



Westinghouse
Electric Corporation

Resource Energy Systems
Division

2400 Ardmore Boulevard
Pittsburgh Pennsylvania 15221
(412) 636 5800
WIN 261 5800

EN2482NH

July 12, 1989

RECEIVED

Mr. Clair Fancy
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399

JUL 17 1989

DER-BAQM

Dear Mr. Fancy:

I am writing you regarding air permits No. AC03-145061, AC03-152196, and PSD-FL-129 for the Bay Resource Management Center located in Panama City, Florida.

Certification of the oxygen and the carbon monoxide continuous emission monitors will take place during the week of July 24, 1989. All tests will be conducted by ETS, Inc. of Roanoke, Virginia, in accordance with 40 CFR 60 Appendix B, Performance Specifications 2, 3, and 4.

If you may have any questions, I can be reached at (412) 636-5890 in Pittsburgh and at (904) 785-7933 in Panama City.

Sincerely,

Nancy M. Hirko
Environmental & Quality Engineering

~~Prader~~ BSA
Prader
~~Jim Prader~~
Squad SA
Patty - file

7/18

cc: D. S. Beachler
M. R. Lindsey
E. Middleswart, Florida DER, NW District Office

PM
7-26-89
Atlanta, Ga

File Copy



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

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JUL 31 1989
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4APT/APB-aes

JUL 26 1989

Mr. Clair Fancy, P.E., Chief
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: June 28, 1989, Letter concerning Bay County Resource Management
Center and Modification of PSD-FL-129

Dear Mr. Fancy:

We have reviewed a copy of the June 28, 1989, letter from Mr. David S. Beachler of the Westinghouse Electric Company to you requesting an increase in the allowable lead emission rate contained in Bay County's PSD permit (No. PSD-FL-129). Our review of this letter and information contained therein indicates that the requested permit modification could be approved without triggering the PSD significant increase level for lead.

If you have any questions, please contact Mark Armentrout of my staff at (404) 347-2864.

Sincerely yours,

Wayne J. Aronson

Wayne J. Aronson, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

CHF/ST/PA

Barry Andrews

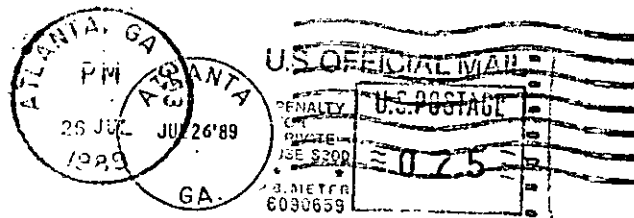
Pradeep Raval

Tom Rogers

Ed Middleswart

} 8-1-89 RAN

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365



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Air-4

Mr. Clair Fancy, P.E., Chief
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400



PM
6-28-89
Pittsburgh, PA



file copy

Westinghouse
Electric Corporation

Resource Energy Systems
Division

2400 Ardmore Boulevard
Pittsburgh Pennsylvania 15221
(412) 636 5800
WIN 261 5800

EN2425DB

June 28, 1989

Ms. Clair Fancy
Department of Environmental Regulation
Air Quality
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399

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JUL 3 1989

DER - BAQM

Dear Clair,

Enclosed is a request to modify the Air Quality Construction Permits AC-03-145061 and AC-03-152196 and PSD permit PSD-FL-129 for the Bay County Resource Management Center located in Panama City, Florida. We would also like to request to extend the expiration date to be open-ended in order for the facility to complete the necessary permit modifications and Continuous Emission Monitor (CEM) certification tests. Nancy Hirko has requested quotes from firms to conduct the CEM certification tests. Testing is anticipated to be conducted in mid to late July, 1989. We will notify the district office as to the final test schedule.

If you have any questions, please call me at 412/636-5806 or Nancy Hirko at 412/636-5890.

