband which is being destroyed at the request of appropriately authorized local, state or federal governmental agencies, provided that such material is not an explosive, a propellant, a hazardous waste, or otherwise prohibited at the facility. For the purposes of this section, contraband includes but is not limited to drugs, narcotics, fruits, vegetables, plants, counterfeit money, and counterfeit consumer goods;

c. Wood pallets, clean wood, and land clearing debris

d. Packaging materials and containers;

e. Clothing, natural and synthetic fibers, fabric remnants, and similar debris, including but not limited to aprons and gloves; or

f. Rugs, carpets, and floor coverings, but not asbestos containing materials.

7. Subject to the conditions and limitations contained in this permit waste tires may be used as fuel at the facility. The total quantity of waste tires received as segregated loads and burned at the facility shall not exceed 3%, by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. 8. below.

8. Subject to the conditions and limitations contained in this permit, the following other solid waste materials may be used as fuel at the facility (i.e. the following are authorized fuels that are non-MSW material). The total quantity of the following non-MSW material received as segregated loads and burned at the facility shall not exceed 5%.

by weight, of the facility's total fuel. Compliance with this limitation shall be determined by using a rolling 30 day average in accordance with specific condition No. 8. below.

a. Construction and demolition debris.

b. Oil spill debris from aquatic, coastal, estuarine or river environments.

Such items or materials include but are not limited to rags, wipes, and absorbents.

c. Items suitable for human, plant or domesticated animal use, consumption or application where the item's shelf-life has expired or the generator wishes to remove the items from the market. Such items or materials include but are not limited to off-specification or expired consumer products, pharmaceuticals, medications, health and personal care products, cosmetics, foodstuffs, nutritional supplements, returned goods, and controlled substances.

d. Consumer-packaged products intended for human or domesticated animal use or application but not consumption. Such items or materials include but are not limited to carpet cleaners, household or bathroom cleaners, polishes, waxes and detergents.

e. Waste materials that:

- i. are generated in the manufacture of items in categories © or (d), above and are functionally or commercially useless (expired, rejected or spent); or
- ii. are not yet formed or packaged for commercial distribution. Such items or materials must be substantially similar to other items or materials routinely found in MSW.

f. Waste materials that contain oil from:

- I. the routine cleanup of industrial or commercial establishments and machinery; or
- ii. spills of virgin or used petroleum products. Such items or materials include but are not limited to rags, wipes, and absorbents.

g. Used oil and used oil filters. Used oil containing a PCB concentration equal or greater than 50 ppm shall not be burned, pursuant to the limitations of 40 CFR 761.20(e).

h. Waste materials generated by manufacturing, industrial or agricultural activities, provided that these items or materials are substantially similar to items or materials that are found routinely in MSW, subject to prior approval of the Department.

8. Segregated Solid Waste Record Keeping:

The following records shall be made and kept to demonstrate compliance with the segregated non-MSW percentage limitations of specific condition XIV.B.7.

Each segregated load of non-MSW materials, that is subject to the percentage weight limitation of specific conditions B.6. and B.7., which is received for processing shall be documented as to waste description and weight. The weight of all waste materials received for processing shall be measured using the facility truck scale and recorded.

Each day the total weight of segregated tires received shall be computed, and the daily total shall be added to the sum of the daily totals from the previous 29 days. The resultant 30 day total weight of tires shall be divided by the total weight of all waste materials received in the same 30 day period, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 3% limitation.

Each day the total weight of segregated non-MSW materials received that are subject to the 5% restriction shall be computed, and the daily total shall be added to the sum of the daily totals from the previous 29 days. The resultant 30 day total weight of segregated non-MSW materials shall be divided by the total weight of all waste materials received in the same 30 day period, and the resultant number shall be multiplied by 100 to express the ratio in percentage terms. The percentage computed shall be compared to the 5% limitation.

C. Metal Recovery Facility



The metal recovery area will be enclosed in a building adjacent to the existing ash loadout area. All bottom ash is currently quenched with water after leaving each boiler. The resulting bottom ash will be about 20 to 30 percent moisture and will not generate fugitive dust.

D. Electric Utility Steam Generating Unit Actual Emissions

The permittee shall provide the Department within the time period not longer than 10 years following the change, information demonstrating that the physical or operational change did not result in a “representative actual annual emissions” increase in accordance with Rule 62-210.200 (12)(d), F.A.C., and Rule 62-212.400, F.A.C. [[40 CFR 52.21(b)(33), Rule 62-4.070 (3), Rule 62-212.400, and Rule 62-210.200, F.A.C.]

E. Determination of Process Variables

Any other operating parameters (including but not limited to control equipment operating parameters) established during compliance testing and/or inspection that will confirm the proper operation of each emission unit shall be included in the operating permit [Rule 62-297.310 (5), F.A.C. and 62-4.070(3), F.A.C.]

~~C.~~ F. Wastewater Disposal - No change

~~D.~~ G. Water Discharges

1. Surface Water

a. Any discharges from the site stormwater system via the emergency overflow structure which result from an event LESS than a ten-year, 24-hour storm (defined by the U.S. Weather Bureau Technical Paper No.40, or the DOT drainage manual, or similar documents) shall meet applicable State Water Quality Standards, Chapter ~~17-3~~ 62-301, F.A.C., the Standards of Chapter ~~17~~ 62-25, F.A.C., and Chapters 40E-2 and 40E-4, F.A.C.

2. And 3. No change.

E. H. Solid/Hazardous Waste

6. If a temporary hazardous waste storage and transfer facility is built at the site for the isolated, temporary handling of suspected hazardous wastes, ~~The~~ temporary hazardous waste storage and transfer facility shall be designed, constructed and operated in conformance with Section ~~17-30.171~~ 62-730, F.A.C. The design of the facility's operational procedures, personal training program, contingency plans and closure plans shall be submitted to the department and SFWMD for review and approval.

F. I. Operational Safeguards - No change.

G. J. Transmission Lines - No change.

H. K. Noise - No change.

I. L. Potable Water System

The potable water system (wells, pipes, pumps and treatment facilities) shall be designed, constructed and operated in conformance with the applicable provisions of Chapters ~~17-24~~ 62-532 and ~~17-22~~ 62-550, F.A.C. Plans and specifications for these facilities shall be provided to the Southeast District Office and the Broward County Environmental Quality Control Board for review and approval ninety (90) days prior to construction.

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

**DONE AND ENTERED** this \_\_\_\_\_ day of \_\_\_\_\_, 2000, in  
Tallahassee,  
Florida.

**STATE OF FLORIDA,**  
**DEPARTMENT OF ENVIRONMENTAL**  
**PROTECTION**

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KIRBY B. GREEN  
ASSISTANT SECRETARY  
3900 Commonwealth Boulevard  
Tallahassee, FL 32399-3000

- file w/ permits -

## INTEROFFICE MEMORANDUM

**Date:** 12-Jul-2000 02:06pm  
**From:** Hamilton Oven TAL 850/487-0472  
OVEN\_H@A1  
**Dept:**  
**Tel No:**

**Subject:** Corrected Order for N Boward

Attached