



RTP ENVIRONMENTAL ASSOCIATES INC.®

AIR · WATER · SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East
Green Brook, New Jersey 08812-1909
(www.rtpenv.com)

(732) 968-9600
Fax: (732) 968-9603

August 22, 2001

C. H. Fancy, P.E., Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RECEIVED

AUG 23 2001

BUREAU OF AIR REGULATION

Re: Pinellas County Resource Recovery Facility Capital Replacement Project
PSD Permit PSD-FL-011B and PSD-FL-098B/DEP File No. 1030117-003-AC

Dear Mr. Fancy:

On December 21, 2000, the Department issued a PSD Permit Modification that authorized the construction of the Capital Replacement Project (CRP) at the Pinellas County Resource Recovery Facility (Facility). The CRP was described in detail in the Technical Evaluation and Determination attached to the Department's permit.

With this letter, Pinellas County is formally notifying the Department that CRP construction activities have commenced as of June 1, 2001. The CRP activities require occasional short-term shutdowns of the municipal waste combustor (MWC) units, which would affect facility availability. In the Technical Evaluation and Determination (page 6, second full paragraph), the Department instructed the County to revise the County's estimate of current actual facility emissions upon commencement of CRP construction activities. The estimate was to be performed in a manner consistent with the emissions estimates originally provided to the Department for the two month period of June-July, 2000 (see October 16, 2000 letter from Donald F. Elias to the Department).

Attached please find the revised calculations for the one-year (twelve-month) period from June 2000 through May 2001. The calculations include the most recent stack test data during May 2001. The CEM pollutant emission rates were revised to consider the average flowrate or dioxin stack tests for immediately before (May 2000) and at the end of (May 2001) the one-year period. This is consistent with the Department's requirement to use multiple years of stack test flowrates when available for determining actual annual emission rates for fee purposes for CEM pollutants at Rule 62-213.205(1)(e), Florida Administrative Code (FAC).

Overall MWC availability for the year, which includes periods of downtime for scheduled maintenance as well as the normal outages for malfunctions and repairs, was 86.6% (down from the two-month average of 89.8%). Overall CEM emission averages (in ppm_{dv} corrected to 7% O₂) were similar to the previous two-month estimates, but the average flowrate decreased when the additional year of dioxin stack test data was included. With the

C. H. Fancy, P.E., Chief
 August 22, 2001
 Page 2

decrease in overall unit availability and flowrates, there was a slight decrease in the estimated actual emissions as compared to the original two-month period.

The revised estimates of current actual emissions and the revised estimates of future actual emissions are shown in the following table, which replaces the table set forth on page 6 of the Department's Technical Evaluation and Determination.

Pollutant	Current Actual Emissions (TPY)	Rep. Future Actual Emissions (TPY)	Net Increase (TPY)	PSD Significance (TPY)	Subject to PSD?
PM/PM ₁₀	45	69/59	24/14	25/15	No
SO ₂	84	123	39	40	No
NO _x	1569	1608	39	40	No
CO	93	192	99	100	No
Pb	0.24	0.83	0.59	0.6	No
Hg	0.22	0.31	0.09	0.1	No
MWC Organics Total PCDD/F	9.5 x 10 ⁻⁵	9.8 x 10 ⁻⁵	3.0 x 10 ⁻⁶	3.5 x 10 ⁻⁶	No
MWC Acid Gases HCl & SO ₂	232	271	39	40	No

Also attached are certification pages from the County's Responsible Official and registered Professional Engineer. If you have any questions, please feel free to contact me at 732-968-9600 or Ronald D. Larson of HDR Engineering at 813/282-2398.

Sincerely,
 RTP ENVIRONMENTAL ASSOCIATES, INC.®



Donald F. Elias, Principal

cc: A.Linero/J.Kahn, Florida DEP;
 P.Talley/R.P.Stasis/W.Smith, Pinellas Co.;
 R.Larson, HDR Engineering; D.De, Esq., Landers & Parsons;
 R.Henson/S.Reinhart/J.McIntyre/M.Killeen/T.Porter, Wheelabrator;
 W.Corbin/PCRRF4 Proj.File, RTP

**CALCULATIONS of
CURRENT ACTUAL EMISSIONS
for PINELLAS COUNTY RRF**

June 2000 - May 2001 Data

Information from CEM Systems (Wheelabrator Pinellas Inc.'s June 5, 2001 letter):Average Stack Concentrations (ppmdv at 7% O₂) for June 2000 - May 2001 from CEM data:

NO _x :	(189.65 + 193.02 + 191.38)/3 =	191.35 ppmdv at 7% O ₂
SO ₂ :	(12.0 + 7.03 + 3.03)/3 =	7.35 ppmdv at 7% O ₂
CO:	(23.4 + 18.1 + 14.2)/3 =	18.6 ppmdv at 7% O ₂