Sincerely,

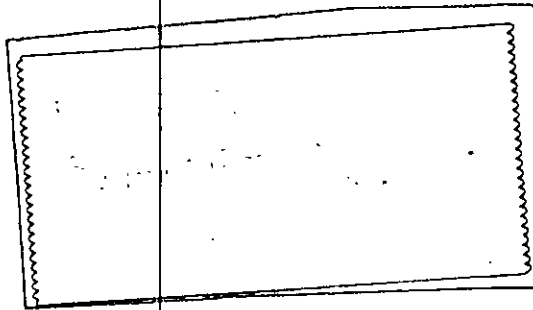
David S. Beachler, Manager
Environmental & Quality Engineering

Enclosure

/lsb

cc: N. M. Hirko
M. Lindsey - Bay County
J. J. Ludwig
J. Preece - Florida DER NW District

copied: P. Raval
B. Andrews
J. Rogals
H. Aronson, EAA
C. Shaver, NPS
CHF/ST



Ms. Clair Fancy
Department of Environmental Regulation
Air Quality
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399



Westinghouse
Electric Corporation
Resource Energy Systems Division
Cost Building
2400 Ardmore Boulevard
Pittsburgh, PA 15221

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Proposed Amendment to the Air Quality Construction Permits
for the Bay County Resource Management Center

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JUL 3 1989

INTRODUCTION

DER - BAQM

Westinghouse has recently completed emission compliance testing at the Bay County Resource Management Center as required by Florida DER permits PSD-FL-129, AC-03-145061, and AC-03-152196. The results of the testing showed the lead emission rates to be 0.041 lb/hr for Unit #1 and 0.084 lb/hr for Unit #2. After thorough examination of data from existing waste-to-energy (WTE) plants using similar particulate emission control equipment, Westinghouse proposes to establish an emission factor and corresponding emission limit that is more realistic than the emission factor developed in 1984, and listed in the permits.

EMISSION FACTORS

In 1984, as part of the PSD and Air Permit Application, Westinghouse proposed an emission factor and corresponding annual lead emission rate based on the facility burning a maximum of 350 TPD MSW and 160 TPD wood waste. The emission factor used was 0.0358 lb/hr per combustor boiler train which corresponded to an annual facility emission rate of 0.31 TPY. The emission factor was developed using only one data point--stack test results from the 200 TPD resource recovery facility located in Gallatin, TN.

Because metals are present in solid waste, some lead and other metals are emitted in the flue gas of the facility. The amount of lead emitted is a function of the quantity of lead in the waste stream, the chemical and physical properties of lead, combustion characteristics of the facility, and the performance of the electrostatic precipitator. Lead in the waste is volatilized during combustion. The lead vapor solidifies in the cooler regions of the heat recovery equipment by condensing on the surface of particulate matter in the gas stream or will form as particulates by self-nucleation. These particulates are then captured in the electrostatic precipitator.

RECEIVED

FOR EACH

DIVISION OF AIR RESOURCE MANAGEMENT

(For Internal Use Only)

ROUTING AND TRANSMITTAL SLIP

ACTION NO

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

Pradeep

Initial

Date

2.

Initial

Date

3.

Initial

Date

4.

Initial

Date

REMARKS:

I don't have any problem with the increased emission rate for lead. The ambient impact remains small.

INFORMATION

Review & Return

Review & File

Initial & Forward

DISPOSITION

Review & Respond

Prepare Response

For My Signature

For Your Signature

Let's Discuss

Set Up Meeting

Investigate & Report

Initial & Forward

Distribute

Concurrence

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FROM:

Tom R.

DATE

7/6/88

PHONE

EMISSION TEST RESULTS

The lead emission test results are given in Table 1. The test results for lead indicate average levels of 0.041 lb/hr for Unit #1 and 0.084 lb/hr for Unit #2. Results from test conducted at the Bay County facility during March 1988 indicate average levels for lead of 0.0915 lb/hr from Unit #2.

