Florida Department of
Environmental Protection

Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

May 27, 1994

Mr. Douglas S. Roberts
Hopping Boyd Green & Sams
Post Office Box 6526
Tallahassee, Florida 32314

Re: North Broward Resource Recovery Facility, Ash Processing Facility Modification, PA 86-22

Dear Mr. Roberts:

The Department of Environmental Protection has reviewed the material filed with the requested modification of conditions of certification for the North Broward Resources Recovery Facility. Please have the appropriate personnel respond to the following requests for clarification:

1. Please provide an explanation why only bottom ash is mentioned in the process description, while schematics in appendix D show fly ash is combined with the bottom ash in the plant.

2. The process description also indicates that the plus 4" material is "primarily ferrous metal". Please address the potential for ash carry-over in this size fraction. Ash should not be removed with the recovered ferrous metals.

3. Page 3 of the project description indicates that truck washout water and a portion of the stormwater generated will be routed to the water storage tank and the contact water recycle tank respectively. Please provide verification that each of these units has adequate capacity to handle these wastestreams.

4. A water balance diagram showing inputs and outputs including the sources and uses for wastewater from each of the tanks would be helpful.

5. No mention is made of any containment of wastewater before sump collection or treatment before recycling. As a recycled fluid, is there any blow down required of the recycle water storage tank. If so, how is the blowdown treated/discharged?

6. On the use of recycled ash for landfill cover, it is not clear how the ash used for daily cover stays in place until closure. Also, it is not clear whether the daily cover reuse ash can be used on the ash monofill or is it only intended for raw waste landfills.

7. The flow diagram for the ash recycling processing facility (page B4) shows a baghouse vent coming from the downleg of the ash storage silo but does not show a separate mixer vent. Please indicate if the mixer is directly vented to the baghouses.

8. Please identify equipment shown on page B4 (if any) that is part of the existing ash handling/lime silo system.

9. The calculated baghouse inlet/outlet grain loadings of 3.0/0.004 gr/ACF may be considerably lower than actually experienced, potentially resulting in emissions approaching or exceeding PSD significance levels. Fairly recent BACT determinations for bulk processing of similar materials have been based on outlet grain loadings of about 0.010 gr/ACF. It is obvious that PSD applicability will enter the picture here at about 0.0085 gr/ACF. Consequently, the Department needs additional information to show that the emission estimates provided by Rust Engineering are based either on vendor guarantees or actual data which support the assumed grain loadings.

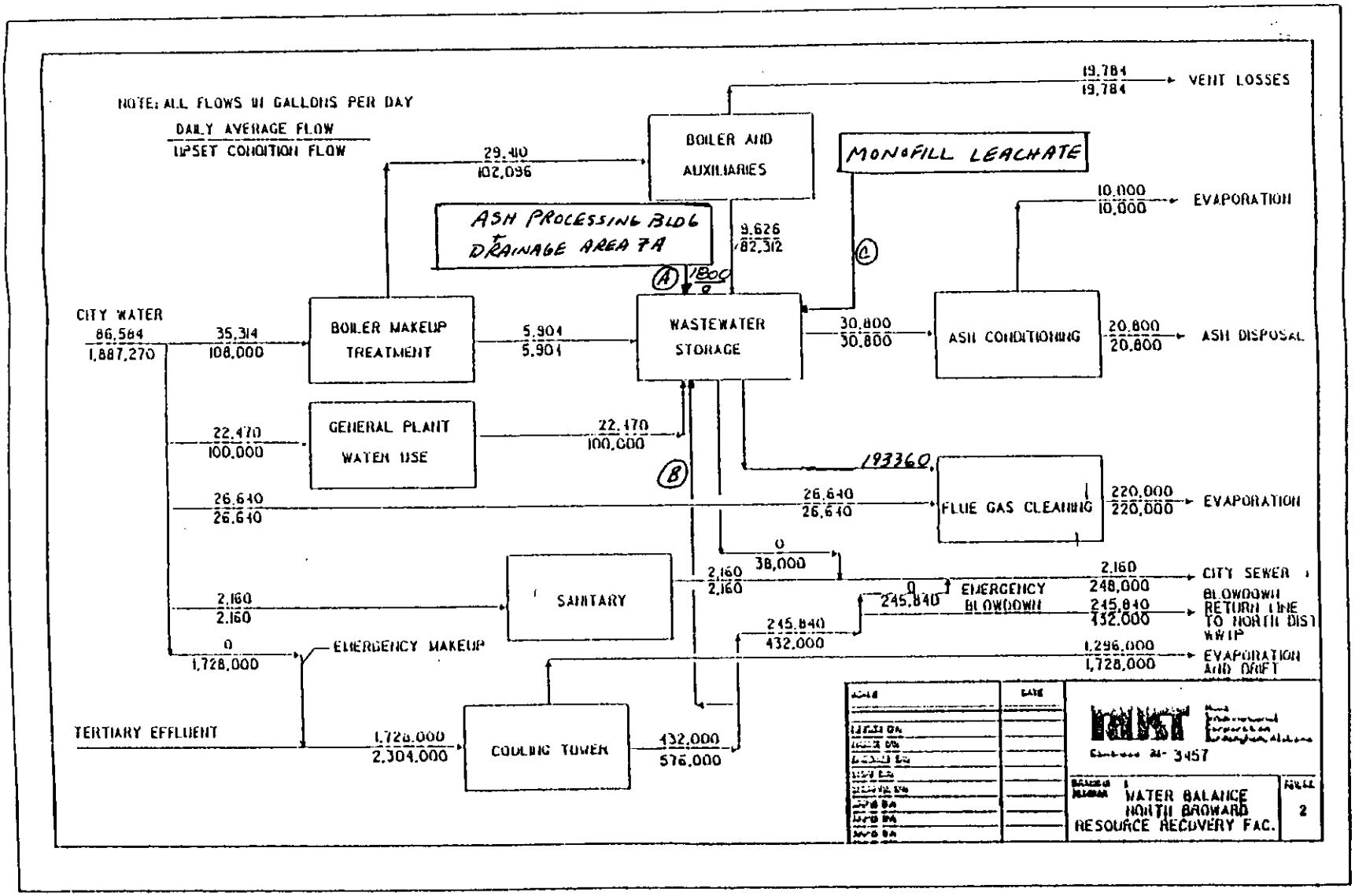
If you have any questions, I may be reached at (904) 487-0472.