June 2000 - May 2001 Operating Rates (percent of available hours):

Unit 1:	453,808 min/(60 min/hr)/(8760 hrs) =	86.34%
Unit 2:	448,836 min/(60 min/hr)/(8760 hrs) =	85.39%
Unit 3:	462,241 min/(60 min/hr)/(8760 hrs) =	87.95%
	Average:	86.56%

Information from Stack Tests:Flowrates (dscfm at 7% O₂) during May 2000 PCDD/F Stack Tests:

Unit 1:	(142,100 dscfm)(20.9%-10.2%)/(20.9%-7%) =	109,386 dscfm at 7% O ₂
Unit 2:	(134,400 dscfm)(20.9%- 9.8%)/(20.9%-7%) =	107,327 dscfm at 7% O ₂
Unit 3:	(118,800 dscfm)(20.9%- 9.6%)/(20.9%-7%) =	96,578 dscfm at 7% O ₂

Flowrates (dscfm at 7% O₂) during May 2001 PCDD/F Stack Tests:

Unit 1:	(122,500 dscfm)(20.9%- 9.3%)/(20.9%-7%) =	102,230 dscfm at 7% O ₂
Unit 2:	(127,600 dscfm)(20.9%-10.2%)/(20.9%-7%) =	98,224 dscfm at 7% O ₂
Unit 3:	(99,250 dscfm)(20.9%- 8.3%)/(20.9%-7%) =	89,968 dscfm at 7% O ₂
	Average:	100,619 dscfm at 7% O ₂

Emission Calculations:Actual Emission Rates (tons/year) for CEM Pollutants:

NO _x :	(191.35 ppmdv)(100619 dscfm)(46 lb/mole)(0.0025956 moles/dscf)(60 min/hr) (8760 hrs/yr)(86.56%)(3 units)/(10 ⁶ ppm)/(2000 lb/ton) =	1569 tons/year
SO ₂ :	(7.35 ppmdv)(100619 dscfm)(64 lb/mole)(0.0025956 moles/dscf)(60 min/hr) (8760 hrs/yr)(86.56%)(3 units)/(10 ⁶ ppm)/(2000 lb/ton) =	84 tons/year
CO:	(18.6 ppmdv)(100619 dscfm)(28 lb/mole)(0.0025956 moles/dscf)(60 min/hr) (8760 hrs/yr)(86.56%)(3 units)/(10 ⁶ ppm)/(2000 lb/ton) =	93 tons/year

Actual Emission Rates (tons/year) for non-CEM Pollutants (see attached table):

PM:	(3.94 lb/hr) (8760 hrs/yr)(86.56%)(3 units)/(2000 lb/ton) =	45 tons/year
Pb:	(0.0207 lb/hr) (8760 hrs/yr)(86.56%)(3 units)/(2000 lb/ton) =	0.24 tons/year
Hg:	(0.0197 lb/hr) (8760 hrs/yr)(86.56%)(3 units)/(2000 lb/ton) =	0.22 tons/year
PCDD/F:	(8.33E-6 lb/hr)(8760 hrs/yr)(86.56%)(3 units)/(2000 lb/ton) =	9.47E-5 tons/year
HCl:	(13.0 lb/hr) (8760 hrs/yr)(86.56%)(3 units)/(2000 lb/ton) =	148 tons/year

Actual Emission Rates (tons/year) for MWC-Specific Pollutants:

MWC Acid Gases:	(84 tons _{SO2} /year)+(148 tons _{HCl} /year) =	232 tons/year
MWC Metals:	-----see PM emission rates above-----	
MWC Organics:	---see PCDD/F emission rate above---	

**CALCULATIONS of
CURRENT ACTUAL EMISSIONS
for PINELLAS COUNTY RRF**

June 2000 - May 2001 Data

1998-2001 Stack Test Measurements (lbs/hr)									
Pollutant	Unit 1		Unit 2			Unit 3			
	May 2000	May 2001	Sept 1999	May 2000	May 2001	Dec 1998	Sept 1999	May 2000	May 2001
PM	0.52	0.24	3.94	0.46	0.30	0.46	1.13	2.47	0.20
Lead	0.00108	0.00722	0.0207	0.000684	0.000596	0.00135	0.00262	0.00994	0.000372
Mercury	0.00588	0.0122	0.00915	0.00293	0.00760	0.0197	0.00374	0.00376	0.00492
PCDD/F	2.12e-07	3.70e-07	3.19e-06	1.18e-06	2.16e-06	8.33e-06	4.18e-06	1.58e-06	1.22e-06
HCl	10.2	5.67	12.5 ^a	7.09	11.0	13.0 ^a	10.2 ^a	5.82	10.9

^aBased on the average HCl concentration (ppmdv at 7% O₂) and the average flowrate and oxygen content during the PCDD/F stack test (dscfm at 7% O₂) for the same unit and year.