Table 1 Summary of Lead and Particulate Emission Levels Measured from the Bay Facility

Pollutant	Test Date	Unit	Run	Emission Rate (lb/hr)	Emission Rate (qr/dscf @ 7%)	Permit Limit (lb/hr)
Lead	4/27/89	1	1	0.016		
Lead	4/27/89	1	2	0.038		
Lead	4/27/89	1	3	<u>0.068</u>		
		Average		0.041		0.041
Lead	4/27/89	2	1	0.097		
Lead	4/27/89	2	2	0.078		
Lead	4/27/89	2	3	<u>0.077</u>		
		Average		0.084		0.041
Lead	3/ /88	2				
		2				
		2				
Particulate	4/26/89	1	1	6.49	0.0363	
Particulate	4/26/89	1	2	2.76	0.0162	
Particulate	4/26/89	1	3	<u>1.12</u>	<u>0.0061</u>	
		Average		3.46	0.0195	6.8
Particulate	4/26/89	2	1	0.78	0.0050	
Particulate	4/26/89	2	2	0.50	0.0029	
Particulate	4/26/89	2	3	0.53	<u>0.0035</u>	
		Average			0.0038	6.8

PROPOSED LEAD EMISSION FACTOR

Westinghouse proposes to use a larger database from existing WTE plants that use ESPs as control devices to develop a representative lead emission factor. Table 2 shows the test results for lead emissions at a number of facilities. As can be seen from Table 2, the lead emission results from the recent tests conducted at the Bay Facility in March and April 1989 fall in line with the test results from other facilities. In addition, the particulate emission results were 0.019 gr/dscf at 7% O₂ and 0.004 gr/dscf at 7% O₂ for Units #1 and #2 respectively (see Table 1). These results are significantly below the permit level of 0.03 gr/dscf. The lead emission tests and particulate emission tests were not conducted simultaneously, however, Westinghouse feels that the performance of the ESPs did not change drastically during the test period (from April 26 to April 27). Therefore, the lead emissions measured were probably more of a function of the lead content in the waste stream than the performance of the ESP.

Table 2 Lead Emissions from MSW Combustion Facilities

FACILITY	CONTROL DEVICE	CONTROLLED EMISSIONS			
		PARTICULATE ⁽⁵⁾ gr/dscf @ 12% CO ₂	LEAD ⁽⁵⁾ lb/ton	LEAD lb/hr	LEAD gr/dscf @ 7% O ₂
Hampton, VA ⁽¹⁾	ESP	0.04	0.088	0.917	NA
Tulsa, OK ⁽¹⁾	ESP-3 field	0.01	0.007	0.11	NA
Bay County, FL (1988)	ESP-3 field	Unit 2 NA	0.009	0.0915	0.0004
Bay County, FL (1989)	ESP-3 field	Unit 1 0.02 Unit 2 0.004	0.004 0.008	0.04 0.08	0.0001 0.0003
Hillsborough, FL ⁽²⁾	ESP	NA	0.048	NA	NA
McKay Bay, FL ⁽³⁾	ESP	0.016	NA	0.3	NA
Oneida, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0002
Cattaragus, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0090
Sheridan Ave, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0007
Occidental, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0008
Oswego, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0004

NA = Not Available

Sources: (1) Municipal Waste Combustion Study: Emission Data Base for MWC, Draft, EPA Contract No. 68-02-3817, Jan. 7, 1987.

(2) CDM, 1984

(3) RTP Consultant Personal Communication, 1989

(4) Resource Recovery Facility Emission Characterization Study, Overview Report, New York DEC, May 1987, Addendum Oct. 24, 1988.

(5) The particulate emission tests were conducted on April 26, 1989 and the lead emission tests were conducted on April 27, 1989.

Westinghouse proposes a new emission factor of 0.1 lb/hr per combustor/boiler train. Table 3 shows the annual lead emissions that would be generated using the emission rate of 0.1 lb/hr while burning 510 tons of MSW per day, 365 days per year.

As can be seen from Table 3, the annual emission rate would increase approximately 0.563 tons from the 1984 PSD permitted levels. The de minimus level for lead is 0.6 tons per year. Therefore, lead emissions would not be affected by PSD regulations or require a new BACT analysis.