Sincerely,

Hamilton S. Oven

Hamilton S. Oven, P.E.
Administrator, Siting
Coordination Office

cc: Martha Neblesiek
Al Rushanan
Raisa Neginsky
Tom Henderson



THE SUM OF STREAMS A,B, AND C WILL EQUATE TO 186,100 GALLONS PER DAY.

STREAM B, THE TERTIARY EFFLUENT SERVES AS AN ADDITIONAL SOURCE OF "MAKE UP" FOR WATER DEMAND BY THE FLUE GAS CLEANING SYSTEM.

FIGURE NO. 1

ENTROPY
ENVIRONMENTALISTS INC.

POST OFFICE BOX 12291
RESEARCH TRIANGLE PARK
NORTH CAROLINA 27709-2291
919-781-3550

STATIONARY SOURCE SAMPLING REPORT

REFERENCE NO. 10347C

WHEELABRATOR NORTH BROWARD, INC.

POMPANO BEACH, FLORIDA

PARTICULATE AND PLUME OPACITY EMISSIONS TESTING

ASH CONDITIONING AND LIME HANDLING SYSTEMS

PERFORMED FOR: WHEELABRATOR ENVIRONMENTAL SYSTEMS, INC.

OCTOBER 10, 1991

FIELD DATA AND RESULTS TABULATION

PLANT: Wheelabrator North Broward, Inc., Pompano Beach, FL

LOCATION: Ash Conditioning System FF Outlet

RUN #	DATE	OPERATOR
ACS-M5-1	10/10/91	William E. Morgan
ACS-M5-2	10/10/91	William E. Morgan
ACS-M5-3	10/10/91	William E. Morgan

		ACS-M5-1	ACS-M5-2	ACS-M5-3
	Run Start Time	1225	1800	1930
	Run Finish Time	1732	1908	2036
	Net Traversing Points	16	16	16
Theta	Net Run Time, Minutes	64.00	64.00	64.00
Dia	Nozzle Diameter, Inches	0.179	0.181	0.179
Cp	Pitot Tube Coefficient	0.840	0.840	0.840
Y	Dry Gas Meter Calibration Factor	0.9903	0.9903	0.9903
Pbar	Barometric Pressure, Inches Hg	29.90	29.90	29.90
Delta-H	Avg. Pressure Differential of Orifice Meter, Inches H_2O	3.53	3.79	3.63
Vm	Volume Of Metered Gas Sample, Dry ACF	64.747	68.893	68.050
tm	Dry Gas Meter Temperature, Degrees F	86	99	101
Vmstd	Volume Of Metered Gas Sample, Dry SCF*	62.473	64.998	63.971
Vlc	Total Volume of Liquid Collected in Impingers & Silica Gel, ml	37.0	42.5	41.5
Vwstd	Volume of Water Vapor, SCF*	1.742	2.000	1.953
$\%H_2O$	Moisture Content, Percent by Volume	2.7	3.0	3.0
Mfd	Dry Mole Fraction	0.973	0.970	0.970
Md	Gas Molecular Weight, lb/lb-Mole, Dry	28.84	28.84	28.84
Ms	Gas Molecular Weight, lb/lb-Mole, Wet	28.54	28.51	28.51
Pg	Flue Gas Static Pressure, Inches H_2O	-10.00	-10.00	-10.00
Ps	Absolute Flue Gas Pressure, Inches Hg	29.16	29.16	29.16
ts	Flue Gas Temperature, Degrees F	87	86	85
Delta-p	Average Velocity Head, Inches H_2O	3.2579	3.2438	3.2303
vs	Flue Gas Velocity, Feet/Second	105.07	104.79	104.48
A	Stack/Duct Area, Square Inches	346.4	346.4	346.4
Qsd	Volumetric Air Flow Rate, Dry SCFM*	13,881	13,833	13,818
Qmsd	Volumetric Air Flow Rate, Dry SCMM*	393	392	391
Qaw	Volumetric Air Flow Rate, Wet ACFM	15,163	15,123	15,079
%I	Isokinetic Sampling Rate, Percent	96.8	98.8	99.6

* 68° F (20° C) -- 29.92 Inches of Mercury (Hg)

(Continued next page)

Ash Handling System Grains /ACF Calculation

RUN #	ACF-DRY	SCF-DRY	SCF-H20	mg Particulate	Grains
1	64.747	62.473	1.742	4	0.061728
2	68.893	64.998	2	3.4	0.052469
3	68.05	63.971	1.953	4.3	0.066358

RUN #	CORR FACTOR SCF to ACF	SCF-WET	ACF-WET	Grains/ACF-WET
1	1.0363997247	64.215	66.552408	0.000927
2	1.0599249208	66.998	71.012849	0.000738
3	1.0637632677	65.924	70.127529	0.000946
			AVERAGE	0.000870

Data from ENTROPY Test Report October 10, 1991.

SCF-WET = SCF-DRY + SCF-H2O
SCF = STANDARD CUBIC FEET
ACF = ACTUAL CUBIC FEET
SCF-H2O = VOLUME OF WATER COLLECTED IN SCF