CITY OF TALLAHASSEE

SITE CERTIFICATION APPLICATION

PURDOM UNIT 8

MARCH 1997

VOLUME 3

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VOLUME DIRECTORY

VOLUME 1

VOLUME DIRECTORY (Cont'd)

VOLUME 1 (Cont'd)

VOLUME DIRECTORY (Cont'd)

VOLUME 2

VOLUME 3

VOLUME DIRECTORY (Cont'd)

VOLUME 4

APPENDIX B

CALCULATIONS OF CURRENT ACTUAL EMISSIONS

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** GT 1

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the short term and annual emission rates associated with Gas Turbine No. 1 based on material balances and AP-42 emission factors for the known hours of operation, natutral gas, and fuel oil usage.

References:

No. 1	COT Generation Logs
No. 2	Calculation: Trace Metal Emissions
No. 3	*FGT Sulfur Content Data*
No. 4	AP-42, Section 3.1, Table 3.1-1, 5th Edition

Knowns/Assumptions:

Fuel Usage Rate (gal/hr) for GT1:	**1,727**	Ref. No. 2
Firing Rate (mmBtu/hr) for GT1:	**228**	Calculation
Lower Heating Value of Distillate Oil (Btu/gal):	**132,000**	Set
Lower Heating Value of Natural Gas (Btu/cf):	**904**	Set
Natural Gas Sulfur Content (gr/100 SCF):	**0.32**	Ref. No. 3
Fuel Oil Sulfur Content (% wt):	**0.31%**	Ref. No. 3
Fuel Oil Density (lb/gal):	**6.75**	Set

Operating Data:

Month/Year	Hours of Operating	Fuel Oil Usage (Gal)	Natural Gas Usage (1000 CF)	Reference Nos.
Aug-94	9.2	0	1646	1
Sep-94	1	0	150	1
Oct-94	2	0	158	1
Nov-94	0	0	0	1
Dec-94	1	0	86	1
Jan-95	3	0	432	1
Feb-95	2.4	0	455	1
Mar-95	1	0	148	1
Apr-95	1	0	134	1
May-95	1.4	0	205	1
Jun-95	12.7	0	1978	1
Jul-95	3.8	0	423	1
Aug-95	40.8	0	6020	1
Sep-95	1.1	0	183	1
Oct-95	5.1	0	733	1
Nov-95	29.1	2782	3424	1
Dec-95	8.4	2415	1377	1
Jan-96	18.2	12501	1010	1
Feb-96	29.7	0	4280	1
Mar-96	8.5	0	683	1
Apr-96	8.6	0	1316	1
May-96	12.8	0	1887	1
Jun-96	12.6	0	2168	1
Jul-96	4.9	0	869	1
2-yr Ave.	**109.15**	**8849**	**14882.5**	**Calculation**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** GT 1

Client: City of Tallahassee
Project: Purdom Unit 8

Calculations: gt1

	Emission Factors (lb/mmBtu)		Hourly Emissions (lb/hr)		Annual Emissions (TPY) - Actual		
Pollutant	**Nat. Gas**	**Fuel Oil**	**Nat. Gas**	**Fuel Oil**	**Nat. Gas**	**Fuel Oil**	**Total**
NOx	0.44	0.698	100.30	159.12	2.96	0.41	3.37
CO	0.11	0.048	25.08	10.94	0.74	0.03	0.77
VOC	0.024	0.017	5.47	3.88	0.16	0.01	0.17
SO2	MB	MB	0.22	68.66	0.00646	0.18	0.18
PM-10	0.0419	0.061	3.82	6.67	0.28	0.04	0.32

MB - Mass Balance Calculation assuming 95 percent of sulfur is converted to SO2, with remaining being converted to other sulfur compounds.
PM-10 emissions estimated from speciation data in AP-42 (40% - NG & 48% - Fuel Oil)

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** GT 2

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the short term and annual emission rates associated with Gas Turbine No. 2 based on material balances and AP-42 emission factors for the known hours of operation, natutral gas, and fuel oil usage.

References:

No. 1	COT Generation Logs
No. 2	Calculation: Trace Metal Emissions
No. 3	FGT Sulfur Content Data
No. 4	AP-42, Section 3.1, Table 3.1-1, 5th Edition

Knowns/Assumptions:

Fuel Usage Rate (gal/hr) for GT2:	**1,727**	Ref. No. 2
Firing Rate (mmBtu/hr) for GT2:	**228**	Calculation
Lower Heating Value of Distillate Oil (Btu/gal):	**132,000**	Set
Lower Heating Value of Natural Gas (Btu/cf):	**904**	Set
Natural Gas Sulfur Content (gr/100 SCF):	**0.32**	Ref. No. 3
Fuel Oil Sulfur Content (% wt):	**0.31%**	Ref. No. 3
Fuel Oil Density (lb/gal):	**6.75**	Set

Operating Data:

Month/Year	Hours of Operating	Fuel Oil Usage (Gal)	Natural Gas Usage (1000 CF)	Reference Nos.
Aug-94	13	0	2359	1
Sep-94	1	0	122	1
Oct-94	1.3	0	205	1
Nov-94	0	0	0	1
Dec-94	1	0	41	1
Jan-95	3.2	0	464	1
Feb-95	2.9	0	528	1
Mar-95	0.9	0	112	1
Apr-95	1	0	134	1
May-95	1	0	140	1
Jun-95	3.6	0	536	1
Jul-95	6.7	0	832	1
Aug-95	40.9	0	6613	1
Sep-95	1.1	0	140	1
Oct-95	2.7	0	462	1
Nov-95	27.6	0	3275	1
Dec-95	5.5	4082	788	1
Jan-96	19.6	0	2188	1
Feb-96	29.8	0	4169	1
Mar-96	8.1	0	643	1
Apr-96	12.5	0	1908	1
May-96	11.8	0	1841	1
Jun-96	10.2	0	1934	1
Jul-96	4.3	0	739	1
2-yr Ave.	**104.85**	**2041**	**15086.5**	**Calculation**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** GT 2

Client: City of Tallahassee
Project: Purdom Unit 8

Calculations: gt2

	Emission Factors (lb/mmBtu)		Hourly Emissions (lb/hr)		Annual Emissions (TPY) - Actual		
Pollutant	**Nat. Gas**	**Fuel Oil**	**Nat. Gas**	**Fuel Oil**	**Nat. Gas**	**Fuel Oil**	**Total**
NOx	0.44	0.698	100.30	159.12	3.00	0.09	3.09
CO	0.11	0.048	25.08	10.94	0.75	0.01	0.76
VOC	0.024	0.017	5.47	3.88	0.16	0.0023	0.17
SO2	MB	MB	0.22	68.66	0.00655	0.04	0.05
PM-10	0.0419	0.061	3.82	6.67	0.11	0.0039	0.12

MB - Mass Balance Calculation assuming 95 percent of sulfur is converted to SO2, with remainder being converted to other sulfur compounds.
PM-10 emissions estimated from speciation data in AP-42 (40% - NG & 48% - Fuel Oil)

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:**
Ckd. By: D. Graziani, PE 3/4/97 **Date:** 11/22/96
Rvd. By: C. Moore **Date:** 12/03/97

OFS No.: 1584.0005.0008
File: EMISS.XLS
Sheet: Unit 5

Client: City of Tallahassee
Project: Purdom Unit 8

Description: *This calculation provides the short term and annual emission rates associated with Unit 5 based on material balances and AP-42 emission factors for the known hours of operation, natutral gas, and fuel oil usage.*

References:

No. 1	COT Generation Logs
No. 2	Calculation: Trace Metal Emissions
No. 3	AP-42, Section 1.4, 5th Edition
No. 4	AP-42, Section 1.3, 5th Edition
No. 5	FGT Sulfur Data

Knowns/Assumptions:

Fuel Usage Rate (gal/hr) for Unit 5:	**2,000**	Calculation
Firing Rate (mmBtu/hr) for Unit 5:	**300**	Set
Higher Heating Value of Residual Oil (Btu/gal):	**150,000**	Ref. No. 3
Higher Heating Value of Natural Gas (Btu/cf):	**1,040**	Approximation (from analytical data)
Natural Gas Sulfur Content (gr/100 SCF):	**0.32**	Ref. No. 5
Weighted Fuel Oil Sulfur Content (% wt):	**1.70%**	Calculation
Fuel Oil Density (lb/gal):	**8.05**	Approximation (from analytical data)

Operating Data:

Month/Year	Fuel Oil Usage (Bbls)	Fuel Oil Sulfur Content (% wt)	Sufur Content Wt'd Ave. (lb - S)*	Natural Gas Usage (1000 CF)	Reference Nos.
Aug-94	0	1.45	0	3260	1
Sep-94	0	1.45	0	23090	1
Oct-94	0	1.45	0	62290	1
Nov-94	0	0.53	0	0	1
Dec-94	0	0.53	0	0	1
Jan-95	0	1.3	0	0	1
Feb-95	0	0.67	0	0	1
Mar-95	0	0.67	0	2704	1
Apr-95	0	1.2	0	31730	1
May-95	0	1.1	0	17517	1
Jun-95	0	1.1	0	0	1
Jul-95	0	0.974	0	72772	1
Aug-95	0	0.956	0	96088	1
Sep-95	0	0.991	0	24548	1
Oct-95	0	0.991	0	7219	1
Nov-95	0	0.903	0	82087	1
Dec-95	0	0.863	0	74483	1
Jan-96	0	1.7	0	85785	1
Feb-96	0	0.5	0	42865	1
Mar-96	0	0.82	0	87763	1
Apr-96	0	1.06	0	3323	1
May-96	107	1.7	615	96317	1
Jun-96	0	1.7	0	35,758	1
Jul-96	0	1.7	0	102507	1
2-yr Ave.	**53.5**	**1.70%**	**615.00**	**476053**	**Calculation**

*** - Pounds of Sulfur were calculated for purposes of developing a weighted sulfur content.**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore
Ckd. By: D. Graziani, PE DJG 3/4/97
Rvd. By: C. Moore

Date:
Date: 11/22/96
Date: 12/03/97

OFS No.: 1584.0005.0008
File: EMISS.XLS
Sheet: Unit 5

Client: City of Tallahassee
Project: Purdom Unit 8

Calculations:

	Emission Factors		Emission Rates - two year average				
	Nat. Gas	Fuel Oil	Hourly Emissions (lb/hr)		Annual Emissions (TPY) - Actual		
Pollutant	Units as defined		Nat. Gas	Fuel Oil	Nat. Gas	Fuel Oil	Total
NOx (1)	286	42	82.50	84.00	68.08	0.05	68.12
CO (1)	41.6	5	12.00	10.00	9.90	0.006	9.91
VOC (1)	1.47	0.76	0.42	1.52	0.29	0.001	0.29
SO2 (1 & 2)	MB	266.9	0.26	533.80	0.22	0.300	0.52
SO3 (1)	NA	9.690	NA	19.38	NA	0.011	0.011
Pb (3)	NA	1.94E-10	NA	0.0582	NA	3.27E-05	3.27E-05
Be (3)	NA	4.2E-12	NA	0.00126	NA	7.08E-07	7.08E-07
Hg (3 & 4)	7.8E-16	3.2E-11	2.34E-07	0.0096	1.93E-07	5.39E-06	5.59E-06
HF (5)	NA	0.16	NA	0.32	NA	1.80E-04	1.80E-04
PM-10(& PM) (1 & 6)	5.2	0.080	1.50	24.00	1.24	0.01	1.25

(1) AP-42 emission factors, units of lb/mmCF for natural gas and lb/kGal for oil.
(2) For natural gas, SO2 emissions based on AP-42 assumption that 100% of the sulfur was converted.
(3) For Fuel Oil, trace metal emissions based on AP-42 emission factors in units of lb/10^12 Btu
(4) For natural gas an EPRI (1994) factor was used
(5) Factor based on fuel analysis of City of Tallahassee oil.
(6) Based on stack test data for oil firing in units of lb/mmBtu.
NA = Not Applicable
MB = Material Balance
Sulfur Content of fuel oil based on as burn fuel oil analysis. Sulfur Content of natural gas based on FGT analytical data.

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** Unit 6

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the short term and annual emission rates associated with Unit 6 based on material balances, teast data, and AP-42 emission factors for the known hours of operation, natutral gas usage, and fuel oil usage.

References:

No. 1	COT Generation Logs
No. 2	Calculation: Trace Metal Emissions
No. 3	AP-42, Section 1.4, 5th Edition
No. 4	AP-42, Section 1.3, 5th Edition
No. 5	FGT Sulfur Data

Knowns/Assumptions:

Fuel Usage Rate (gal/hr) for Unit 6:	**2,000**	Calculation
Firing Rate (mmBtu/hr).for Unit 6:	**300**	Set
Higher Heating Value of Residual Oil (Btu/gal):	**150,000**	Ref. No. 3
Higher Heating Value of Natural Gas (Btu/cf):	**1,040**	*Approximation (from analytical data)*
Natural Gas Sulfur Content (gr/100 SCF):	**0.32**	Ref. No. 5
Weighted Fuel Oil Sulfur Content (% wt):	**1.05%**	Calculation
Fuel Oil Density (lb/gal):	**8.05**	Approximation (from analytical data)
Total Firing Under Soot Blowing (mmBtu/yr):	**447.30**	Ref. No. 1

Operating Data:

Month/Year	Fuel Oil Usage (Bbls)	Fuel Oil Sulfur Content (% wt)	Sufur Content Wt'd Ave. (lb - S)*	Natural Gas Usage (1000 CF)	Reference Nos.
Aug-94	183	1.45	897	82494	1
Sep-94	0	1.45	0	8430	1
Oct-94	0	1.45	0	59683	1
Nov-94	0	0.53	0	0	1
Dec-94	0	0.53	0	0	1
Jan-95	0	1.3	0	0	1
Feb-95	0	0.67	0	0	1
Mar-95	0	0.67	0	0	1
Apr-95	0	1.2	0	39050	1
May-95	0	1.1	0	10897	1
Jun-95	0	1.1	0	0	1
Jul-95	770	0.974	2536	88809	1
Aug-95	163	0.956	527	104573	1
Sep-95	253	0.991	848	27249	1
Oct-95	0	0.991	0	3152	1
Nov-95	0	0.903	0	44200	1
Dec-95	0	0.863	0	50463	1
Jan-96	295	1.7	1696	80979	1
Feb-96	299	0.5	505	42509	1
Mar-96	85	0.82	236	77917	1
Apr-96	0	1.06	0	13354	1
May-96	0	1.7	0	103368	1
Jun-96	0	1.7	0	66899	1
Jul-96	0	1.7	0	69548	1
2-yr Ave.	**1024**	**1.05%**	**7244**	**486787**	**Calculation**

*** - Pounds of Sulfur were calculated for purposes of developing a weighted sulfur content.**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** Unit 6

Client: City of Tallahassee
Project: Purdom Unit 8

Calculations:

	Emission Factors		Emission Rates - two year average				
	Nat. Gas	Fuel Oil	Hourly Emissions (lb/hr)		Annual Emissions (TPY) - Actual		
Pollutant	Units as defined		Nat. Gas	Fuel Oil	Nat. Gas	Fuel Oil	Total
NOx (1)	572	67	165.00	134.00	139.22	1.44	140.66
CO (1)	41.6	5	12.00	10.00	10.13	0.108	10.23
VOC (1)	1.467	0.76	0.42	1.52	0.30	0.016	0.31
SO2 (1 & 2)	MB	164.25	0.26	328.50	0.22	3.532	3.75
SO3 (1)	NA	5.96	NA	11.93	NA	0.128	0.128
Pb (3)	NA	1.94E-10	NA	0.0582	NA	6.26E-04	6.26E-04
Be (3)	NA	4.2E-12	NA	0.00126	NA	1.35E-05	1.35E-05
Hg (3 & 4)	7.8E-16	3.2E-11	2.34E-07	0.0096	1.97E-07	1.03E-04	1.03E-04
HF (5)	NA	0.16	NA	0.32	NA	0.003	0.003
PM-10 (1 & 6)	5	0.048	1.44	14.40	1.22	0.155	1.37
PM-10 (7 & 8)	0	0.161	0.00	0.32	0.00	0.018	0.02

(1) AP-42 emission factors, units of lb/mmCF for natural gas and lb/kGal for oil.
(2) For natural gas, SO2 emissions based on AP-42 assumption that 100% of the sulfur was converted.
(3) For Fuel Oil, trace metal emissions based on AP-42 emission factors in units of lb/10^12 Btu
(4) For natural gas an EPRI (1994) factor was used
(5) Factor based on fuel analysis of City of Tallahassee oil.
(6) Fuel Oil data based on Stack Test (0.048 lb/mmBtu)
(7) Additional PM10 emissions associated with soot blowing (Test Data - 0.209 lb/mmBtu)
(8) Additional PM10 emissions associated with soot blowing (lb/mmBtu) from test data
NA = Not Applicable
MB = Material Balance
Sulfur Content of fuel oil based on as burn fuel oil analysis. Sulfur Content of natural gas based on FGT analytical data.