Table 3 Annual Lead Emission Rate

Pollutant	<u>1984 PSD Permit</u>		Annual Emissions 350 TPD MSW and 160 Wood Chips	<u>1989 Proposed Lead Emissions</u>		
	Emission Rate (Wood Chips)	Emission Rate (MSW)		Emission Rate 510 TPD MSW	Annual Emissions	Difference
Pb	0 lb/hr	0.0358 lb/hr per combustor	0.313 ton/yr	0.1 lb/hr per combustor	0.876 ton/yr	0.563 ton/yr

PREDICTION OF AIR QUALITY IMPACTS

Attached is the air quality modeling report that was submitted with the permit application in 1984. The increased lead emission rate is 0.563 which is less than the de minimus level of 0.6 TPY. The "worst case" lead emissions were used in the 1984 modeling study. The permitted annual emission rate was 0.313 tons/year relates to:

$$\begin{aligned} & \frac{0.313 \text{ ton}}{\text{year}} \times \frac{2000 \text{ lb}}{\text{ton}} \times \frac{1 \text{ year}}{8760 \text{ hr}} \\ &= \frac{0.0716 \text{ lb}}{\text{hour}} \quad (\text{both units}) \end{aligned}$$

The proposed "worst case" lead annual emission rate is 0.876 tons/year or 0.2 lb/hr (both units).

Therefore, it is estimated the maximum predicted lead concentrations will increase by:

$$\left(\frac{0.2}{0.0716} - 1 \right) \times 100 = 179.3\%$$

Based upon the equation:

$$C(X,0,Z,N) = \frac{Q}{2 u \sigma_y \sigma_z} \times \left[\text{EXP} - \left(\frac{[(z-h)^2]}{2\sigma_z^2} \right) \right]$$

where: C = concentration
Q = emission rate

C corresponds linearly with Q, therefore it is appropriate to ratio the two emission rates and arrive at an equivalent concentration.

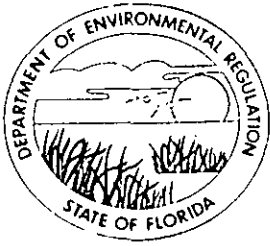
The lead NAAQS value is based on a 3-month average. A 24-hour averaging period value (as presented in Table 4) yields a higher concentration than would be generated for a 3-month period. However, to show a very conservative estimate of the impact of this proposed increase in the lead emission rate, the two values are compared as being for the same averaging period. Even using this very conservative assumption, the predicted impact on the lead NAAQS is very small, <2% of the NAAQS for the facility alone and <15% when considering all other lead sources plus the Bay County Facility.

Table 4

Averaging Time	All Other Sources Max. Predicted Concentrations* (mg/m ³)	Max. Predicted Incremental Concentrations** (mg/m ³)	Total (mg/m ³)	Pb NAAQS (mg/m ³)
24 hour	0.19	0.029	0.219	1.5

* From 1984 Modeling Analysis

** Proposed Value minus 1985 Predicted Value



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

June 22, 1989

Ms. Nancy M. Hirko
Westinghouse RESD, Cost Building
2400 Ardmore Blvd.
Pittsburgh, Pennsylvania 15221

Dear Ms. Hirko:

Re: Bay County Waste-to-Energy Facility's Carbon Monoxide
Continuous Emission Monitor Certification Tests

The Department has received comments from EPA with regards to your letter dated April 20, 1989, concerning the relative accuracy and calibration drift tests for CO CEMS.

Although the 1988 40 CFR 60 Appendix B, Performance Specification for CEMS, requires RA tests, permit PSD-FL-129 for the Bay County WE facility specifies compliance in accordance with the 1987 40 CFR 60 which does not require RA tests for specific NDIR (non-dispersive infrared absorption photometer) CEMS.

The Department will not require RA tests for the Maihak UNOR GN CO NDIR monitor, however, RA tests will be required for the Land Model 9000 NDIR monitor since it does not meet EPA Method 10 specifications (it is an insitu, not an extractive monitor).

A single point calibration drift determination will be allowed for the Land monitor (at the zero point) so long as RA testing is done regularly to ensure the accuracy of the monitor.

