Pinellas County
ENVIRONMENT AND INFRASTRUCTURE
Solid Waste

August 6, 2012

Al Linero, P.E.
Office of Permitting and Compliance
Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Project No. 1030117-009-AC
Pinellas County Resource Recovery Facility
CO Modeling Results

Dear Mr. Linero:

Enclosed please find one copy of the final CO modeling report and compact disk that includes all of the air dispersion modeling files for the CO Significant Impact Analyses that the Department requested that the County perform in support of the above-referenced permit modification. The files include the CO modeling files. The meteorological data files have been sent previously and are not included on this disk. We anticipate submitting the BACT analysis for PM 2.5 later this week.

Please contact me at (727) 464-7514 if the Department has any additional questions regarding this submittal.

Sincerely,

Kelsi Oswald

Kelsi Oswald
WTE Program Manager, Division of Solid Waste
Department of Environment and Infrastructure

PLEASE ADDRESS REPLY TO:
Solid Waste Division, 3095 114th Avenue N., St. Petersburg, FL 33716
Phone: (727) 464-7500 www.pinellascounty.org

CO Modeling Report for the Pinellas County Resource Recovery Facility
July 30, 2012

AERMOD air quality dispersion modeling was performed to evaluate the impacts of the CO emissions from the Pinellas County Resource Recovery Facility (PCRRF). This analysis was conducted at the request of the Florida Department of Environmental Protection (FDEP). This CO modeling supplements the analyses that previously were submitted to the FDEP in support of the County's application for a PSD permit modification.

The CO modeling looked at a single stack with a CO emission rate based on a single flue concentration of 100 ppm or 60.94 lb/s per hour. Since the PCRRF has three flues, these values were multiplied by three, which results in a total CO emission rate of 182.82 lb/hr (23.04 g/s). All modeling options were the same as in the original SO_2 and $PM_{2.5}$ modeling report (May 2012).

The results of the modeling analysis for the 1-hr and 8-hr CO AAQS are summarized in Table 1. Modeling concentrations for CO were modeled for the 5 years (2006-2010) of meteorological data from the Tampa International Airport for both standards. The 2008 meteorological data set predicts the maximum concentrations of the 5 years for both 1-hr and 8-hr averaging times. The maximum 1-hr CO concentration is 33.08 $\mu g/m^3$ and it occurs about 150 m from the PCRRF's southwest fence line. The 8-hr CO maximum concentration is 22.66 $\mu g/m^3$ and it occurs along the PCRRF's northeast fence line. The maximum modeled CO 1-hr and 8-hr concentrations remain well below the applicable SILs of 2,000 and 500 $\mu g/m^3$ and, they are well below the ambient air quality standards or 40,000 and 10,000 $\mu g/m^3$, respectively. Consequently, multisource modeling for CO is not required in this case.

Table 1 – Summary of 1-hr CO AERMOD Results

Air Constituent	Averaging Time	AAQS Primary ($\mu g/m^3$)	AAQS Secondary ($\mu g/m^3$)	PSD Monitoring Significance ($\mu g/m^3$)	Significant Impact Levels ($\mu g/m^3$)	PSD Increment Class II Area ($\mu g/m^3$)	CO Concentration H1H ($\mu g/m^3$)	CO Concentration H1H Location	Exceed SIL?	Exceed AAQS?	Exceed PSD?
CO	1-hr	40,000	40,000	—	2000	NA	33.08	145m SW of Fenceline	N	N	NA
CO	8-hr	10,000	10,000	—	500	NA	22.66	NW Fenceline	N	N	NA

H1H ($\mu g/m^3$)

		2006	2007	2008	2009	2010
CO	1-hr	30.98	31.88	33.08	32.51	31.04
CO	8-hr	18.05	16.98	22.66	17.29	16.68

The disk included with this report contains all the air quality dispersion modeling analysis electronic data files used to generate the results presented in this report. These electronic data files include the following and are summarized below. Input files including the meteorological data, building downwash and AERMAP files have been previously submitted and are not included here.

AERMOD Electronic Files for the Modeling Analysis

Input Data File Name	Output Data File Name	Plot File Name	Averaging Period /Pollutant	Receptor Grid File
PIN06CO.INP	PIN06CO.OUT	PIN06-*hr.PLT	1-hr & 8hr, CO	PINELLAS. REC
PIN07CO.INP	PIN07CO.OUT	PIN07-*hr.PLT	1-hr & 8hr, CO	PINELLAS. REC
PIN08CO.INP	PIN08CO.OUT	PIN08-*hr.PLT	1-hr & 8hr, CO	PINELLAS. REC
PIN09CO.INP	PIN09CO.OUT	PIN09-*hr.PLT	1-hr & 8hr, CO	PINELLAS. REC
PIN10CO.INP	PIN10CO.OUT	PIN10-*hr.PLT	1-hr & 8hr, CO	PINELLAS. REC