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** Unit 7

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the short term and annual emission rates associated with Unit 7 based on material balances, teast data, CEMS data, and AP-42 emission factors for the known hours of operation, natutral gas usage, and fuel oil usage.

References:

No. 1	COT Generation Logs
No. 2	Calculation: Trace Metal Emissions
No. 3	AP-42, Section 1.4, 5th Edition
No. 4	AP-42, Section 1.3, 5th Edition
No. 5	Calculation: Unit 7- Continuous Emissions Monitor (CEMS) & Monthly Generation Report (MGR) data
No. 6	FGT Sulfur Content Data

Knowns/Assumptions:

Fuel Usage Rate (gal/hr) for Unit 7:	**4,140**	Calculation
Firing Rate (mmBtu/hr) for Unit 7:	**621**	Set
Higher Heating Value of Residual Oil (Btu/gal):	**150,000**	Ref. No. 3
Higher Heating Value of Natural Gas (Btu/cf):	**1,040**	Approximation (from analytical data)
Natural Gas Sulfur Content (gr/100 SCF):	**0.32**	Ref. No. 6
Weighted Fuel Oil Sulfur Content (% wt):	**1.06%**	Calculation
Fuel Oil Density (lb/gal):	**8.05**	Approximation (from analytical data)
Total Firing Under Soot Blowing (mmBtu/yr):	**8,477.28**	Ref. No. 1

Operating Data:

Month/Year	Fuel Oil Usage (kgal)	Fuel Oil Sulfur Content (% wt)	Sufur Content Wt'd Ave. (lb - S)*	Natural Gas Usage (1000 CF)	Reference Nos.
Aug-94	125.748	1.45%	14677.94	*120125*	5
Sep-94	271.908	1.45%	31738.46	*150492*	5
Oct-94	103.572	1.45%	12089.44	*127718*	5
Nov-94	189.086	1.33%	20226.52	*167291*	5
Dec-94	229.698	0.71%	13162.54	*139865*	5
Jan-95	3.780	1.30%	395.58	*148227*	5
Feb-95	122.304	0.55%	5415.01	*138958*	5
Mar-95	0.000	0.00%	0.00	*79162*	5
Apr-95	5.270	1.20%	509.09	155279	5
May-95	15.752	1.10%	1394.86	207271	5
Jun-95	0.000	0.00%	0.00	153582	5
Jul-95	33.661	0.97%	2639.27	201694	5
Aug-95	187.728	0.97%	14617.02	199229	5
Sep-95	17.201	0.99%	1372.22	82389	5
Oct-95	0.000	0.00%	0.00	203212	5
Nov-95	10.140	0.90%	737.09	169909	5
Dec-95	132.618	0.96%	10226.65	198234	5
Jan-96	38.751	0.83%	2589.13	231836	5
Feb-96	170.159	0.73%	9965.94	171262	5
Mar-96	5.050	0.84%	343.47	212566	5
Apr-96	48.433	1.07%	4159.62	160524	5
May-96	77.904	1.07%	6732.93	187689	5
Jun-96	0.000	0.00%	0.00	223,591	5
Jul-96	0.000	0.00%	0.00	*231499*	5
2-yr Ave.	**894.381**	**1.06%**	**152992.76**	**2030802**	**Calculation**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DG 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** Unit 7

Client: City of Tallahassee
Project: Purdom Unit 8

Calculations: UNIT 7

	Emission Factors		Emission Rates - two year average				
	Nat. Gas	Fuel Oil	Hourly Emissions (lb/hr)		Annual Emissions (TPY) - Actual		
Pollutant	Units as defined		Nat. Gas	Fuel Oil	Nat. Gas	Fuel Oil	Total
NOx (1)	0.23	0.33	142.83	204.930	227.84	23.40	251.24
CO (2)	41.6	5	24.84	20.700	42.24	2.236	44.48
VOC (2)	1.47	0.76	0.88	3.146	1.49	0.340	1.83
SO2 (2&3)	MB	166.81	0.55	690.593	0.93	74.596	75.52
SO3 (1)	NA	6.06	NA	25.072	NA	2.708	2.708
Pb (4)	NA	1.94E-10	NA	0.120	NA	1.30E-02	1.30E-02
Be (4)	NA	4.2E-12	NA	0.003	NA	2.82E-04	2.82E-04
Hg (4 & 5)	7.8E-16	3.2E-11	4.84E-07	0.020	8.24E-07	2.15E-03	2.15E-03
HF (6)	NA	0.16	NA	0.662	NA	0.072	0.072
PM-10 (2 & 7)	5.2	0.033	3.11	20.651	5.28	2.231	7.51
PM-10 (7 & 8)	0	0.064	0.00	0.267	0.00	0.066	0.07

(1) Short Term NOx data based on 0.23 lb/mmBtu - gas & 0.33 lb/mmBtu oil, annual based on Calculation Unit 7 CEMS & MGR
(2) Reference Nos. 3 & 4, gas-lb/mmcf & oil-lb/kgal
(2) For natural gas, SO2 emissions based on AP-42 assumption that 100% of the sulfur was converted.
(4) For Fuel Oil, trace metal emissions based on AP-42 emission factors in units of lb/10^12 Btu
(5) For natural gas an EPRI (1994) factor was used
(6) Factor based on fuel analysis of City of Tallahassee oil.
(7) Fuel Oil data based on Stack Test results (lb/mmBtu)
(8) Additional PM10 emissions associated with soot blowing (lb/mmBtu) from test data

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 11/22/96 **File:** EMISS.XLS
Rvd. By: C. Moore **Date:** 12/03/97 **Sheet:** Unit 7 CEMS & MGR

Client: City of Tallahassee
Project: Purdom Unit 8

Description: Data reduction for the Fuel Oil Usage for the period 8/94 through 7/96
References:
No. 1 FGT Sulfur Content Data
Knowns/Assumptions:

Higher Heating Value of Residual Oil (Btu/gal):	**150,000**	Set
Fuel Oil Density (lb/gal):	**8.05**	Set
Higher Heating Value of Natural Gas (Btu/cf):	**1,040**	Set
Natural Gas Sulfur Content (gr/100 SCF):	**0.32**	Ref. No. 1

Natural Gas Usage Data

Period	MGR GAS (mcf)	CEMS GAS (mcf)	Difference (%)	CEMS NOX-Data (lb/mmBtu)	CEMS NOX-Data (lbs)	Emissions Estimate Basis
Aug-94	120125	ND	N/A	0.23	28733.9	MGR
Sep-94	150492	ND	N/A	0.23	35997.7	MGR
Oct-94	127718	ND	N/A	0.23	30550.1	MGR
Nov-94	167291	*ND*	N/A	*0.23*	40016.0	MGR
Dec-94	139865	ND	N/A	0.23	33455.7	MGR
Jan-95	148227	185459	20	0.23	35455.9	MGR
Feb-95	138958	0	N/A	0.23	33238.8	MGR
Mar-95	79162	0	N/A	0.23	18935.6	MGR
Apr-95	155279	159657.5	3	*0.231*	38356.1	CEMS
May-95	207271	201462.5	-3	*0.231*	48399.4	CEMS
Jun-95	153582	173838.8	12	*0.231*	41763.0	CEMS
Jul-95	201694	181561.9	-11	*0.217*	40974.9	CEMS
Aug-95	199229	188223.8	-6	*0.217*	42478.3	CEMS
Sep-95	82389	72500.23	-14	*0.222*	16738.9	CEMS
Oct-95	203212	205639.1	1	*0.222*	47478.0	CEMS
Nov-95	169909	154860	-10	*0.222*	35754.1	CEMS
Dec-95	198234	180331.2	-10	*0.222*	41634.9	CEMS
Jan-96	231836	204178.3	-14	*0.244*	51812.3	CEMS
Feb-96	171262	159820.2	-7	*0.244*	40556.0	CEMS
Mar-96	212566	193966.6	-10	*0.244*	49221.0	CEMS
Apr-96	160524	153055.3	-5	*0.21*	33427.3	CEMS
May-96	187689	169551	-11	*0.21*	37029.9	CEMS
Jun-96	223591	202355.1	-10	*0.21*	44194.4	CEMS
Jul-96	ND	206782.3	N/A	*0.21*	45161.3	CEMS

Italics represent average values for gas and oil
MGR = monthly generation reports
CEMS = Continuous Emissions Monitoring System

Fuel Oil Usage

Period	lbs	(kGal)	NOx Data (lb/mmBtu)	% Sulfur (wt)	Lbs of Sulfur	Monthly Summaries Period (kgal)	(lbs - S)	(lbs-Nox)
Aug-94	1012271.40	125.748	0.33	1.45	14677.9	125.7	14677.9	6224.5
Sep-94	2188859.40	271.908	0.33	1.45	31738.5	271.9	31738.5	13459.4
Oct-94	833754.60	103.572	0.33	1.45	12089.4	103.6	12089.4	5126.8
Nov-94	1321649.00	164.18	0.33	1.45	19163.9	189.086	20226.5	9359.8
Nov-94	200493.30	24.906	0.33	0.53	1062.6			
Dec-94	365486.10	45.402	0.33	1.45	5299.5	229.698	13162.5	11370.1
Dec-94	1483582.80	184.296	0.33	0.53	7863.0			
Jan-95	30429.00	3.78	0.33	1.3	395.6	3.8	395.6	187.1
Feb-95	984547.20	122.304	0.33	0.55	5415.0	122.3	5415.0	6054.0
Mar-95	0.00	0	0.33	0	0.0	0.0	0.0	0.0
Apr-95	1043.6	0.130	***0.231***	1.2	12.5	5.270	509.1	182.6
Apr-95	6560.6	0.815	***0.231***	1.2	78.7			
Apr-95	5912.2	0.734	***0.231***	1.2	70.9			
Apr-95	6266.8	0.778	***0.231***	1.2	75.2			
Apr-95	6090.6	0.757	***0.231***	1.2	73.1			
Apr-95	6124.8	0.761	***0.231***	1.2	73.5			
Apr-95	6175	0.767	***0.231***	1.2	74.1			
Apr-95	4250.2	0.528	***0.231***	1.2	51.0			
May-95	9384.7	1.166	***0.231***	1.1	103.2	15.752	1394.9	545.8
May-95	14891	1.850	***0.231***	1.1	163.8			
May-95	14881.4	1.849	***0.231***	1.1	163.7			
May-95	20534.1	2.551	***0.231***	1.1	225.9			
May-95	21384.3	2.656	***0.231***	1.1	235.2			

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:**
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Rvd. By: C. Moore **Date:** 12/03/97

OFS No.: 1584.0005.0008
File: EMISS.XLS
Sheet: Unit 7 CEMS & MGR

Client: City of Tallahassee
Project: Purdom Unit 8

Period	lbs	(kGal)	NOx Data (lb/mmBtu)	% Sulfur (wt)	Lbs of Sulfur	Period (kgal)	Period (lbs - S)	Period (lbs-Nox)
May-95	21387.5	2.657	***0.231***	1.1	235.3	15.75217391	1394.855	
May-95	19821.6	2.462	***0.231***	1.1	218.0			
May-95	4520.4	0.562	***0.231***	1.1	49.7			
Jun-95	0	0.000	***0.217***	0	0.0	0	0	0.0
Jul-95	4579.3	0.569	***0.217***	0.974	44.6	33.661	2639.3	1095.7
Jul-95	13242	1.645	***0.217***	0.974	129.0			
Jul-95	13330.5	1.656	***0.217***	0.974	129.8			
Jul-95	17931.2	2.227	***0.217***	0.974	174.6			
Jul-95	23696.1	2.944	***0.217***	0.974	230.8			
Jul-95	19698.2	2.447	***0.217***	0.974	191.9			
Jul-95	18733.8	2.327	***0.217***	0.974	182.5			
Jul-95	18750.6	2.329	***0.217***	0.974	182.6			
Jul-95	18781.1	2.333	***0.217***	0.974	182.9			
Jul-95	18753.6	2.330	***0.217***	0.974	182.7			
Jul-95	23084.2	2.868	***0.217***	0.974	224.8			
Jul-95	25101.5	3.118	***0.217***	0.974	244.5			
Jul-95	24663.5	3.064	***0.217***	0.974	240.2			
Jul-95	24602.5	3.056	***0.217***	0.974	239.6			
Jul-95	6024.4	0.748	***0.217***	0.974	58.7			
Aug-95	10263.4	1.275	***0.217***	0.982	100.8	187.7	14617.0	6110.5
Aug-95	14456.6	1.796	***0.217***	0.982	142.0			
Aug-95	13919.5	1.729	***0.217***	0.982	136.7			
Aug-95	13414.4	1.666	***0.217***	0.982	131.7			
Aug-95	13444.9	1.670	***0.217***	0.982	132.0			
Aug-95	14423	1.792	***0.217***	0.982	141.6			
Aug-95	14801.5	1.839	***0.217***	0.98	145.1			
Aug-95	14035.5	1.744	***0.217***	0.98	137.5			
Aug-95	13954.6	1.733	***0.217***	0.98	136.8			
Aug-95	13954.6	1.733	***0.217***	0.98	136.8			
Aug-95	14890	1.850	***0.217***	0.98	145.9			
Aug-95	25284.6	3.141	***0.217***	0.98	247.8			
Aug-95	26679.3	3.314	***0.217***	0.98	261.5			
Aug-95	26621.3	3.307	***0.217***	0.98	260.9			
Aug-95	26966.2	3.350	***0.217***	0.98	264.3			
Aug-95	26686.9	3.315	***0.217***	0.98	261.5			
Aug-95	26618.2	3.307	***0.217***	0.98	260.9			
Aug-95	26757.1	3.324	***0.217***	0.98	262.2			
Aug-95	26964.6	3.350	***0.217***	0.98	264.3			
Aug-95	26705.2	3.317	***0.217***	0.98	261.7			
Aug-95	26659.4	3.312	***0.217***	0.98	261.3			
Aug-95	26865.4	3.337	***0.217***	0.98	263.3			
Aug-95	25109.1	3.119	***0.217***	0.98	246.1			
Aug-95	8050.8	1.000	***0.217***	0.98	78.9			
Aug-95	1294	0.161	***0.217***	0.964	12.5			
Aug-95	21854.3	2.715	***0.217***	0.964	210.7			
Aug-95	27292.7	3.390	***0.217***	0.964	263.1			
Aug-95	27245.4	3.385	***0.217***	0.964	262.6			
Aug-95	27237.8	3.384	***0.217***	0.964	262.6			
Aug-95	27237.8	3.384	***0.217***	0.964	262.6			
Aug-95	27227.1	3.382	***0.217***	0.964	262.5			
Aug-95	27214.9	3.381	***0.217***	0.964	262.4			
Aug-95	27196.6	3.378	***0.217***	0.964	262.2			
Aug-95	27166.1	3.375	***0.217***	0.964	261.9			
Aug-95	24495.7	3.043	***0.217***	0.964	236.1			
Aug-95	24131	2.998	***0.217***	0.964	232.6			
Aug-95	24442.3	3.036	***0.217***	0.964	235.6			
Aug-95	19187	2.383	***0.217***	0.962	184.6			
Aug-95	18601	2.311	***0.217***	0.962	178.9			
Aug-95	18761.3	2.331	***0.217***	0.962	180.5			
Aug-95	18776.5	2.332	***0.217***	0.962	180.6			
Aug-95	18616.3	2.313	***0.217***	0.962	179.1			
Aug-95	19832.5	2.464	***0.217***	0.962	190.8			
Aug-95	25431.1	3.159	***0.217***	0.962	244.6			
Aug-95	25338	3.148	***0.217***	0.962	243.8			
Aug-95	24094.4	2.993	***0.217***	0.962	231.8			
Aug-95	26184.9	3.253	***0.217***	0.962	251.9			
Aug-95	27491.1	3.415	***0.217***	0.962	264.5			
Aug-95	27198.1	3.379	***0.217***	0.962	261.6			