Sincerely,

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

CHF/PR

cc: E. Middleswart, NW District
W. Aronson, EPA
J. Pennington, BAQM

EMISSION COMPLIANCE TEST REPORT
FOR THE BAY RESOURCE MANAGEMENT CENTER
BAY COUNTY, FLORIDA

SUBMITTED TO THE
FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

June 2, 1989

Prepared By: David S. Beachler
Manager, Environmental and Quality Engineering

Signature: David S. Beachler

Nancy M. Hirko
Senior Engineer

Signature: Nancy M. Hirko

WESTINGHOUSE ELECTRIC CORPORATION
RESOURCE ENERGY SYSTEMS DIVISION (RES D)
ENVIRONMENTAL AND QUALITY ENGINEERING
2400 ARDMORE BOULEVARD
Pittsburgh, PA 15221

TABLE 1
SAMPLING AND ANALYTICAL METHODS

Pollutant	Sampling Method	Analysis Method	Number of Tests
Particulate Matter	EPA RM 5	EPA RM 5	3 on each train
Visible (opacity)	EPA RM 9		3 on each train - simultaneously with RM 5 runs
HCl	Modified RM 5 0.1 N NaOH in impingers	Ion Chromatography	3 on each train, part of RM 5 runs
Lead	EPA RM 12	Atomic Adsorption	3 on each train
Mercury	EPA RM 101A	Cold Vapor Atomic Adsorption	3 on each train
Beryllium	EPA RM 104	Atomic Adsorption	3 on each train
HF	EPA RM 13B	Specific Ion Electrode	3 on each train
SO ₂	EPA RM 6C	CEM Instrument	3 on each train
NO _x	EPA RM 7E	CEM Instrument	3 on each train
CO	EPA RM 10	CEM Instrument	3 on each train
NMHC/VOC	EPA RM 25A	Flame Ionization Detector	3 on each train

Note: CO₂ and O₂ concentrations were measured during CEM measurements.

TABLE 2
 BAY RESOURCE MANAGEMENT CENTER
 MSW CHARGING RATES

DATE	MSW TONS RECEIVED	100 TON TEST PILES	
		UNIT 1	UNIT 2
4/24/89	556.12		
4/25/89	590.07		
4/26/89	439.45	TONS: 103.0	105.15
4/27/89	440.14	TIME, hrs: 9.1	10.22
4/28/89	490.09		
4/29/89	283.30		
4/30/89	64.65	TPH: 11.32	10.29
5/1/89	584.02		
5/2/89	699.35		
5/3/89	472.57		
SUM:	4619.76		
TIME, hrs:	240		
TPH:	9.62		

MSW FIRING
 RANGE: 9.57 - 11.77 tph

TABLE 3
 SCHEDULE OF COMPLETED COMPLIANCE TESTS
 AND STEAM PRODUCTION RATES - UNIT 1

<u>DATE</u>	<u>TIME</u>	<u>POLLUTANT</u>	<u>RUN</u>	<u>STEAM PRODUCTION RATE, lb/hr</u>
4/24	13:39 - 14:48	HF	1	69,020
4/24	16:09 - 17:25	HF	2	68,270
4/24	18:21 - 19:32	HF	3	68,880
4/25	11:14 - 13:18	Beryllium	1	60,340
4/25	14:25 - 17:18	Beryllium	2	68,630
4/25	19:23 - 21:27	Beryllium	3	68,720
4/26	10:38 - 11:43	Part./HCl	1	67,740
4/26	12:47 - 13:55	Part./HCl	2	67,390
4/26	14:55 - 16:06	Part./HCl	3	67,170
4/26	12:30 - 13:30	CEM	1	65,078
4/26	14:40 - 15:40	CEM	2	66,959
4/26	17:00 - 18:00	CEM	3	67,650
4/26	10:33 - 11:03	Opacity	1	67,740
4/26	12:44 - 13:14	Opacity	2	67,390
4/26	14:52 - 15:19	Opacity	3	67,170
4/27	12:59 - 15:04	Lead	1	69,924
4/27	15:34 - 17:40	Lead	2	68,538
4/27	17:45 - 19:52	Lead	3	69,364
4/28	9:44 - 12:10	Mercury	1	67,968
4/28	12:54 - 15:23	Mercury	2	68,247
4/28	15:53 - 18:05	Mercury	3	68,165
5/3	16:05 - 17:04	CEM	4	66,033
5/3	19:23 - 20:22	CEM	5	67,667
5/3	21:15 - 22:14	CEM	6	68,950