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LETTER OF
TRANSMITTAL

239 US Highway 22 East (732) 968-9600 Voice
Green Brook, NJ 08812 (732) 968-9603 Fax

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AUG 23 2001

To: C. H. Fancy, P.E., Chief, Bureau of Air Regulation
Florida Department of Environmental Protection
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Date: August 22, 2001

Project:

From: Donald F. Elias

BUREAU OF AIR REGULATION

We Are Sending You: Attached Under Separate Cover
Via: 1st Class Mail Federal Express Hand Delivery
 United Parcel Service Other _____

Copies	Date	No.	Description
1	8/22/01		RE: Pinellas County Resource Recovery Facility Capital Replacement Project PSD Permit PSD-FL-011B and PSD-FL-098B/DEP File No. 1030117-003-AC.
			Two Copies same as above to: A. Linero and J. Kahn

These are Transmitted as Checked Below:

- For Approval For Review and Comment Resubmit ____ Copies for Approval
- For Your Use Copies Returned After Loan For Signature
- As Requested Returned for Corrections For Signature and Submittal to State

Remarks:

Copy to:

Signed: Carey J. Kesteven

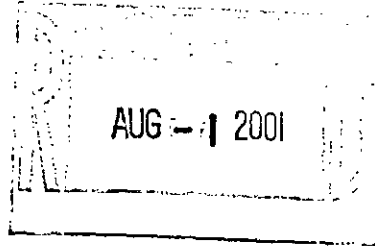
If enclosures are not as noted, kindly notify us at once.



Wheelabrator Pinellas Inc.

A Waste Management Company

3001 110th Avenue North
St. Petersburg, FL 33716-2002
(727) 572-9163
(727) 572-4370 Fax



June 5, 2001

Donald Elias
RTP Environmental
239 US Highway 22 East
Green Brook, New Jersey 08812

Dear Don:

The following tables summarize the average steam flow, NOx, CO, and SO₂ at the Pinellas County Resource Recovery Facility (PCRRF) for all three boilers (Unit 1, 2, and 3):

Boiler	Steam Flow (klbs/hour)	Unit On Line (minutes)	NOx (ppmdv @ 7% O ₂)	SO ₂ (ppmdv @ 7% O ₂)	CO (ppmdv @ 7% O ₂)
Unit 1	208.6	453,808	189.65	12.0	23.4
Unit 2	205.2	448,836	193.02	7.03	18.1
Unit 3	209.1	462,241	191.38	3.03	14.2


Please note these averages are from 00:00 on 6/1/00 to 23:59 on 05/31/01 CEMS time at the PCRRF (CEMS time remains at Eastern Standard Time). This information is from the ESC computer system.

Boiler	Steam Flow (klbs/hour)	Unit On Line (minutes)	NOx (ppmdv @ 7% O ₂)	SO ₂ (ppmdv @ 7% O ₂)	CO (ppmdv @ 7% O ₂)
Unit 1	215.1	40,869	190.03	8.9	12.2
Unit 2	213.9	40,184	197.74	7.80	9.2
Unit 3	217.7	42,547	195.95	4.62	7.4

Please note these averages are from 00:00 on 05/01/01 to 23:59 on 05/31/01. CEMS time at the PCRRF (CEMS time remains at Eastern Standard Time). This information is from the ESC computer system.

If you require any further information or have any questions, please feel free to give me a call at (727) 572-9163 x16.

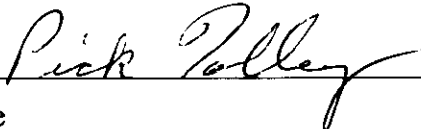

Sincerely,

Janet Mc Intyre 
Janet E. Mc Intyre
EH&S Director

Cc: Ron Larson, HDR



Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Mr. Pick Talley, Director of Utilities, Pinellas County
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Pinellas County Utilities Administration Street Address: 14 South Fort Harrison Avenue, 5th Floor City: Clearwater State: Florida Zip Code: 33756
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (727) 464-3438 Fax: (727) 464-3944
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i> <p style="text-align: center;"> Signature</p> <p style="text-align: center;"> Date</p>

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: R. Peter Stasis Registration Number: 0046220
2. Professional Engineer Mailing Address: Organization/Firm: Pinellas County Utilities Administration Street Address: 14 South Fort Harrison Avenue, 5th Floor City: Clearwater State: Florida Zip Code: 33756
3. Professional Engineer Telephone Numbers: Telephone: (727) 464-3519 Fax: (727) 464-3595

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

R. Stasis

Signature

8/10/01

Date

(seal)

* Attach any exception to certification statement.