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore
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Date:
Date: 11/22/96
Date: 12/03/97

OFS No.: 1584.0005.0008
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Client: City of Tallahassee
Project: Purdom Unit 8

Period	lbs	(kGal)	NOx Data (lb/mmBtu)	% Sulfur (wt)	Lbs of Sulfur	Period (kgal)	Period (lbs - S)	Period (lbs-Nox)
Aug-95	27021.1	3.357	0.217	0.962	259.9	187.7	14617.0	6110.5
Aug-95	27100.4	3.367	0.217	0.962	260.7			
Aug-95	27184.4	3.377	0.217	0.962	261.5			
Aug-95	27593.3	3.428	0.217	0.962	265.4			
Aug-95	27353.7	3.398	0.217	0.962	263.1			
Aug-95	27619.3	3.431	0.217	0.962	265.7			
Aug-95	27114.2	3.368	0.217	0.962	260.8			
Aug-95	14229.3	1.768	0.217	0.962	136.9			
Aug-95	683.6	0.085	0.217	0.962	6.6			
Aug-95	8916	1.108	0.217	0.956	85.2			
Aug-95	15588.9	1.937	0.217	0.956	149.0			
Aug-95	27878.7	3.463	0.217	0.956	266.5			
Aug-95	27185.9	3.377	0.217	0.956	259.9			
Aug-95	27111.1	3.368	0.217	0.956	259.2			
Aug-95	27097.4	3.366	0.217	0.956	259.1			
Aug-95	27401	3.404	0.217	0.956	262.0			
Aug-95	27098.9	3.366	0.217	0.956	259.1			
Aug-95	26703.7	3.317	0.217	0.956	255.3			
Aug-95	20761.7	2.579	0.217	0.956	198.5			
Aug-95	8493.3	1.055	0.217	0.956	81.2			
Sep-95	13918	1.729	0.222	0.991	137.9	17.201	1372.2	572.8
Sep-95	16957.6	2.107	0.222	0.991	168.0			
Sep-95	18253.1	2.267	0.222	0.991	180.9			
Sep-95	18041	2.241	0.222	0.991	178.8			
Sep-95	18010.5	2.237	0.222	0.991	178.5			
Sep-95	18009	2.237	0.222	0.991	178.5			
Sep-95	17995.2	2.235	0.222	0.991	178.3			
Sep-95	15518.7	1.928	0.222	0.991	153.8			
Sep-95	1765.5	0.219	0.222	0.991	17.5			
Oct-95	0	0.000	0.222	0	0.0	0	0	0.0
Nov-95	3022.9	0.376	0.222	0.903	27.3	10.140	737.1	337.7
Nov-95	13309.1	1.653	0.222	0.903	120.2			
Nov-95	15866.6	1.971	0.222	0.903	143.3			
Nov-95	15247	1.894	0.222	0.903	137.7			
Nov-95	16757.7	2.082	0.222	0.903	151.3			
Nov-95	14983.1	1.861	0.222	0.903	135.3			
Nov-95	2440	0.303	0.222	0.903	22.0			
Dec-95	3698.8	0.459	0.222	0.91	33.7	132.618	10226.6	4416.2
Dec-95	21736.8	2.700	0.222	0.91	197.8			
Dec-95	27723	3.444	0.222	0.91	252.3			
Dec-95	27976.3	3.475	0.222	0.91	254.6			
Dec-95	19109.2	2.374	0.222	0.91	173.9			
Dec-95	20120.9	2.499	0.222	0.91	183.1			
Dec-95	5401.8	0.671	0.222	0.91	49.2			
Dec-95	8919	1.108	0.222	0.951	84.8			
Dec-95	8500.9	1.056	0.222	0.951	80.8			
Dec-95	8746.6	1.087	0.222	0.951	83.2			
Dec-95	7408.4	0.920	0.222	0.951	70.5			
Dec-95	8868.7	1.102	0.222	0.951	84.3			
Dec-95	8877.8	1.103	0.222	0.951	84.4			
Dec-95	8899.2	1.105	0.222	0.951	84.6			
Dec-95	3724.8	0.463	0.222	0.951	35.4			
Dec-95	12067	1.499	0.222	1.024	123.6			
Dec-95	21526.2	2.674	0.222	1.024	220.4			
Dec-95	17754.1	2.205	0.222	1.024	181.8			
Dec-95	19576.1	2.432	0.222	1.024	200.5			
Dec-95	13899.7	1.727	0.222	1.024	142.3			
Dec-95	13742.5	1.707	0.222	1.024	140.7			
Dec-95	13109.2	1.628	0.222	1.024	134.2			
Dec-95	12921.5	1.605	0.222	1.024	132.3			
Dec-95	17528.3	2.177	0.222	1.024	179.5			
Dec-95	24056.2	2.988	0.222	1.024	246.3			
Dec-95	26027.7	3.233	0.222	1.024	266.5			
Dec-95	26119.3	3.245	0.222	1.024	267.5			
Dec-95	27134	3.371	0.222	1.024	277.9			
Dec-95	26493.1	3.291	0.222	1.024	271.3			
Dec-95	24855.8	3.088	0.222	1.024	254.5			
Dec-95	18576.6	2.308	0.222	1.024	190.2			

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore **Date:** **OFS No.:** 1584.0005.0008
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Client: City of Tallahassee
Project: Purdom Unit 8

Period	lbs	(kGal)	NOx Data (lb/mmBtu)	% Sulfur (wt)	Lbs of Sulfur	Period (kgal)	Period (lbs - S)	Period (lbs-Nox)
Dec-95	20885.3	2.594	0.222	0.956	199.7	132.6	10226.6	4416.2
Dec-95	18900.1	2.348	0.222	0.956	180.7			
Dec-95	21507.9	2.672	0.222	0.956	205.6			
Dec-95	24343.1	3.024	0.222	0.956	232.7			
Dec-95	24265.3	3.014	0.222	0.956	232.0			
Dec-95	24875.6	3.090	0.222	0.956	237.8			
Dec-95	19917.9	2.474	0.222	0.956	190.4			
Dec-95	22437.2	2.787	0.222	0.956	214.5			
Dec-95	24816.1	3.083	0.222	0.956	237.2			
Dec-95	24749	3.074	0.222	0.956	236.6			
Dec-95	19631	2.439	0.222	0.956	187.7			
Dec-95	14577.2	1.811	0.222	0.956	139.4			
Dec-95	12573.6	1.562	0.222	0.956	120.2			
Dec-95	12561.4	1.560	0.222	0.956	120.1			
Dec-95	12558.4	1.560	0.222	0.956	120.1			
Dec-95	12572.1	1.562	0.222	0.956	120.2			
Dec-95	12630.1	1.569	0.222	0.956	120.7			
Dec-95	13992.7	1.738	0.222	0.956	133.8			
Dec-95	13116.9	1.629	0.222	0.956	125.4			
Dec-95	13179.4	1.637	0.222	0.956	126.0			
Dec-95	13525.8	1.680	0.222	0.956	129.3			
Dec-95	13528.9	1.681	0.222	0.956	129.3			
Dec-95	13524.3	1.680	0.222	0.956	129.3			
Dec-95	15036.5	1.868	0.222	0.956	143.7			
Dec-95	16664.6	2.070	0.222	0.863	143.8			
Dec-95	16916.4	2.101	0.222	0.863	146.0			
Dec-95	16666.2	2.070	0.222	0.863	143.8			
Dec-95	16602.1	2.062	0.222	0.863	143.3			
Dec-95	17343.7	2.154	0.222	0.863	149.7			
Dec-95	20621.4	2.562	0.222	0.863	178.0			
Dec-95	17854.9	2.218	0.222	0.863	154.1			
Dec-95	18610.2	2.312	0.222	0.863	160.6			
Dec-95	1489.3	0.185	0.222	0.863	12.9			
Jan-96	4828	0.600	0.244	0.83	40.1	38.751	2589.1	1418.3
Jan-96	25196.1	3.130	0.244	0.83	209.1			
Jan-96	26877.7	3.339	0.244	0.83	223.1			
Jan-96	24105	2.994	0.244	0.83	200.1			
Jan-96	23714.4	2.946	0.244	0.83	196.8			
Jan-96	19046.6	2.366	0.244	0.83	158.1			
Jan-96	20326.9	2.525	0.244	0.83	168.7			
Jan-96	25064.9	3.114	0.244	0.83	208.0			
Jan-96	26671.7	3.313	0.244	0.83	221.4			
Jan-96	26688.4	3.315	0.244	0.83	221.5			
Jan-96	25792.7	3.204	0.244	0.83	214.1			
Jan-96	24945.8	3.099	0.244	0.83	207.1			
Jan-96	13661.6	1.697	0.244	0.83	113.4			
Jan-96	11639.8	1.446	0.244	0.83	96.6			
Jan-96	9659.1	1.200	0.244	0.83	80.2			
Jan-96	3338.7	0.415	0.244	0.83	27.7			
Jan-96	386.1	0.048	0.244	0.83	3.2			
Feb-96	7406.8	0.920	0.244	0.8	59.3	170.159	9965.9	6227.8
Feb-96	23278	2.892	0.244	0.8	186.2			
Feb-96	23647.3	2.938	0.244	0.8	189.2			
Feb-96	21431.6	2.662	0.244	0.8	171.5			
Feb-96	21048.6	2.615	0.244	0.8	168.4			
Feb-96	19356.4	2.405	0.244	0.8	154.9			
Feb-96	21260.7	2.641	0.244	0.8	170.1			
Feb-96	19437.2	2.415	0.244	0.8	155.5			
Feb-96	28080.1	3.488	0.244	0.8	224.6			
Feb-96	25154.9	3.125	0.244	0.8	201.2			
Feb-96	28237.3	3.508	0.244	0.8	225.9			
Feb-96	26506.9	3.293	0.244	0.8	212.1			
Feb-96	26628.9	3.308	0.244	0.8	213.0			
Feb-96	22861.4	2.840	0.244	0.8	182.9			
Feb-96	20751.1	2.578	0.244	0.8	166.0			
Feb-96	20770.9	2.580	0.244	0.8	166.2			
Feb-96	20761.7	2.579	0.244	0.8	166.1			
Feb-96	20758.7	2.579	0.244	0.8	166.1			

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: C. Moore DJB 3/4/97
Ckd. By: D. Graziani, PE
Rvd. By: C. Moore

Date:
Date: 11/22/96
Date: 12/03/97

OFS No.: 1584.0005.0008
File: EMISS.XLS
Sheet: Unit 7 CEMS & MGR

Client: City of Tallahassee
Project: Purdom Unit 8

Period	lbs	(kGal)	NOx Data (lb/mmBtu)	% Sulfur (wt)	Lbs of Sulfur	Period (kgal)	Period (lbs - S)	Period (lbs-Nox)
Feb-96	26705.2	3.317	*0.244*	0.8	213.6	170.16	9965.94	6227.8
Feb-96	28049.6	3.484	*0.244*	0.8	224.4			
Feb-96	29171.1	3.624	*0.244*	0.8	233.4			
Feb-96	29131.4	3.619	*0.244*	0.8	233.1			
Feb-96	29189.4	3.626	*0.244*	0.8	233.5			
Feb-96	27451.4	3.410	*0.244*	0.8	219.6			
Feb-96	21039.5	2.614	*0.244*	0.74	155.7			
Feb-96	21201.2	2.634	*0.244*	0.74	156.9			
Feb-96	21402.6	2.659	*0.244*	0.74	158.4			
Feb-96	21160	2.629	*0.244*	0.74	156.6			
Feb-96	17130	2.128	*0.244*	0.74	126.8			
Feb-96	28327.3	3.519	*0.244*	0.74	209.6			
Feb-96	28910.2	3.591	*0.244*	0.74	213.9			
Feb-96	27390.4	3.403	*0.244*	0.74	202.7			
Feb-96	26009.4	3.231	*0.244*	0.74	192.5			
Feb-96	24268.3	3.015	*0.244*	0.74	179.6			
Feb-96	23564.9	2.927	*0.244*	0.74	174.4			
Feb-96	27892.4	3.465	*0.244*	0.74	206.4			
Feb-96	27817.6	3.456	*0.244*	0.74	205.9			
Feb-96	27889.3	3.465	*0.244*	0.74	206.4			
Feb-96	27993.1	3.477	*0.244*	0.74	207.1			
Feb-96	22211.4	2.759	*0.244*	0.74	164.4			
Feb-96	20813.6	2.586	*0.244*	0.74	154.0			
Feb-96	24869.5	3.089	*0.244*	0.74	184.0			
Feb-96	29099.4	3.615	*0.244*	0.74	215.3			
Feb-96	28847.6	3.584	*0.244*	0.74	213.5			
Feb-96	25421.9	3.158	*0.244*	0.74	188.1			
Feb-96	26227.6	3.258	*0.244*	0.74	194.1			
Feb-96	25113.7	3.120	*0.244*	0.74	185.8			
Feb-96	15317.2	1.903	*0.244*	0.74	113.3			
Feb-96	13991.2	1.738	*0.244*	0.5	70.0			
Feb-96	14304	1.777	*0.244*	0.5	71.5			
Feb-96	14488.7	1.800	*0.244*	0.5	72.4			
Feb-96	14511.6	1.803	*0.244*	0.5	72.6			
Feb-96	14455.1	1.796	*0.244*	0.5	72.3			
Feb-96	14481	1.799	*0.244*	0.5	72.4			
Feb-96	15723.1	1.953	*0.244*	0.5	78.6			
Feb-96	25515	3.170	*0.244*	0.5	127.6			
Feb-96	23331.4	2.898	*0.244*	0.5	116.7			
Feb-96	23348.2	2.900	*0.244*	0.5	116.7			
Feb-96	22647.8	2.813	*0.244*	0.5	113.2			
Feb-96	15988.6	1.986	*0.244*	0.5	79.9			
Mar-96	248.7	0.031	*0.244*	0.94	2.3	5.050	343.5	184.8
Mar-96	8072.1	1.003	*0.244*	0.92	74.3			
Mar-96	1724.3	0.214	*0.244*	0.92	15.9			
Mar-96	11024.8	1.370	*0.244*	0.82	90.4			
Mar-96	19032.9	2.364	*0.244*	0.82	156.1			
Mar-96	552.4	0.069	*0.244*	0.82	4.5			
Apr-96	134287.4	16.682	*0.210*	1.08	1450.3	48.433	4159.6	1525.6
Apr-96	255595.6	31.751	*0.210*	1.06	2709.3			
May-96	226933.2	28.190	*0.210*	1.08	2450.9	77.904	6732.9	2454.0
May-96	400192	49.713	*0.210*	1.07	4282.1			
Jun-96	0	0.000	*0.210*	0	0.0	0.000	0.0	0.0
Jul-96	0	0.000	*0.210*	0	0.0	0.000	0.0	0.0

Note: There was no fuel oil usage in Unit 7 in June or July, 1996.