Average: 67,626

TABLE 4
 SCHEDULE OF COMPLETED COMPLIANCE TESTS
 AND STEAM PRODUCTION RATES - UNIT 2

<u>DATE</u>	<u>TIME</u>	<u>POLLUTANT</u>	<u>RUN</u>	<u>STEAM PRODUCTION RATE, lb/hr</u>
4/24	13:27 - 15:38	HF	1	68,090
4/24	16:42 - 17:54	HF	2	67,860
4/24	18:43 - 19:49	HF	3	68,580
4/25	11:57 - 14:05	Beryllium	1	67,950
4/25	14:55 - 17:02	Beryllium	2	68,540
4/25	18:58 - 21:06	Beryllium	3	68,120
4/26	12:57 - 14:04	Part./HCl	1	67,590
4/26	14:54 - 16:00	Part./HCl	2	67,970
4/26	16:47 - 17:55	Part./HCl	3	68,070
4/26	13:17 - 13:48	Opacity	1	67,590
4/26	15:31 - 16:04	Opacity	2	67,970
4/26	16:48 - 17:33	Opacity	3	68,070
4/27	9:47 - 10:46	CEM	1	68,317
4/27	12:15 - 13:14	CEM	2	70,683
4/27	14:30 - 15:29	CEM	3	71,850
4/27	8:54 - 11:00	Lead	1	69,342
4/27	11:40 - 13:40	Lead	2	69,926
4/27	14:20 - 16:30	Lead	3	70,868
4/28	10:08 - 12:16	Mercury	1	67,899
4/28	14:20 - 16:27	Mercury	2	67,094
4/28	17:09 - 19:15	Mercury	3	68,165
Average:				68,597

TABLE 5
 BAY RESOURCE MANAGEMENT CENTER
 EMISSION LIMITATIONS

Pollutant	MSW Emission Limitations		Emission Factors	
	Per Unit lb/hr	Facility lb/hr	Wood lb/ton	MSW lb/ton
PM, PM ₁₀	6.8	13.5	(0.03 gr/dscf)	
CO	92.8	185.6	20.0	3.58
NOx	26.9	53.9	2.8	2.41
SO ₂	35.8	71.5	0.3	3.36
VOC	7.1	14.2	1.7	0.196
Lead	0.04	0.08	0	0.0039
Mercury	0.18	0.36	0	0.0017
Beryllium	5x10 ⁻⁶	1x10 ⁻⁵	0	4.8x10 ⁻⁷
Hydrogen Chloride	61.7	123.3	0	5.8
Sulfuric Acid Mist	1.5	3.0	0	0.14
Fluoride	0.15	0.3	0	0.014

TABLE 6

SUMMARY OF EMISSION DATA UNIT 1

Pollutant	Run	gr/dscf @ 7% O ₂	lb/hr	ppm _{dv} @ 7% O ₂	Permit Limit lb/hr
Particulate	1	0.0363	6.49		6.8
	2	0.0162	2.76		
	3	0.0061	1.12		
	Ave.	0.0195	3.46		
HCl	1		57.85	452.2	61.7
	2		54.01	478.4	
	3		55.47	456.9	
	Ave.		55.78	462.5	
HF	1		0.103	1.6	0.15
	2		0.069	0.8	
	3		0.079	1.1	
	Ave.		0.084	1.2	
CO	1		23.4	228	92.8
	2		19.2	180	
	3		14.8	132	
	Ave.		19.1	181	
SO ₂	1		12.26	53	35.8
	2		14.27	59	
	3		12.85	50	
	Ave.		13.13	54	
NO _x	1		17.24	106	26.9
	2		15.44	90	
	3		15.19	83	
	Ave.		15.96	93	
HC	1		0.52	1.7	7.1
	2		0.10	0.3	
	3		0.01	0.0	
	Ave.		0.21	0.7	
Beryllium	1		3.13x10 ⁻⁶		5x10 ⁻⁶
	2		ND		
	3		ND		
	Ave.		1.04x10 ⁻⁶		
Lead	1		0.016		0.041
	2		0.038		
	3		0.068		
	Ave.		0.041		
Mercury	1		0.0197		0.18
	2		0.020		
	3		0.034		
	Ave.		0.024		

ND = Not Detected; Detection Limit = 5.0x10⁻⁸ lb/hr

TABLE 7

SUMMARY OF EMISSION DATA UNIT 2

Pollutant	Run	gr/dscf @ 7% O ₂	lb/hr	ppm _{dv} @ 7% O ₂	Permit Limit lb/hr
Particulate	1	0.0050	0.78		6.8
	2	0.0029	0.50		
	3	<u>0.0035</u>	<u>0.53</u>		
	Ave.	0.0038	0.60		
HCl	1		59.00	575.0	61.7
	2		60.60	536.7	
	3		<u>59.47</u>	<u>599.6</u>	
	Ave.		59.69	570.4	
HF	1		0.042	0.5	0.15
	2		0.061	0.9	
	3		<u>0.050</u>	<u>0.7</u>	
	Ave.		0.051	0.7	
CO	1		9.4	84	92.8
	2		25.9	252	
	3		<u>24.0</u>	<u>212</u>	
	Ave.		19.8	183	
SO ₂	1		24.99	97	35.8
	2		35.70	147	
	3		<u>34.92</u>	<u>131</u>	
	Ave.		31.87	125	
NO _x	1		25.30	137	26.9
	2		15.08	87	
	3		<u>17.34</u>	<u>91</u>	
	Ave.		19.24	105	
HC	1		0.61	1.7	7.1
	2		0.62	1.9	
	3		<u>0.12</u>	<u>0.4</u>	
	Ave.		0.45	1.3	
Beryllium	1		ND		5x10 ⁻⁶
	2		ND		
	3		<u>ND</u>		
	Ave.		ND		
Lead	1		0.097		0.041
	2		0.078		
	3		<u>0.077</u>		
	Ave.		0.084		
Mercury	1		0.018		0.18
	2		0.022		
	3		<u>0.039</u>		
	Ave.		0.026		

ND = Not Detected; Detection Limit = 5.0x10⁻⁸ lb/hr

TABLE 8

LEAD EMISSIONS FROM MSW COMBUSTION FACILITIES

FACILITY	CONTROL DEVICE	CONTROLLED EMISSIONS			
		PARTICULATE gr/dscf @ 12% CO ₂	lb/ton	lb/ton	LEAD gr/dscf @ 7% O ₂
Hampton, VA ⁽¹⁾	ESP	0.04	0.088	0.917	NA
Tulsa, OK ⁽¹⁾	ESP-3 field	0.01	0.003	0.11	NA
Bay County, FL (1988)	ESP-3 field	Unit 2 NA	0.009	0.0915	0.0004
Bay County, FL (1989)	ESP-3 field	Unit 1 0.02 Unit 2 0.004	0.004 0.008	0.04 0.08	0.0001 0.0003
Hillsborough, FL ⁽²⁾	ESP	NA	0.048	NA	NA
McKay Bay, FL ⁽³⁾	ESP	0.016	NA	0.3	NA
Oneida, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0002
Cattaragus, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0090
Sheridan Ave, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0007
Occidental, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0008
Oswego, NY ⁽⁴⁾	ESP	NA	NA	NA	0.0004

NA = Not Available

Sources: (1) Municipal Waste Combustion Study: Emission Data Base for MWC, Draft, EPA Contract No. 68-02-3817, Jan. 7, 1987.