APPENDIX C

SUMMARY OF EMISSION RATES USED IN MODELLING

SUPPORTING CALCULATIONS

TITLE V EMISSION FACTORS - FCG
EMISSION FACTORS WORKSHOP VERSION 3.1

SIGNIFICANT IMPACT

Future Emis (yr 2000) - Current Actual

	CURRENT ACTUAL PERIOD	UNIT 1-4 SHEET #	FUTURE	-CURRENT	=(g/s)	UNIT 5 SHEET #	FUTURE	-CURRENT	(g/s)	UNIT 6 SHEET #	FUTURE	-CURRENT	(g/s)	UNIT 7 SHEET #	FUTURE	-CURRENT	(g/s)
SO2 SHORT	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 6	0.00	49.18	-49.18	NO - 6	0.00	49.18	-49.18	4 - 6	146.45	146.45	0.00
SO2 LONG	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 5	0.00	0.01	-0.01	NO - 5	0.00	0.11	-0.11	3 - 5	2.30	2.17	0.12
PM SHORT	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 6	0.00	4.73	-4.73	NO - 6	0.00	4.73	-4.73	4 - 6	9.79	9.79	0.00
PM LONG	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 5	0.00	0.04	-0.04	NO - 5	0.00	0.04	-0.04	3 - 5	0.24	0.22	0.03
NO2 LONG	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 5	0.00	1.96	-1.96	NO - 5	0.00	4.05	-4.05	3 - 5	13.18	7.23	5.95
CO SHORT	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 6	0.00	1.26	-1.26	NO - 6	0.00	1.26	-1.26	4 - 6	2.61	2.61	0.00

Note: Long term Emission rates were based on Scenarios
The Scenario which produced the highest emissions was selected
This worst case selection process may result it some units having zero emissions in the Long term analysis.

NO = Not Operating

SIGNIFICANT IMPACT

Future Emis (yr 2000) - Current Actual

	CURRENT ACTUAL PERIOD	UNIT GT1 SHEET #	FUTURE -CURRENT		(g/s)	UNIT GT2 SHEET #	FUTURE -CURRENT		(g/s)	UNIT 8 SHEET #	(g/s)	UNIT Cooling Tower	(g/s)	AUXILARY BOILER SHEET #	(g/s)
SO2 SHORT	Aug94Jul96	4 - 6	1.47	11.76	-10.29	4 - 6	1.47	11.76	-10.29	4	7.82	NA	NA	NA**	NA
SO2 LONG	Aug94Jul96	There is only info on the			0.00	5 - 5(a)	0.01	0.01	0.00	3	0.00	NA	NA	3	2.89E-04
PM SHORT	Aug94Jul96	4 - 6	1.09	1.09	0.00	4 - 6	1.09	1.09	NA	4	2.14		0.30	NA**	NA
PM LONG	Aug94Jul96	combined operation of			0.00	5 - 5(a)	0.01	0.01	0.00	3	1.14		0.30	3	2.99E-03
NO2 LONG	Aug94Jul96	GT 1&2 see GT2 column			0.00	5 - 5(a)	0.19	0.19	0.00	3	0.00	NA	NA	3	6.75E-02
CO SHORT	Aug94Jul96	4 - 6	1.38	1.38	0.00	4 - 6	1.38	1.38	NA	4	14.34	NA	NA	NA**	NA

(a) GT 1 and GT 2 are assumed to operate at the current utilization in the futrure.

** aux Boiler will never operate with the other steam units (unit 7 & 8) so it is not included in any "short term" Modelling

NO = Not Operating

NO = Not Operating

MONITORING EXEMPTION

EMISSION RATES BASED ON:

Future Emis (yr 2000) - Current Actual

	CURRENT ACTUAL PERIOD	UNIT 1-4				UNIT 5				UNIT 6				UNIT 7			
		SHEET #	FUTURE	-CURRENT	=(g/s)	SHEET #	FUTURE	-CURRENT	(g/s)	SHEET #	FUTURE	-CURRENT	(g/s)	SHEE	FUTURE	-CURRENT	(g/s)
PM SHORT	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 6	0.00	4.73	-4.73	NO - 6	0.00	4.73	-4.73	4 - 6	9.79	9.79	0.00
CO SHORT	Aug94Jul96	NO-NO	0.00	0.00	0.00	NO - 6	0.00	1.26	-1.26	NO - 6	0.00	1.26	-1.26	4 - 6	2.61	2.61	0.00

MONITORING EXEMPTION

EMISSION RATES BASED ON:

Future Emis (yr 2000) - Current Actual

	CURRENT ACTUAL PERIOD	UNIT GT1				UNIT GT2				UNIT 8		UNIT Cooling Tower		AUXILARY BOILER	
		SHEE	FUTURE -CURRENT		(g/s)	SHEET #	FUTURE -CURRENT		(g/s)	SHEET #	(g/s)		(g/s)	SHEET #	(g/s)
PM SHORT	Aug94Jul96	4 - 6	1.09	1.09	0.00	4 - 6	1.09	1.09	0.00	4	2.14	4	0.30	NA**	NA
CO SHORT	Aug94Jul96	4 - 6	1.38	1.38	0.00	4 - 6	1.38	1.38	0.00	4	14.34	NA	NA	NA**	NA

** aux Boiler will never operate with the other steam units (unit 7 & 8) so it is not included in any "short term" Modelling

NO = Not Operating

Summary of Emission rates used in modelling

PSD CLASS II

Future Emis (yr 2000) - Baseline Actual

	BASELINE PERIOD	UNIT 1				UNIT 2				UNIT 3				UNIT 4			
		SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)
SO2 SHORT	1976-1977	O - NO	0.00	0.00	0.00	O - NO	0.00	39.88	-39.88	NO - 2	0.00	39.88	-39.88	NO - 2	0.00	39.88	-39.88
SO2 LONG	1976-1977	O - NO	0.00	0.00	0.00	NO - 2	0.00	0.31	-0.31	NO - 1	0.00	0.84	-0.84	NO - 1	0.00	0.79	-0.79
PM SHORT	1976-1977	O - NO	0.00	0.00	0.00	NO - 1	0.00	1.81	-1.81	NO - 2	0.00	1.81	-1.81	NO - 2	0.00	1.81	-1.81
PM LONG	1976-1977	O - NO	0.00	0.00	0.00	NO - 2	0.00	0.01	-0.01	NO - 1	0.00	0.04	-0.04	NO - 1	0.00	0.04	-0.04
NO2 LONG	1986-1987	O - NO	0.00	0.00	0.00	NO - 1	0.00	0.00	0.00	NO - 1	0.00	0.00	0.00	NO - 1	0.00	0.00	0.00

PSD CLASS II

Future Emis (yr 2000) - Baseline Actual

	BASELINE PERIOD	UNIT 5				UNIT 6				UNIT 7				UNIT GT1			
		SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)
SO2 SHORT	1976-1977	NO - 2	0.00	104.04	-104.04	NO - 2	0.00	104.04	-104.04	4 - 2	146.45	215.37	-68.92	4 - 2	1.47	11.76	-10.29
SO2 LONG	1976-1977	NO - 1	0.00	22.66	-22.66	NO - 1	0.00	26.08	-26.08	3 - 1	2.30	97.68	-95.39	see note below			0.00
PM SHORT	1976-1977	NO - 2	0.00	4.73	-4.73	NO - 2	0.00	4.73	-4.73	4 - 2	9.79	9.79	0.00	4 - 2	1.09	1.09	0.00
PM LONG	1976-1977	NO - 1	0.00	1.04	-1.04	NO - 1	0.00	1.19	-1.19	3 - 1	0.00	4.46	-4.46	see note below			0.00
NO2 LONG	1986-1987	NO - 1	0.00	0.52	-0.52	NO - 1	0.00	1.25	-1.25	3 - 1	13.18	1.20	11.98	see note below			0.00

Note: GT 1&2 long term emission rates are a combination of the two units and are presented in the GT2 column.

* For GT 1&2 Current and Future long term emissions are based on Current Utilization factor
* (this is an assumption not a permit condition)

** aux Boiler will never operate with the other units so it is not included in any "short term" Modelling

NO = Not Operating

PSD CLASS II

Future Emis (yr 2000) - Baseline Actual

	BASELINE PERIOD	UNIT GT2 SHEET #	FUTURE	BASELINE	=(g/s)	UNIT 8 SHEET #	(g/s)	UNIT Cooling Tower	(g/s)	AUXILARY BOILER SHEET #	(g/s)
SO2 SHORT	1976-1977	4 - 2	1.47	11.76	-10.29	4	7.82	NA	NA	NA**	NA
SO2 LONG	1976-1977	5* - 1	0.01	0.04	-0.03	3	0.00	NA	NA	3	2.89E-04
PM SHORT	1976-1977	4 - 2	1.09	1.09	NA	4	2.14	4.00	0.30	NA**	NA
PM LONG	1976-1977	5* - 1	0.01	0.006	0.01	3	2.30	4.00	0.30	3	2.99E-03
NO2 LONG	1986-1987	5* - 1	0.19	0.04	0.14	3	0.00	NA	NA	3	6.75E-02

PSD CLASS I

Future Emis (yr 2000) - Baseline

	BASELINE PERIOD	UNIT 1				UNIT 2				UNIT 3				UNIT 4			
		SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)
SO2 SHORT	1976-1977	O - NO	0.00	0.00	0.00	NO - 2	0.00	39.88	-39.88	NO - 2	0.00	39.88	-39.88	NO - 2	0.00	39.88	-39.88
SO2 LONG	1976-1977	O - NO	0.00	0.00	0.00	NO - 1	0.00	0.31	-0.31	NO - 1	0.00	0.84	-0.84	NO - 1	0.00	0.79	-0.79
PM SHORT	1976-1977	O - NO	0.00	0.00	0.00	NO - 2	0.00	1.81	-1.81	NO - 2	0.00	1.81	-1.81	NO - 2	0.00	1.81	-1.81
PM LONG	1976-1977	O - NO	0.00	0.00	0.00	NO - 1	0.00	0.01	-0.01	NO - 1	0.00	0.04	-0.04	NO - 1	0.00	0.04	-0.04
NO2 LONG	1986-1987	O - NO	0.00	0.00	0.00	O - NO	0.00	0.00	0.00	O - NO	0.00	0.00	0.00	O - NO	0.00	0.00	0.00

PSD CLASS I

Future Emis (yr 2000) - Baseline

	BASELINE PERIOD	UNIT 5				UNIT 6				UNIT 7				UNIT GT1			
		SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)	SHEET #	FUTURE	-BASELINE	=(g/s)
SO2 SHORT	1976-1977	NO - 2	0.00	104.04	-104.04	NO - 2	0.00	104.04	-104.04	4 - 2	146.45	215.37	-68.92	4 - 2	1.47	11.76	-10.29
SO2 LONG	1976-1977	NO - 1	0.00	22.66	-22.66	NO - 1	0.00	26.08	-26.08	3 - 1	2.30	97.68	-95.39	see note below			0.00
PM SHORT	1976-1977	NO - 2	0.00	4.73	-4.73	NO - 2	0.00	4.73	-4.73	4 - 2	9.79	9.79	0.00	4 - 2	1.09	1.09	0.00
PM LONG	1976-1977	NO - 1	0.00	1.04	-1.04	NO - 1	0.00	1.19	-1.19	3 - 1	0.00	4.46	-4.46	see note below			0.00
NO2 LONG	1986-1987	NO - 1	0.00	0.52	-0.52	NO - 1	0.00	1.25	-1.25	3 - 1	13.18	1.20	11.98	see note below			0.00

Note: GT 1&2 long term emission rates are a combination of the two units and are presented in the GT2 column.

* For GT 1&2 Current and Future long term emissions are based on Current Utilization factor
* (this is an assumption not a permit condition)

** aux Boiler will never operate with the other units so it is not included in any "short term" Modelling

NO = Not Operating

PSD CLASS I

Future Emis (yr 2000) - Baseline

	BASELINE PERIOD	UNIT GT2 SHEET #	FUTURE - BASELINE		=(g/s)	UNIT 8 SHEET #	(g/s)	UNIT Cooling Tower	(g/s)	AUXILARY BOILER SHEET #	(g/s)
SO2 SHORT	1976-1977	4 - 2	1.47	11.76	-10.29	4	7.82	NA	NA	NA**	NA
SO2 LONG	1976-1977	5* - 1	0.01	0.04	-0.03	3	0.00	NA	NA	3	2.89E-04
PM SHORT	1976-1977	4 - 2	1.09	1.09	NA	4	2.14	4	0.30	NA**	NA
PM LONG	1976-1977	5* - 1	0.01	0.006	0.01	3	2.30	4	0.30	3	2.99E-03
NO2 LONG	1986-1987	5* - 1	0.19	0.04	0.14	3	0.00	NA	NA	3	6.75E-02

AAQS

Future Emissions (year 2000)

	FUTURE PERIOD	UNIT 1-4		UNIT 5		UNIT 6		UNIT 7		UNIT GT1		UNIT GT2	
		SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)
SO2 SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	146.45	4	1.47	4	1.47
SO2 LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	2.30	SEE	NOTE	5*	0.01
PM SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	9.79	4	1.09	4	1.09
PM LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.24	SEE	NOTE	5*	0.01
NO2 LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	13.18	SEE	NOTE	5*	0.19
CO SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	2.61	4	1.38	4	1.38
Pb SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	0.0152	4	0.00167	4	0.00167

Note: GT 1&2 long term emission rates are a combination of the two units and are presented in the GT2 column.