(2) CDM, 1984

(3) RTP Consultant Personal Communication, 1989

(4) Resource Recovery Facility Emission Characterization Study, Overview Report, New York, DEC, May 1987, Addendum Oct. 24, 1988.

PM
5-23-89
Atlanta, Ga



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

RECEIVED
MAY 25 1989
DER

MAY 22 1989

4APT-AC

Mr. Clair H. Fancy, Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Bay County Resource Management Center
(PSD-FL-129)

Dear Mr. Fancy:

In your letter of May 10, 1989, to Nancy M. Hirko of Westinghouse RESD, you concurred with Ms. Hirko that Relative Accuracy tests as specified in Performance Specification 4 would not be required for the carbon monoxide (CO) continuous emission monitors (CEMs) on Bay County Resource Management Center's Units 1 and 2. The basis for your decision is that their PSD permit (PSD-FL-129) references the 1987 version of 40 CFR Part 60 which does not require Relative Accuracy tests for non-dispersive infrared (NDIR) CO CEMs which meet the specifications of Method 10.

Your interpretation of the 1987 version of Performance Specification 4 is correct with regard to Bay County's Maihak CO CEM but not with regard to their Land Model 9000 CO CEM. The Land Model 9000 does not meet Method 10 specifications because the Land Model 9000 is an insitu type monitor and not an extractive type monitor as specified in Method 10. Therefore, Relative Accuracy tests as specified in Performance Specification 4 should be required for the Land Model 9000 CO CEM.

If you have any questions regarding this letter, please contact Wayne Aronson of my staff at 404/347-2864.

Sincerely yours,

Bruce P. Miller

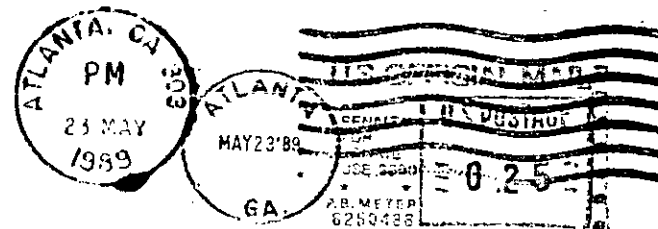
Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides and Toxics
Management Division

cc:
Pradeep Raval
John Brown / Jim Pennington } 5-26-89 RBM
BT/CHF

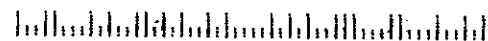
UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

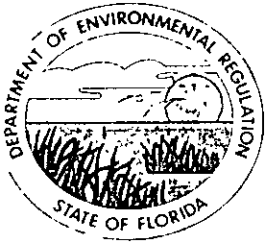
OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, \$300
4APT-AC



Mr. Clair H. Fancy, Deputy Chief
Bureau of Air Quality Management
Florida Department of Environmental
Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400





Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

May 10, 1989

Ms. Nancy M. Hirko
Westinghouse RESD, Cost Building
2400 Ardmore Blvd.
Pittsburgh, Pennsylvania 15221

Dear Ms. Hirko:

Re: Bay County Waste-to-Energy Facility's Carbon Monoxide
Continuous Emission Monitor Certification Tests

The Department has reviewed your letter dated April 20, 1989,
regarding the relative accuracy tests for CO CEMs.

Although the 1988 version of the 40 CFR 60 Appendix B,
Performance Specification for CEMs, requires RA tests, the
construction permit for the above referenced facility
(PSD-FL-129) specifies compliance in accordance with the 1987
version of the 40 CFR 60 which does not require RA tests for
specific CEMs.

The Department hereby concurs that RA tests will not be required
for the Land Model 9000 NDIR and the Maihak UNOR GN CO NDIR gas
analyzers to be installed at the Bay County Waste-to-Energy
Facility.

Sincerely,

C. H. Fancy
Deputy Chief
Bureau of Air Quality
Management

CHF/PR/plm

cc: E. Middleswart, NW District
W. Aronson, EPA
J. Pennington, BAQM