* For GT 1&2 *Current* and *Future* long term emissions are based on *Current Utilization factor*
* (this is an assumption not a permit condition)

** aux Boiler will never operate with the other units so it is not included in any "short term" Modelling

NO = Not Operating

AAQS

Future Emissions (year 2000)

	FUTURE PERIOD	UNIT 8		UNIT Cooling Tower		AUXILARY BOILER	
		SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)
SO2 SHORT	2000	4	7.82	NA	NA	NA**	NA
SO2 LONG	2000	3	0.00	NA	NA	3	2.89E-04
PM SHORT	2000	4	2.14	4	0.30	NA**	NA
PM LONG	2000	3	1.14	4	0.30	3	6.75E-02
NO2 LONG	2000	3	0.00	NA	NA	3	2.99E-03
CO SHORT	2000	4	14.34	NA	NA	NA**	NA
Pb SHORT	2000	4	0.00892	NA	NA	NA**	NA

FARCS

Future Emissions (year 2000)

		FUTURE PERIOD	UNIT 1-4		UNIT 5		UNIT 6		UNIT 7		UNIT GT1		UNIT GT2	
			SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)
As	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	8.93E-03	4	1.41E-04	4	1.41E-04
Cd	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	3.62E-03	4	1.21E-04	4	1.21E-04
Cr	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	1.00E-02	4	1.35E-03	4	1.35E-03
Pb	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	1.52E-02	4	1.67E-03	4	1.67E-03
Mn	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	5.80E-03	4	9.49E-03	4	9.49E-03
Hg	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	2.51E-03	4	2.62E-05	4	2.62E-05
Ni	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	1.82E-01	4	3.45E-02	4	3.45E-02
Co	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	9.48E-03	4	2.62E-04	4	2.62E-04
Sb	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	3.60E-03	4	6.32E-04	4	6.32E-04
V	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	1.39E-01	4	1.26E-04	4	1.26E-04
POM	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	3.21E-04	4	6.90E-04	4	6.90E-04
Ben(a)P	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	2.98E-07	4	1.17E-07	4	1.17E-07
Benzene	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	8.61E-05	4	3.38E-05	4	3.38E-05
Toluene	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	7.75E-04	4	3.04E-04	4	3.04E-04
Se	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	2.98E-03	4	1.52E-04	4	1.52E-04
HCL	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	4.40E-01	4	2.17E-01	4	2.17E-01
HF	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	8.35E-02	4	3.05E-02	4	3.05E-02
378TCDD	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	6.53E-10	4	2.55E-10	4	2.55E-10
HCOH	SHORT	2000	NO	0.00	NO	0.00	NO	0.00	4	3.17E-02	4	6.14E-04	4	6.14E-04

FARCS

Future Emissions (year 2000)

		FUTURE	UNIT 1-4		UNIT 5		UNIT 6		UNIT 7		UNIT GT1		UNIT GT2	
		PERIOD	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)
As	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	2.44E-04	3	1.61E-06	3	1.61E-06
Be	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	1.08E-07	3	1.08E-07
Cd	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	1.38E-06	3	1.38E-06
Cr	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	1.54E-05	3	1.54E-05
Pb	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	2.62E-04	3	1.90E-05	3	1.90E-05
Mn	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	1.08E-04	3	1.08E-04
Hg	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	6.85E-05	3	2.99E-07	3	2.99E-07
Ni	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	3.94E-04	3	3.94E-04
Co	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	2.99E-06	3	2.99E-06
Sb	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	7.22E-06	3	7.22E-06
V	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	3.79E-03	3	1.44E-06	3	1.44E-06
POM	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	7.88E-06	3	7.88E-06
Ben(a)P	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	1.33E-09	3	1.33E-09
Benzene	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	2.04E-05	3	3.85E-07	3	3.85E-07
Toluene	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	5.73E-04	3	3.47E-06	3	3.47E-06
Se	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	1.74E-06	3	1.74E-06
HCL	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	2.48E-03	3	2.48E-03
HF	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	2.09E-03	3	2.09E-03
378TCDD	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	0.00E+00	3	2.91E-12	3	2.91E-12
HCOH	LONG	2000	NO	0.00	NO	0.00	NO	0.00	3	7.92E-04	3	7.01E-06	3	7.01E-06

FARCS

Future Emissions (year 2000)

		FUTURE PERIOD	UNIT 8		UNIT Cooling Tower		UNIT AUX. BOILER	
			SHEET #	(g/s)	SHEET #	(g/s)	SHEET #	(g/s)
As	SHORT	2000	4	7.54E-04	(a)	NA	(b)	NA
Cd	SHORT	2000	4	6.46E-04	(a)	NA	(b)	NA
Cr	SHORT	2000	4	7.23E-03	(a)	NA	(b)	NA
Pb	SHORT	2000	4	8.92E-03	(a)	NA	(b)	NA
Mn	SHORT	2000	4	5.08E-02	(a)	NA	(b)	NA
Hg	SHORT	2000	4	1.40E-04	(a)	NA	(b)	NA
Ni	SHORT	2000	4	1.85E-01	(a)	NA	(b)	NA
Co	SHORT	2000	4	1.40E-03	(a)	NA	(b)	NA
Sb	SHORT	2000	4	3.38E-03	(a)	NA	(b)	NA
V	SHORT	2000	4	6.77E-04	(a)	NA	(b)	NA
POM	SHORT	2000	4	3.69E-03	(a)	NA	(b)	NA
Ben(a)P	SHORT	2000	4	6.24E-07	(a)	NA	(b)	NA
Benzene	SHORT	2000	4	1.81E-04	(a)	NA	(b)	NA
Toluene	SHORT	2000	4	1.63E-03	(a)	NA	(b)	NA
Se	SHORT	2000	4	8.15E-04	(a)	NA	(b)	NA
HCL	SHORT	2000	4	1.16E+00	(a)	NA	(b)	NA
HF	SHORT	2000	4	1.63E-01	(a)	NA	(b)	NA
378TCDD	SHORT	2000	4	1.36E-09	(a)	NA	(b)	NA
HCOH	SHORT	2000	4	3.29E-03	(a)	NA	(b)	NA

FARCS

Future Emissions (year 2000)

		FUTURE PERIOD	UNIT 8 SHEET #	UNIT 8 (g/s)	UNIT Cooling Tower SHEET #	UNIT Cooling Tower (g/s)	UNIT AUX. BOILER SHEET #	UNIT AUX. BOILER (g/s)
As	LONG	2000	3	0.00E+00	3	NA	3	NA
Be	LONG	2000	3	1.47E-05	3	NA	3	NA
Cd	LONG	2000	3	1.87E-04	3	NA	3	NA
Cr	LONG	2000	3	2.09E-03	3	NA	3	NA
Pb	LONG	2000	3	2.58E-03	3	NA	3	NA
Mn	LONG	2000	3	1.47E-02	3	NA	3	NA
Hg	LONG	2000	3	0.00E+00	3	NA	3	3.76E-10
Ni	LONG	2000	3	5.33E-02	3	NA	3	NA
Co	LONG	2000	3	4.04E-04	3	NA	3	NA
Sb	LONG	2000	3	9.78E-04	3	NA	3	NA
V	LONG	2000	3	0.00E+00	3	NA	3	NA
POM	LONG	2000	3	1.07E-03	3	NA	3	NA
Ben(a)P	LONG	2000	3	1.80E-07	3	NA	3	NA
Benzene	LONG	2000	3	1.58E-04	3	NA	3	NA
Toluene	LONG	2000	3	0.00E+00	3	NA	3	NA
Se	LONG	2000	3	2.36E-04	3	NA	3	NA
HCL	LONG	2000	3	3.36E-01	3	NA	3	NA
HF	LONG	2000	3	4.71E-02	3	NA	3	NA
378TCDD	LONG	2000	3	3.94E-10	3	NA	3	NA
HCOH	LONG	2000	3	6.70E-03	3	NA	3	NA

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/25/96 **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 1/9/97 **File:** P8EMISS2.XLS
Rvd. By: M. Bilello **Date:** 03/04/97 **Sheet:** Baseline LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the annualized emission rates for Units 1 thru 7 and GT1 and GT2 during the period 1/76 thru 12/77 for SO2 and PM and 1/86 thru 1/87 for NO2

References:

No. 1	COT Operating Data Report Summary
No. 2	Average Sulfur Content Natural Gas (0.32 grain/100CF)
No. 3	2.75 lb/mmBtu per 62-296.405(1)(c), F.A.C.
No. 4	0.125 lb/mmBtu per 62-296.405(1)(b) & 62-210.700(3) F.A.C. (assumes 3 hrs/day soot blowing)
No. 5	AP-42 Section 1.4 (emission factors adjusted to 1040 Btu/CF per table 1.4-2 (a))
No. 6	Unit 7 CEM NO2 emission factors (0.23 lb/mmBtu Nat. Gas) (0.33 lb/mmBtu Oil)
No. 7	Original Permit
No. 8	Typical density of #2 fuel oil at Purdom site (from analytical data).
No. 9	AP-42 Appendix sec 3.1

Operating Data 1976 1977

	Gross Generation Rate (kW*hr)							Units 3-7 (a) Generation Split (%)	
Month/Year	1	2	3	4	5	6	7	Gas	Oil
Jan-76	0	0	584,300	714,700	7,721,000	8,251,000	26,617,000	0.0%	100.0%
Feb-76	0	0	0	95,800	4,098,000	3,865,000	22,466,000	0.0%	100.0%
Mar-76	0	0	0	0	2,980,000	4,611,000	24,054,000	0.0%	100.0%
Apr-76	0	0	0	0	5,395,000	4,857,000	13,277,000	0.0%	100.0%
May-76	0	0	0	0	0	0	25,166,000	0.0%	100.0%
Jun-76	0	0	0	0	3,272,000	1,039,000	24,983,000	0.0%	100.0%
Jul-76	0	0	529,300	349,000	7,907,000	7,719,000	25,297,000	0.0%	100.0%
Aug-76	0	0	0	0	4,623,000	576,000	25,557,000	3.4%	96.6%
Sep-76	0	0	0	0	1,422,000	2,048,000	19,926,000	0.0%	100.0%
Oct-76	0	0	0	0	1,514,000	7,548,000	0	0.0%	100.0%
Nov-76	0	0	0	0	388,000	8,499,000	0	0.0%	100.0%
Dec-76	0	0	0	0	4,800,000	5,013,000	20,021,000	0.0%	100.0%
Jan-77	0	234,000	395,800	385,800	3,599,000	4,491,000	28,515,000	0.0%	100.0%
Feb-77	0	0	34,300	45,200	408,000	1,239,000	25,579,000	0.0%	100.0%
Mar-77	0	0	0	0	0	4,936,000	15,171,000	11.2%	88.8%
Apr-77	0	0	0	0	0	0	23,750,000	23.5%	76.5%
May-77	0	0	0	0	4,658,000	4,145,000	25,837,000	30.4%	69.6%
Jun-77	0	361,100	854,100	514,000	9,664,000	10,823,000	26,585,000	26.4%	73.6%
Jul-77	0	439,000	883,200	1,090,400	11,756,000	11,222,000	27,920,000	15.6%	84.4%
Aug-77	0	100,400	183,600	74,400	11,824,000	11,212,000	27,676,000	3.0%	97.0%
Sep-77	0	0	0	0	10,940,000	7,256,000	25,733,000	24.8%	75.2%
Oct-77	0	0	0	0	896,000	701,000	20,131,000	93.5%	6.5%
Nov-77	0	0	0	0	963,000	2,436,000	18,655,000	23.6%	76.4%
Dec-77	0	0	0	0	7,000	1,243,000	19,830,000	6.1%	93.9%
Average (%)								***10.89%***	***89.11%***
Total kW-hr	0	1,134,500	3,464,600	3,269,300	98,835,000	113,730,000	512,746,000		
Btu/kW-hr	13,700	13,700	13,700	13,700	13,000	13,000	10,800	(a) Units 1 & 2 fire	
Gas (mmBtu)76&77	0	0	5,169	4,878	139,929	161,018	603,088	Oil Only	
Oil (mmBtu)76&77	0	15,543	42,296	39,912	1,144,926	1,317,472	4,934,568		

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/25/96 **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 1/9/97 **File:** P8EMISS2.XLS
Rvd. By: M. Bilello **Date:** 03/04/97 **Sheet:** Baseline LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Note all ITALIC data is from COT PURDOM (CURTIS GOLDEN)
GT 1 & 2 Operating Information (COMBINATION OF TWO UNITS)
Operating Information: unit rating 12.3 MW x 2 — 24.6 mw

Heat Input 228* mmBtu/hr x 2	456 mmBtu/hr
BTU per KW-hr based on unit ratings (heat input/mw)	18537 Btu/kwh
LHV of natural gas Per GE data sheet	904 Btu/CF
LHV of #2 Fuel oil	132000 Btu/gal

WHEN OPERATING DATA DOES NOT HAVE FUEL USAGE THE FUEL USAGE WAS CALCULATED
FUEL USAGE= KWH*BTU/KWH/HEATING VALUE OF THE FUEL

GT1 & GT2 Operating Data

Year - 1978	mmCF gas	Kgal oil	*Hours on Gas*	*Hours on Oil*	*Total Hours*	*Oil Burn Gallons*	*Gas Burn M.C.F.*	*Gross KWH Gas*	*Gross KWH Oil*
Month									
January	0.00	0.00	*0*	*0*	*0*	*0*	*0*	*0*	*0*
February	0.00	32.07				*32067*	*0*	*0*	*241000*
March	0.00	0.00	*0*	*0*	*0*	*0*	*0*	*0*	*0*
April	5.78	0.00						*282000*	*0*
May	3.24	17.12				*17118*		*158000*	*123000*
June	0.73	8.40	*7*	*5*	*12*	*8401*	*730*	*38000*	*46000*
July	0.55	6.67			*7*	*6674*		*27000*	*50000*
August	0.00	5.31	*0*		*3*	*5313*	*0*	*0*	*40000*
September	4.94	2.16			*25*	*2163*		*241000*	*10000*
October	0.00	0.00	*0*	*0*	*0*	*0*	*0*	*0*	*0*
November	0.00	0.00	*0*	*0*	*0*	*0*	*0*	*0*	*0*
December	0.00	13.88	*0*			*13882*	*0*	*0*	*101000*
TOTAL	15.25	85.62							

Year - 1979	mmCF gas	Kgal oil	*Hours on Gas*	*Hours on Oil*	*Total Hours*	*Oil Burn Gallons*	*Gas Burn M.C.F.*	*Gross KWH Gas*	*Gross KWH Oil*
Month									
January	0.00	17.81	*0.00*	*11.50*	*11.50*	*17805*	*0*	*0*	*138000*
February	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
March	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
April	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
May	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
June	0.08	0.00		*0.00*		*0*		*4000*	*0*
July	1.11	0.00		*0.00*		*0*		*54000*	*0*
August	3.06	0.00		*0.00*		*0*		*149000*	*0*
September	0.92	0.00		*0.00*		*0*		*45000*	*0*
October	0.23	0.00		*0.00*		*0*		*11000*	*0*
November	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
December	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
TOTAL	5.39	17.81							

blank means no data

1978 1979 Summary

	mmCF gas	Kgal oil
1978	15.25	85.62
1979	5.39	17.81
two year total	*20.64*	*103.42*

** The heat input is based on the current permitted level. It is understood that during the baseline years it was somewhat lower. (188 mmBtu/hr @ site elev.). The fuel oil sulfur content in the original application was 0.27% but this limit was not reflected in the permit issued. Given the low number of operating hours for these units these differences will have no material effect on the modelled impacts.*

Note 1978 and 1979 are the oldest data available on the operation of GT1 and GT2. These data are being used as the most representative data available to 1976 and 1977

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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Ckd. By: D. Graziani, PE DJD 3/4/97
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Note all ITALIC data is from COT PURDOM (CURTIS GOLDEN)
GT 1 & 2 Operating Information (COMBINATION OF TWO UNITS)
Operating Information: unit rating 12.3 MW x 2

	24.6 mw
Heat Input 228* mmBtu/hr x 2	456 mmBtu/hr
BTU per KW-hr based on unit ratings (heat input/mw)	18537 Btu/kw-hr
LHV of natural gas Per GE data sheet)	904 Btu/CF
LHV of #2 Fuel oil	132000 Btu/gal

WHEN OPERATING DATA DOES NOT HAVE FUEL USAGE THE FUEL USAGE WAS CALCULATED
FUEL USAGE= KWH*BTU/KWH/HEATING VALUE OF THE FUEL

Year - 1986	mmCF gas	Kgal oil	*Hours on Gas*	*Hours on Oil*	*Total Hours*	*Oil Burn Gallons*	*Gas Burn M.C.F.*	*Gross KWH Gas*	*Gross KWH Oil*
Month									
January	1.95	0.00	*8.50*	*0*	*8.50*	*0*		*95000*	*0*
February	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
March	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
April	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
May	2.79	0.00	*13.00*	*0*	*13.00*	*0*		*136000*	*0*
June	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
July	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
August	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
September	0.88	0.00	*4.50*	*0*	*4.50*	*0*		*43000*	*0*
October	2.48	0.00	*11.50*	*0*	*11.50*	*0*		*121000*	*0*
November	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
December	0.00	0.00	*0.00*	*0*	*0.00*	*0*	*0*	*0*	*0*
Annual	8.10	0.00	37.50	0.00	37.50	0.00	0.00	395000.00	0.00

Year - 1987	mmCF gas	Kgal oil	*Hours on Gas*	*Hours on Oil*	*Total Hours*	*Oil Burn Gallons*	*Gas Burn M.C.F.*	*Gross KWH Gas*	*Gross KWH Oil*
Month									
January	0.45	0.00	*3.00*	*0.00*	*3.00*	*0*	*448*	*32000*	*0*
February	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
March	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
April	0.66	0.00	*6.00*	*0.00*	*6.00*	*0*	*662*	*64000*	*0*
May	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
June	0.74	0.00	*3.50*	*0.00*	*3.50*	*0*		*36000*	*0*
July	1.36	0.00	*10.30*	*0.00*	*10.30*	*0*	*1358*	*97000*	*0*
August	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
September	0.00	0.00	*0.00*	*0.00*	*0.00*	*0*	*0*	*0*	*0*
October	0.20	0.00	*2.00*	*0.00*	*2.00*	*0*	*196*	*14000*	*0*
November	1.70	0.00	*8.25*	*0.00*	*8.25*	*0*		*83000*	*0*
December	1.81	0.00	*13.75*	*0.00*	*13.75*	*0*	*1806*	*129000*	*0*
Annual	6.91	0.00	46.80	0.00	46.80	0.00	4470.00	455000.00	0.00

blank means no data

1986 1987 Summary	mmCF gas	Kgal oil
1978	8.10	0.00
1979	6.91	0.00
two year total	*15.01*	*0.00*

** The heat input is based on the current permitted level. It is understood that during the baseline years it was somewhat lower. (188 mmBtu/hr @ site elev.). The fuel oil sulfur content in the original application was 0.27% but this limit was not reflected in the permit issued. Given the low number of operating hours for these units these differences will have no material effect on the modelled impacts.*

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/25/96 **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJD 3/4/97 **Date:** 1/9/97 **File:** P8EMISS2.XLS
Rvd. By: M. Bilello **Date:** 03/04/97 **Sheet:** Baseline LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Operating Data 1986 1987

Year	Unit 5 Gas (10^3 CF)	Unit 5 Oil (kgal)	Unit 6 Gas (10^3 CF)	Unit 6 Oil (kgal)	Unit 7 Gas (10^3 CF)	Unit 7 Oil (kgal)	Ref. No.
1986	142450	55.1	240370	59.81	1762910	559.9	1
1987	102227	0	55045	0	664245	0	1
Totals	244677	55.1	295415	59.81	2427155	559.9	
mmBtu 1986/87	254464.08	8265	307231.6	8971.5	2524241.2	83985	

Assume	150000	Btu/gal heat content for #6 Oil or 0.15 mmBtu/gal	
Assume	132000	Btu/gal heat content for #2 Oil or 0.132 mmBtu/gal	
Assume	1040	Btu/scf heat content for natural gas	HHV for Boilers
Assume	904	Btu/scf heat content for natural gas,	LHV for Combustion Turbines (per GE Data Sheet)
Ref 8	6.75	lb/gal weight of # 2 fuel oil	

Calculations Oil Fired

Pollutant	UNIT 1 em. factor		UNIT 1 TPY	UNIT 2 em. factor		UNIT 2 TPY
SO2	2.75	lb/mmBtu(7)	**0.00E+00**	2.75	lb/mmBtu(7)	**1.07E+01**
NO2	na	na	na	na	na	na
PM	0.125	lb/mmBtu(3)	**0.00E+00**	0.125	lb/mmBtu(3)	**4.86E-01**

Units 1- 4 were not operating during the NO2 baseline years 1986/87

Calculations Oil Fired

Pollutant	UNIT 3 em. factor		UNIT 3 TPY	UNIT 4 em. factor		UNIT 4 TPY
SO2	2.75	lb/mmBtu(7)	**2.91E+01**	2.75	lb/mmBtu(7)	**2.74E+01**
NO2	na	na	na	na	na	na
PM	0.125	lb/mmBtu(3)	**1.32E+00**	0.125	lb/mmBtu(3)	**1.25E+00**

Calculations Oil Fired

Pollutant	UNIT 5 em. factor		UNIT 5 TPY	UNIT 6 em. factor		UNIT 6 TPY
SO2	2.75	lb/mmBtu(7)	**7.87E+02**	2.75	lb/mmBtu(7)	**9.06E+02**
NO2	42	lb/Kgal (1)	**5.79E-01**	67	lb/Kgal (1)	**1.00E+00**
PM	0.125	lb/mmBtu(3)	**3.58E+01**	0.125	lb/mmBtu(3)	**4.12E+01**

Calculations Oil Fired

Pollutant	UNIT 7 em. factor		UNIT 7 TPY	UNIT GT1 em. factor	UNIT GT1 TPY	UNIT GT2 em. factor		UNIT GT2 TPY
SO2	2.75	lb/mmBtu(7)	**3.39E+03**	OPERATING DATA IS ONLY		0.4	%S (7)*	**1.40E+00**
NO2	0.33	lb/mmBtu(3)	**6.93E+00**	AVAILABLE FOR THE COMBINATION		0.698	lb/mmBtu(9)	**0.00E+00**
PM	0.125	lb/mmBtu(3)	**1.54E+02**	OF GT1& GT2 (SEE GT2 COLUMN)		0.038	lb/mmBtu(9)(f)	**1.30E-01**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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Rvd. By:M. Bilello **Date:** 03/04/97 **Sheet:** Baseline LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Calculations Natural Gas Fired

Pollutant	UNIT 1 em. factor		1 TPY	2 em. factor		2 TPY
SO2	na	na	na	na	na	na
NO2	na	na	na	na	na	na
PM	na	na	na	na	na	na

Unit 1 & 2 are only capable of firing oil.

Calculations Natural Gas Fired

Pollutant	UNIT 3 em. factor		3 TPY	4 em. factor		4 TPY
SO2	0.32	gr/100CF	**1.14E-03**	0.32	gr/100CF	**1.07E-03**
NO2	na	na	na	na	na	na
PM	5.2	lb/mmCF(5)	**6.46E-03**	5.2	lb/mmCF(5)	**6.10E-03**

Units 1-4 were not running during NO2 baseline years

Calculations Natural Gas Fired

Pollutant	UNIT 5 em. factor		5 TPY	6 em. factor		6 TPY
SO2	0.32	gr/100CF	**3.08E-02**	0.32	gr/100CF	**3.54E-02**
NO2	286	lb/mmCF(5)	**1.76E+01**	572	lb/mmCF(5)	**4.22E+01**
PM	5.2	lb/mmCF(5)	**1.76E-01**	5.2	lb/mmCF(5)	**2.01E-01**

Calculations Natural Gas Fired

Pollutant	UNIT 7 em. factor		7 TPY	GT1 em. factor	GT1 TPY	GT2 em. factor		GT2 TPY
SO2	0.32	gr/100CF	**1.33E-01**	OPERATING DATA IS ONLY		0.32	gr/100CF	**4.72E-03**
NO2	0.23	lb/mmBTU(5)	**3.47E+01**	AVAILABLE FOR THE COMBINATION		0.44	lb/mmBtu(9)	**1.49E+00**
PM	5.2	lb/mmCF(5)	**7.54E-01**	OF GT1& GT2 (SEE GT2 COLUMN)		0.0193	lb/mmBtu (9)	**9.00E-02**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello
Ckd. By: D. Graziani, PE DJG 3/4/97
Rvd. By: M. Bilello

Date: 11/25/96
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OFS No.: 1584.0005.0008
File: P8EMISS2.XLS
Sheet: Baseline LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Annualized Emission Rates =[Oil (tpy) + Gas(tpy)] x 2000lb/ton x 454gm/lb /8760hr/yr / 3600sec/hr

	UNIT					
	1		1	2		2
Pollutant	OIL(TPY)	Gas TPY	g/s	OIL(TPY)	Gas TPY	g/s
SO2	0.00E+00	na	**0.00E+00**	1.07E+01	na	**3.08E-01**
NO2	*na*	*na*	**0.00E+00**	*na*	*na*	**0.00E+00**
PM	0.00E+00	na	**0.00E+00**	4.86E-01	na	**1.40E-02**

	UNIT					
	3		3	4		4
Pollutant	OIL(TPY)	Gas TPY	g/s	OIL(TPY)	Gas TPY	g/s
SO2	2.91E+01	1.14E-03	**8.37E-01**	2.74E+01	1.07E-03	**7.90E-01**
NO2	na	na	**0.00E+00**	na	na	**0.00E+00**
PM	1.32E+00	6.46E-03	**3.82E-02**	1.25E+00	6.10E-03	**3.61E-02**

	UNIT					
	5		5	6		6
Pollutant	OIL(TPY)	Gas TPY	g/s	OIL(TPY)	Gas TPY	g/s
SO2	7.87E+02	3.08E-02	**2.27E+01**	9.06E+02	3.54E-02	**2.61E+01**
NO2	5.79E-01	1.75E+01	**5.20E-01**	1.00E+00	4.22E+01	**1.25E+00**
PM	3.58E+01	1.75E-01	**1.04E+00**	4.12E+01	2.01E-01	**1.19E+00**

	UNIT					
	7		7	GT1		GT1
Pollutant	OIL(TPY)	Gas TPY	g/s	OIL(TPY)	Gas TPY	g/s
SO2	3.39E+03	1.33E-01	**9.77E+01**	OPERATING DATA IS ONLY		
NO2	6.93E+00	3.47E+01	**1.20E+00**	AVAILABLE FOR THE COMBINATION		
PM	1.54E+02	7.54E-01	**4.46E+00**	OF GT1& GT2 (SEE GT2 COLUMN)		

	UNIT		
	GT2		GT2
Pollutant	OIL(TPY)	Gas TPY	g/s
SO2	1.40E+00	4.72E-03	**4.03E-02**
NO2	0.00E+00	1.49E+00	**4.30E-02**
PM	1.30E-01	9.00E-02	**6.33E-03**

Calculation Formats:

EmissionFactor Units	Equation
lb/mmBtu	TPY= EF(lb/mmBtu) X Heat input(mmBtu/2yr baseline) / 2000(lb/ton) / 2(yr/Baseline period)
lb/Kgal	TPY= EF(lb/Kgal) X Fuel usage(Kgal/2yr baseline) / 2000(lb/ton) / 2(yr/Baseline period)
gr/100CF	TPY= EF(gr/100CF) X Heat input(mmBtu/2yr baseline) X 10^6Btu/mmBtu / 100(CF) / Heat rate(Btu/CF) X 7000 gr/lb / 2000(lb/ton) / 2(yr/Baseline period)

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96 **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 1/9/97 **File:** P8EMISS.XLS
Rvd. By: M. Bilello **Date:** 03/04/97 **Sheet:** Baseline ST Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the short term emission rates for Units 1-7, GTs 1 & 2 based on allowable emission rates

References:

No. 1 AP-42, Section 1.3
No. 2 Original Permits
No. 3 0.125 lb/mmBtu per 62-296.405(1)(b) & 62-210.700(3) F.A. (assumes 3 hrs/day soot blowing)
No. 4 Typical densities of oil (#2 and #6) at Purdom site (from analytical data).
No. 5 Title V Application (11/04/96)
No. 7 AP-42, Section 3.1
No. 8 Letter from Kennard F. Kosky (KBN) to Howard Rhodes (FDEP) 4-28-95Re: Florida [Electric Power] Coordinating Group [,Inc.]Emission Factors for Title [V] Permit Applications dated 4-28-95
No.9 Analysis of City of Tallahssee oil

General Information

	Unit No.					
	1	5	6	7	GT 1	GT 2
mmBTU	115	300	300	621	228.0	228.0
gal/hr	767	2,000	2000	4140	1727	1727.0
oil densi	8.05	8.05	8.05	8.05	6.75	6.75
lb Oil/hr	6172	16100	16100	33327	11657	11657

Calculations

	UNIT								
Pollutant	1 (g) em. factor		1(g) (g/s)	5 em. factor		5 (g/s)	6 em. factor		6 (g/s)
SO2	2.75	lb/mmBtu (2)	**39.88**	2.75	lb/mmBtu (2)	**104.04**	2.75	lb/mmBtu (2)	**104.04**
NO2	67	lb/Kgal (1)	**6.48**	42	lb/Kgal (1)(h)	**10.59**	67	lb/Kgal (1)	**16.90**
PM	0.125	lb/mmBtu(3)	**1.81**	0.125	lb/mmBtu(3)	**4.73**	0.125	lb/mmBtu(3)	**4.73**
CO	5	lb/Kgal (1)	**0.48**	5	lb/Kgal (1)	**1.26**	5	lb/Kgal (1)	**1.26**
Be	4.2	lb/10^12Btu(1)	**0.0001**	4.2	lb/10^12Btu(1)	**0.0002**	4.2	lb/10^12Btu(1)	**0.0002**
Pb	194.0	lb/10^12Btu(1)	**0.0028**	194.0	lb/10^12Btu(1)	**0.0073**	194.0	lb/10^12Btu(1)	**0.0073**
Hg	32.0	lb/10^12Btu(1)	**0.0005**	32.0	lb/10^12Btu(1)	**0.0012**	32.0	lb/10^12Btu(1)	**0.0012**
Fl	0.00016	lb/gal (9)	**0.0155**	0.00016	lb/gal (9)	**0.0404**	0.00016	lb/gal (9)	**0.0404**

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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Rvd. By: M. Bilello 3/4/97 **Date:** 03/04/97 **Sheet:** Baseline ST Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Calculations

	UNIT								
Pollutant	7 em. factor		7 (g/s)	GT1 em. factor		GT1 (g/s)	GT2 em. factor		GT2 (g/s)
SO2	2.75	lb/mmBtu (2)	**215.37**	0.4	%S (2)	**11.76**	0.4	%S (2)	**11.76**
NO2	0.33	lb/mmBtu(b)	**25.84**	0.698	lb/mmBtu(7)	**20.07**	0.698	lb/mmBtu(7)	**20.07**
PM	0.125	lb/mmBtu(3)	**9.79**	0.038	lb/mmBtu(7)(f)	**1.09**	0.038	lb/mmBtu(7)(f)	**1.09**
CO	5	lb/Kgal (1)	**2.61**	0.048	lb/mmBtu(7)	**1.38**	0.048	lb/mmBtu(7)	**1.38**
Be	4.2	lb/10^12Btu(1)	**0.0003**	3.30E-07	lb/mmBtu(7)	**0.00001**	3.30E-07	lb/mmBtu(7)	**0.00001**
Pb	194.0	lb/10^12Btu(1)	**0.0152**	5.80E-05	lb/mmBtu(7)	**0.00167**	5.80E-05	lb/mmBtu(7)	**0.00167**
Hg	32.0	lb/10^12Btu(1)	**0.0025**	9.10E-07	lb/mmBtu(7)	**0.00003**	9.10E-07	lb/mmBtu(7)	**0.00003**
Fl	0.00016	lb/gal (9)	**0.0835**	0.00014	lb/gal (9)	**0.0305**	0.00014	lb/gal (9)	**0.0305**

all emission rates based on firing oil

(b) Unit 7 NO2 emission factor from CEM data
(e) heat inputs for Units 5,6&7 are from Ref.5
(f) includes only filterable fraction of particulates
(g) Units 1-4 are identical units, as such emissions calculations are identical.
(h) Unit 5 is tangentially fired

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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Rvd. By: M. Bilello **Date:** 3/04/97 **Sheet:** Future LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This is a summary of the annual scenario calculation that was used for the determination of future long term emission rates for unit 7 and unit 8 and the calculation of the future long term emissions for GT1 , GT2 and the Aux Boiler.

This is a summary of the calculations performed in the anual scenario calculations.
ALL tpy VALUES PRESENTED IN THIS SUMMARY ARE FROM THE ANNUAL SCEANRIOS.

Scenarios used for future emissions estimates for Unit 7 and Unit 8

SCENARIO 1 UNIT 8 AS CONTROLLING UNIT OPERATING 8760 HOURS ON NATURAL GAS / UNIT 7 FIRING #6 OIL SO2 LIMIT 1.67 lb/mmBtu
SCENARIO 2 UNIT 8 AS CONTROLLING UNIT OPERATING MAX HOURS ON #2 FUEL OIL / NO OPERATION OF UNIT 7
SCENARIO 3 UNIT 7 AS CONTROLLING UNIT MAX HOURS ON #6 FUEL OIL 1.67 lb/mmBtu/ NO OPERATION OF UNIT 8
SCENARIO 4 UNIT 8 AS CONTROLLING UNIT OPERATING 8760 HOURS ON NATURAL GAS / UNIT 7 OPERATING ON # 6 OIL ASSUME TYPICAL S CONTENT
SCENARIO 5 UNIT 8 AS CONTROLLING UNIT OPERATING 8760 HOURS ON NATURAL GAS / UNIT 7 OPERATION ON NATURAL GAS
SCENARIO 6 UNIT 7 AS CONTROLLING UNIT MAX HOURS ON #6 FUEL OIL ASSUME TYPICAL S CONTENT/ NO OPERATION OF UNIT 8
SCENARIO 7 UNIT 7 AS CONTROLLING UNIT MAX HOURS ON NATURAL GAS/ OPERATION OF UNIT 8 ON NATURAL GAS
SCENARIO 8 UNIT 8 AS CONTROLLING UNIT OPERATING 8260 HOURS ON NATURAL GAS & 500 HR ON #2 OIL / UNIT 7 ON #6 OIL Typical S content 1%
SCENARIO 9 UNIT 8 AS CONTROLLING UNIT OPERATING 8260 HOURS ON NATURAL GAS & 500 HR ON #2 OIL / UNIT 7 ON NATURAL GAS
SCENARIO 10 UNIT 8 AS CONTROLLING UNIT OPERATING 7021 HRS ON NATURAL GAS & 425 HR ON #2 OIL / UNIT 7 ON #6 OIL ASSUME typical S content 1%
SCENARIO 11 UNIT 8 AS CONTROLLING UNIT (85% CAP.) OPERATING 7201 HOURS ON NATURAL GAS & 425 HR ON #2 OIL / UNIT 7 ON NATURAL GAS

Note: These scenarios were used to determine the potential worst case emissions on an annual basis and are not meant to reflect any hourly operational limits on the facility

ALL SCENARIOS BASED ON UNITS OPERATING AT 100 % LOAD

FOSTER WHEELER ENVIRONMENTAL CORPORATION
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Client: City of Tallahassee
Project: Purdom Unit 8

Summary of annual Scenarios

	SO2			PM			NO2		
	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL
	TPY	TPY	TPY	TPY	TPY	TPY	TPY	TPY	TPY
SCENARIO 1	72.9	6.9	79.8	4.9	39.4	44.3	12.9	254.0	266.9
SCENARIO 2	0.0	79.8	79.8	0.0	14.7	14.7	0.0	279.3	279.3
SCENARIO 3	79.8	0.0	79.8	5.3	0.00	5.3	14.1	0.0	14.1
SCENARIO 4	72.9	6.9	79.8	**8.5**	**39.4**	**47.9**	22.4	254.0	276.4
SCENARIO 5	0.8	6.9	7.7	4.4	39.4	43.8	203.7	254.0	457.7
SCENARIO 6	**79.8**	**0.0**	**79.8**	9.3	0.0	9.3	24.5	0.0	24.5
SCENARIO 7	1.7	0.0	1.7	10.0	0.0	10.0	**457.7**	**0.0**	**457.7**
SCENARIO 8	50.3	29.5	79.8	5.9	41.4	47.3	15.5	320.0	335.5
SCENARIO 9	0.5	29.5	30.1	3.0	41.4	44.4	137.7	320.0	457.7
SCENARIO 10	54.7	25.1	79.8	6.4	35.2	41.6	16.8	272.0	288.9
SCENARIO 11	0.7	25.1	25.8	4.0	35.2	39.2	185.7	272.0	457.7
MAX TOTAL			79.8			47.9			457.7

	SO2			PM			NO2		
	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL
Maximum emissions TPY	79.8	0.0	79.8	8.49	39.42	47.91	457.73	0.00	457.73
Emission Rate used in annual Modelling (g/s)	**2.30**	**0.00**	2.30	**0.24**	**1.14**	1.38	**13.18**	**0.00**	13.18
double check			OK			OK			OK

FOSTER WHEELER ENVIRONMENTAL CORPORATION
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Client: City of Tallahassee
Project: Purdom Unit 8

	CO			VOC			Pb			H2SO4		
	UNIT 7 TPY	UNIT 8 TPY	TOTAL TPY	UNIT 7 TPY	UNIT 8 TPY	TOTAL TPY	UNIT 7 TPY	UNIT 8 TPY	TOTAL TPY	UNIT 7 TPY	UNIT 8 TPY	TOTAL TPY
SCENARIO 1	1.3	147.0	148.3	0.2	12.3	12.5	7.56E-03	0.00E+00	7.56E-03	3.37E+00	0.00E+00	3.37E+00
SCENARIO 2	0.0	98.6	98.6	0.0	7.9	7.9	**0.00E+00**	**8.95E-02**	**8.95E-02**	**0.00E+00**	**8.67E+00**	**8.67E+00**
SCENARIO 3	1.4	0.0	1.4	0.2	0.0	0.2	8.28E-03	0.00E+00	8.28E-03	3.69E+00	0.00E+00	3.69E+00
SCENARIO 4	2.3	147.0	149.3	0.3	12.3	12.6	1.32E-02	0.00E+00	1.32E-02	5.88E+00	0.00E+00	5.88E+00
SCENARIO 5	35.4	147.0	182.4	1.2	12.3	13.5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SCENARIO 6	2.5	0.0	2.5	0.4	0.0	0.4	1.44E-02	0.00E+00	1.44E-02	6.44E+00	0.00E+00	6.44E+00
SCENARIO 7	79.6	0.0	79.6	2.7	0.0	2.7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SCENARIO 8	1.6	167.0	168.6	0.2	13.8	14.1	9.09E-03	2.58E-02	3.49E-02	4.06E+00	2.50E+00	6.56E+00
SCENARIO 9	**23.9**	**167.0**	**191.0**	**0.8**	**13.8**	**14.7**	0.00E+00	2.58E-02	2.58E-02	0.00E+00	2.50E+00	2.50E+00
SCENARIO 10	1.7	142.0	143.7	0.3	11.8	12.0	9.89E-03	2.19E-02	3.18E-02	4.41E+00	2.13E+00	6.54E+00
SCENARIO 11	32.3	142.0	174.3	1.1	11.8	12.9	0.00E+00	2.19E-02	2.19E-02	0.00E+00	2.13E+00	2.13E+00
MAX TOTAL			191.0			14.7			8.95E-02			8.67E+00

	CO			VOC			Pb			H2SO4		
	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL
Maximum emissions TPY	23.95	167.02	190.97	0.8	13.8	14.7	9.09E-03	8.95E-02	8.95E-02	0.00E+00	8.67E+00	8.67E+00
Emission Rate used in annual Modelling (g/s)	**0.69**	**4.81**	5.50	na	na	na	0.0002616	0.0025776	0.00257763	**0.00E+00**	**2.50E-01**	2.50E-01
double check			OK			OK			OK			OK

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 1/9/97
Rvd. By: M. Bilello **Date:** 3/04/97

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

	Fl			Hg			Be			As		
	UNIT 7 TPY	UNIT 8 TPY	TOTAL TPY	UNIT 7 TPY	UNIT 8 TPY	TOTAL TPY	UNIT 7 TPY	UNIT 8 TPY	TOTAL TPY	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*
SCENARIO 1	4.16E-02	0.00E+00	4.16E-02	1.25E-03	5.34E-06	1.25E-03	1.64E-04	0.00E+00	1.64E-04	4.44E-03	0.00E+00	*4.44E-03*
SCENARIO 2	**0.00E+00**	**1.64E+00**	**1.64E+00**	**0.00E+00**	**1.40E-03**	**1.40E-03**	**0.00E+00**	**5.09E-04**	**5.09E-04**	0.00E+00	7.56E-03	*7.56E-03*
SCENARIO 3	4.55E-02	0.00E+00	4.55E-02	1.37E-03	0.00E+00	1.37E-03	1.79E-04	0.00E+00	1.79E-04	4.86E-03	0.00E+00	*4.86E-03*
SCENARIO 4	7.24E-02	0.00E+00	7.24E-02	2.17E-03	5.34E-06	2.18E-03	2.85E-04	0.00E+00	2.85E-04	7.74E-03	0.00E+00	*7.74E-03*
SCENARIO 5	0.00E+00	0.00E+00	0.00E+00	6.91E-07	5.34E-06	6.03E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 6	7.93E-02	0.00E+00	7.93E-02	**2.38E-03**	**0.00E+00**	**2.38E-03**	3.12E-04	0.00E+00	3.12E-04	**8.48E-03**	**0.00E+00**	***8.48E-03***
SCENARIO 7	0.00E+00	0.00E+00	0.00E+00	1.55E-06	0.00E+00	1.55E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 8	4.72E-01	5.00E-02	5.22E-01	4.10E-04	4.10E-04	8.20E-04	1.97E-04	1.47E-04	3.44E-04	5.34E-03	2.18E-03	*7.52E-03*
SCENARIO 9	0.00E+00	4.72E-01	4.72E-01	4.67E-07	4.10E-04	4.10E-04	0.00E+00	1.47E-04	1.47E-04	0.00E+00	2.18E-03	*2.18E-03*
SCENARIO 10	5.44E-02	4.01E-01	4.55E-01	1.63E-03	3.48E-04	1.98E-03	2.14E-04	1.25E-04	3.39E-04	5.81E-03	1.85E-03	*7.66E-03*
SCENARIO 11	0.00E+00	4.01E-01	4.01E-01	6.30E-07	3.48E-04	3.49E-04	0.00E+00	1.25E-04	1.25E-04	0.00E+00	1.85E-03	*1.85E-03*
MAX TOTAL			1.64E+00			2.38E-03			5.09E-04			*8.48E-03*

	Fl			Hg			Be			As		
	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	TOTAL	UNIT 7	UNIT 8	*TOTAL*
Maximum emissions TPY	0.00E+00	1.64E+00	1.64E+00	2.38E-03	0.00E+00	2.38E-03	0.00E+00	5.09E-04	5.09E-04	8.48E-03	0.00E+00	8.48E-03
Emission Rate used in annual Modelling (g/s)	**0.00E+00**	**4.71E-02**	4.71E-02	**6.85E-05**	**0.00E+00**	6.85E-05	**0.00E+00**	**1.47E-05**	1.47E-05	2.44E-04	0.00E+00	**2.44E-04**
double check			OK			OK			OK			OK

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 1/9/97
Rvd. By: M. Bilello **Date:** 3/04/97

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Client: City of Tallahassee
Project: Purdom Unit 8

	Cd			Cr			Mn			Ni		
	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*
SCENARIO 1	1.80E-03	0.00E+00	*1.80E-03*	4.99E-03	0.00E+00	*4.99E-03*	2.88E-03	0.00E+00	*2.88E-03*	9.08E-02	0.00E+00	*9.08E-02*
SCENARIO 2	**0.00E+00**	**6.48E-03**	***6.48E-03***	**0.00E+00**	**7.25E-02**	***7.25E-02***	**0.00E+00**	**5.09E-01**	***5.09E-01***	**0.00E+00**	**1.85E+00**	***1.85E+00***
SCENARIO 3	1.97E-03	0.00E+00	*1.97E-03*	5.46E-03	0.00E+00	*5.46E-03*	3.16E-03	0.00E+00	*3.16E-03*	9.08E-02	0.00E+00	*9.08E-02*
SCENARIO 4	3.14E-03	0.00E+00	*3.14E-03*	8.69E-03	0.00E+00	*8.69E-03*	5.02E-03	0.00E+00	*5.02E-03*	1.58E-01	0.00E+00	*1.58E-01*
SCENARIO 5	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 6	3.43E-03	0.00E+00	*3.43E-03*	9.52E-03	0.00E+00	*9.52E-03*	5.50E-03	0.00E+00	*5.50E-03*	1.73E-01	0.00E+00	*1.73E-01*
SCENARIO 7	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 8	2.16E-03	1.87E-03	*4.03E-03*	5.99E-03	2.09E-02	*2.69E-02*	3.47E-03	1.47E-01	*1.50E-01*	1.09E-01	5.34E-01	*6.43E-01*
SCENARIO 9	0.00E+00	1.87E-03	*1.87E-03*	0.00E+00	2.09E-02	*2.09E-02*	0.00E+00	1.47E-01	*1.47E-01*	0.00E+00	5.34E-01	*5.34E-01*
SCENARIO 10	2.35E-03	1.59E-03	*3.94E-03*	6.52E-03	1.78E-02	*2.43E-02*	3.77E-03	1.25E-01	*1.29E-01*	1.19E-01	4.54E-01	*5.73E-01*
SCENARIO 11	0.00E+00	1.59E-03	*1.59E-03*	0.00E+00	1.78E-02	*1.78E-02*	0.00E+00	1.25E-01	*1.25E-01*	0.00E+00	4.54E-01	*4.54E-01*
MAX TOTAL			*6.48E-03*			*7.25E-02*			*5.09E-01*			*1.85E+00*

	Cd			Cr			Mn			Ni		
	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*
Maximum emissions TPY	0.00E+00	6.48E-03	6.48E-03	0.00E+00	7.25E-02	7.25E-02	0.00E+00	5.09E-01	5.09E-01	0.00E+00	1.85E+00	1.85E+00
Emission Rate used in annual Modelling (g/s)	0.00E+00	1.87E-04	**1.87E-04**	0.00E+00	2.09E-03	**2.09E-03**	0.00E+00	1.47E-02	**1.47E-02**	0.00E+00	5.33E-02	**5.33E-02**
double check			OK			OK			OK			OK

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
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Rvd. By: M. Bilello **Date:** 3/04/97

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Client: City of Tallahassee
Project: Purdom Unit 8

		Co			Sb			V			POM	
	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*
SCENARIO 1	4.72E-03	0.00E+00	*4.72E-03*	1.79E-03	0.00E+00	*1.79E-03*	6.90E-02	0.00E+00	*6.90E-02*	1.60E-04	0.00E+00	*1.60E-04*
SCENARIO 2	**0.00E+00**	**1.40E-02**	***1.40E-02***	**0.00E+00**	**3.40E-02**	***3.40E-02***	0.00E+00	6.79E-03	***6.79E-03***	**0.00E+00**	**3.71E-02**	***3.71E-02***
SCENARIO 3	4.72E-03	0.00E+00	*4.72E-03*	1.96E-03	0.00E+00	*1.96E-03*	7.56E-02	0.00E+00	*7.56E-02*	1.75E-04	0.00E+00	*1.75E-04*
SCENARIO 4	8.22E-03	0.00E+00	*8.22E-03*	3.12E-03	0.00E+00	*3.12E-03*	1.20E-01	0.00E+00	*1.20E-01*	2.78E-04	0.00E+00	*2.78E-04*
SCENARIO 5	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 6	9.00E-03	0.00E+00	*9.00E-03*	3.42E-03	0.00E+00	*3.42E-03*	**1.32E-01**	**0.00E+00**	***1.32E-01***	3.05E-04	0.00E+00	*3.05E-04*
SCENARIO 7	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 8	5.67E-03	4.05E-03	*9.72E-03*	2.15E-03	9.79E-03	*1.19E-02*	8.29E-02	1.96E-03	*8.49E-02*	1.92E-04	1.07E-02	*1.09E-02*
SCENARIO 9	0.00E+00	4.05E-03	*4.05E-03*	0.00E+00	9.79E-03	*9.79E-03*	0.00E+00	1.96E-03	*1.96E-03*	0.00E+00	1.07E-02	*1.07E-02*
SCENARIO 10	6.17E-03	3.44E-03	*9.61E-03*	2.34E-03	8.32E-03	*1.07E-02*	9.02E-02	1.66E-03	*9.19E-02*	2.09E-04	9.08E-03	*9.29E-03*
SCENARIO 11	0.00E+00	3.44E-03	*3.44E-03*	0.00E+00	8.32E-03	*8.32E-03*	0.00E+00	1.66E-03	*1.66E-03*	0.00E+00	9.08E-03	*9.08E-03*
MAX TOTAL			*1.40E-02*			*3.40E-02*			*1.32E-01*			*3.71E-02*

		Co			Sb			V			POM	
	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*
Maximum emissions TPY	0.00E+00	1.40E-02	1.40E-02	0.00E+00	3.40E-02	3.40E-02	1.32E-01	0.00E+00	1.32E-01	0.00E+00	3.71E-02	3.71E-02
Emission Rate used in annual Modelling (g/s)	0.00E+00	4.04E-04	**4.04E-04**	0.00E+00	9.78E-04	**9.78E-04**	3.79E-03	0.00E+00	**3.79E-03**	0.00E+00	1.07E-03	**1.07E-03**
double check			OK			OK			OK			OK

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
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Client: *City of Tallahassee*
Project: Purdom Unit 8

	BaP			Benzene			Toluene			Se		
	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*	UNIT 7 TPY	UNIT 8 TPY	*TOTAL TPY*
SCENARIO 1	1.48E-07	0.00E+00	*1.48E-07*	4.29E-05	5.48E-03	*5.52E-03*	3.86E-04	0.00E+00	*3.88E-04*	1.48E-03	0.00E+00	*1.48E-03*
SCENARIO 2	**0.00E+00**	**6.27E-06**	***6.27E-06***	0.00E+00	1.81E-03	*1.81E-03*	0.00E+00	1.63E-02	*1.63E-02*	**0.00E+00**	**8.18E-03**	***8.18E-03***
SCENARIO 3	1.62E-07	0.00E+00	*1.62E-07*	4.69E-05	0.00E+00	*4.69E-05*	4.22E-04	0.00E+00	*4.22E-04*	1.62E-03	0.00E+00	*1.62E-03*
SCENARIO 4	2.58E-07	0.00E+00	*2.58E-07*	7.47E-05	5.48E-03	*5.55E-03*	6.72E-04	0.00E+00	*6.72E-04*	2.58E-03	0.00E+00	*2.58E-03*
SCENARIO 5	0.00E+00	0.00E+00	*0.00E+00*	**7.08E-04**	**5.48E-03**	***6.19E-03***	8.86E-03	0.00E+00	*8.86E-03*	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 6	2.83E-07	0.00E+00	*2.83E-07*	8.18E-05	0.00E+00	*8.18E-05*	7.36E-04	0.00E+00	*7.36E-04*	2.83E-03	0.00E+00	*2.83E-03*
SCENARIO 7	0.00E+00	0.00E+00	*0.00E+00*	1.59E-03	0.00E+00	*1.59E-03*	**1.99E-02**	**0.00E+00**	***1.99E-02***	0.00E+00	0.00E+00	*0.00E+00*
SCENARIO 8	1.78E-07	1.81E-06	*1.98E-06*	5.15E-05	5.69E-03	*5.74E-03*	4.64E-04	4.70E-03	*5.17E-03*	1.78E-03	2.36E-03	*4.14E-03*
SCENARIO 9	0.00E+00	1.81E-06	*1.81E-06*	4.79E-04	5.69E-03	*6.17E-03*	5.99E-03	4.70E-03	*1.07E-02*	0.00E+00	2.36E-03	*2.36E-03*
SCENARIO 10	1.94E-07	1.53E-06	*1.73E-06*	5.61E-05	4.83E-03	*4.89E-03*	5.05E-04	4.00E-03	*4.50E-03*	1.94E-03	2.00E-03	*3.94E-03*
SCENARIO 11	0.00E+00	1.53E-06	*1.53E-06*	6.46E-04	4.83E-03	*5.48E-03*	8.07E-03	4.00E-03	*1.21E-02*	0.00E+00	2.00E-03	*2.00E-03*
MAX TOTAL			*6.27E-06*			*6.19E-03*			*1.99E-02*			*8.18E-03*

	BaP			Benzene			Toluene			Se		
	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*
Maximum emissions TPY	0.00E+00	6.27E-06	6.27E-06	7.08E-04	5.48E-03	6.19E-03	1.99E-02	0.00E+00	1.99E-02	0.00E+00	8.18E-03	8.18E-03
Emission Rate used in annual Modelling (g/s)	0.00E+00	1.80E-07	**1.80E-07**	2.04E-05	1.58E-04	**1.78E-04**	5.73E-04	0.00E+00	**5.73E-04**	0.00E+00	2.36E-04	**2.36E-04**
double check		OK			OK			OK			OK	

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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Project: Purdom Unit 8

	HCL			2378diox			HCOH		
	UNIT 7 TPY	UNIT 8 TPY	*TOTAL* TPY	UNIT 7 TPY	UNIT 8 TPY	*TOTAL* TPY	UNIT 7 TPY	UNIT 8 TPY	*TOTAL* TPY
SCENARIO 1	2.19E-01	0.00E+00	*2.19E-01*	3.25E-10	0.00E+00	*3.25E-10*	1.58E-02	2.33E-01	*2.49E-01*
SCENARIO 2	**0.00E+00**	**1.17E+01**	***1.17E+01***	**0.00E+00**	**1.37E-08**	***1.37E-08***	0.00E+00	3.30E-02	*3.30E-02*
SCENARIO 3	2.40E-01	0.00E+00	*2.40E-01*	3.56E-10	0.00E+00	*3.56E-10*	1.73E-02	0.00E+00	*1.73E-02*
SCENARIO 4	3.81E-01	0.00E+00	*3.81E-01*	5.66E-10	0.00E+00	*5.66E-10*	**2.76E-02**	**2.33E-01**	***2.60E-01***
SCENARIO 5	0.00E+00	0.00E+00	*0.00E+00*	1.06E-09	0.00E+00	*1.06E-09*	0.00E+00	2.33E-01	*2.33E-01*
SCENARIO 6	4.18E-01	0.00E+00	*4.18E-01*	6.20E-10	0.00E+00	*6.20E-10*	3.01E-02	0.00E+00	*3.01E-02*
SCENARIO 7	0.00E+00	0.00E+00	*0.00E+00*	2.39E-09	0.00E+00	*2.39E-09*	6.77E-02	0.00E+00	*6.77E-02*
SCENARIO 8	2.63E-01	3.36E+00	*3.63E+00*	3.90E-10	3.94E-09	*4.33E-09*	1.90E-02	2.29E-01	*2.48E-01*
SCENARIO 9	0.00E+00	3.36E+00	*3.36E+00*	7.18E-10	3.94E-09	*4.66E-09*	2.04E-02	2.29E-01	*2.49E-01*
SCENARIO 10	2.86E-01	2.86E+00	*3.15E+00*	4.25E-10	3.35E-09	*3.78E-09*	2.06E-02	1.95E-01	*2.15E-01*
SCENARIO 11	0.00E+00	2.86E+00	*2.86E+00*	9.69E-10	3.35E-09	*4.32E-09*	2.75E-02	1.95E-01	*2.22E-01*
MAX TOTAL			*1.17E+01*			*1.37E-08*			*2.60E-01*

	HCL			2378diox			HCOH		
	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*	UNIT 7	UNIT 8	*TOTAL*
Maximum emissions TPY	0.00E+00	1.17E+01	1.17E+01	0.00E+00	1.37E-08	1.37E-08	2.75E-02	2.33E-01	2.60E-01
Emission Rate used in annual Modelling (g/s)	0.00E+00	3.36E-01	**3.36E-01**	0.00E+00	3.94E-10	**3.94E-10**	7.92E-04	6.70E-03	**7.49E-03**
double check			OK			OK			OK

Note: When there is more than one scenario with the total TPY equal to the max the scenario in which Unit 7 has the higer emissions was selected. This is because Unit 7 produces higher impacts than Unit 8 with the same TPY emissions

annualized g/s=TPY x 2000lb/ton x 454gm/lb / 8760hr/yr / 3600sec/hr

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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Client: City of Tallahassee
Project: Purdom Unit 8

General Information for Oil firing

	GT 1	GT 2	Aux B (3)
mmBTU/hr	228.0	228.0	16.738
gal/hr	1727	1727.0	na
oil density(5)	6.75	6.75	na
lb Oil/hr	11657	11657	na
hours/year(a)	100	100	2000

References:

No. 1 AP-42, Section 1.3
No. 2 Letter from Kennard F. Kosky (KBN) to Howard Rhodes (FDEP) 4-28-95Re:Florida [Electric Power] Coordinating Group [,Inc.]Emission Factors for Title [V] Permit Applications dated 4-28-95
No. 3 Aux Boiler Permit Application
No. 4 AP-42, Section 1.4
No. 5 Typical densitiyof #2 fuel oil at Purdom site (from analytical data).

All calculations based on 100% load

Note: These emission rates (g/s) are annualized based on the assumed hrs/yr in the above general information

Pollutant	GT1 em. factor		GT1 (g/s)	GT2 em. factor		GT2 (g/s)	AUX BOILER em. factor		AUX (g/s)
As	4.90E-06	lb/mmBtu (1)	1.61E-06	4.90E-06	lb/mmBtu (1)	1.61E-06	NA	NA	NA
Be	3.30E-07	lb/mmBtu (1)	1.08E-07	3.30E-07	lb/mmBtu (1)	1.08E-07	NA	NA	NA
Cd	4.20E-06	lb/mmBtu (1)	1.38E-06	4.20E-06	lb/mmBtu (1)	1.38E-06	NA	NA	NA
Cr	4.70E-05	lb/mmBtu (1)	1.54E-05	4.70E-05	lb/mmBtu (1)	1.54E-05	NA	NA	NA
Pb	5.80E-05	lb/mmBtu (1)	1.90E-05	5.80E-05	lb/mmBtu (1)	1.90E-05	NA	NA	NA
Mn	3.30E-04	lb/mmBtu (1)	1.08E-04	3.30E-04	lb/mmBtu (1)	1.08E-04	NA	NA	NA
Hg	9.10E-07	lb/mmBtu (1)	2.99E-07	9.10E-07	lb/mmBtu (1)	2.99E-07	7.80E-04	lb/Btu10^12 (2	3.76E-10
Ni	1.20E-03	lb/mmBtu (1)	3.94E-04	1.20E-03	lb/mmBtu (1)	3.94E-04	NA	NA	NA
Co	9.10E-06	lb/mmBtu (1)	2.99E-06	9.10E-06	lb/mmBtu (1)	2.99E-06	NA	NA	NA
Sb	2.20E-05	lb/mmBtu (1)	7.22E-06	2.20E-05	lb/mmBtu (1)	7.22E-06	NA	NA	NA
V	4.40E-06	lb/mmBtu (1)	1.44E-06	4.40E-06	lb/mmBtu (1)	1.44E-06	NA	NA	NA
POM	0.00317	lb/Kgal(2)	7.88E-06	0.00317	lb/Kgal(2)	7.88E-06	NA	NA	NA
BaP	5.36E-07	lb/Kgal(2)	1.33E-09	5.36E-07	lb/Kgal(2)	1.33E-09	NA	NA	NA
Benzene	0.000155	lb/Kgal(2)	3.85E-07	0.000155	lb/Kgal(2)	3.85E-07	NA	NA	NA
Toluene	0.001396	lb/Kgal(2)	3.47E-06	0.001396	lb/Kgal(2)	3.47E-06	NA	NA	NA
Se	5.30E-06	lb/mmBtu (1)	1.74E-06	5.30E-06	lb/mmBtu (1)	1.74E-06	NA	NA	NA
HCL	0.997988	lb/Kgal(2)	2.48E-03	0.997988	lb/Kgal(2)	2.48E-03	NA	NA	NA
HF	0.842446	lb/Kgal(2)	2.09E-03	0.842446	lb/Kgal(2)	2.09E-03	NA	NA	NA
2378 diox.	1.17E-09	lb/Kgal(2)	2.91E-12	1.17E-09	lb/Kgal(2)	2.91E-12	NA	NA	NA
HCOH	0.00282	lb/Kgal(2)	7.01E-06	0.00282	lb/Kgal(2)	7.01E-06	NA	NA	NA

(a) for purposes of this analysis GT 1 and GT2 are assumed to operate at the current utilization of nominally 100 hrs per year this is not a permit condition

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
Ckd. By: D. Graziani, PE DJG **Date:** 1/9/97
Rvd. By: M. Bilello 3/4/97 **Date:** 3/04/97

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future LT Rates

Client: City of Tallahassee
Project: Purdom Unit 8

General Information for Natural Gas firing

	Aux B (3)
mmBTU/hr	16.738
Btu/cf	1000.0
mmCF/hr	0.017
annual hr operation	2000

Note: These emission rates (g/s) are annualized based on the assumed hrs/yr in the above general information

Pollutant	Aux Boiler em. factor (g)		Aux. B (g/s)	
SO2	0.6	lb/mmCF (4)	2.89E-04	
NO2	140	lb/mmCF (4)	6.75E-02	
PM	6.2	lb/mmCF (4)	2.99E-03	
CO	35	lb/mmCF (4)	1.69E-02	
Be	NA	NA	NA	
Pb	NA	NA	NA	
Hg	NA	NA	NA	
Fl	NA	NA	NA	
VOC	2.784	lb/mmCF (4)(j	1.34E-03	The VOC emission rate is used to calculate TPY It is not used for modelling
H2SO4	na	na	na	

Aux Boiler fires ONLY Nat. Gas

(j) TOC emission factor adjusted for 52% methane (see ref 4 table 1.4-3 footnote g)

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
Ckd. By: D. Graziani, PE **Date:** 1/9/97
Rvd. By: M. Bilello **Date:** 03/04/97
Client: City of Tallahassee
Project: Purdom Unit 8

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future ST Rates

Description: This calculation provides the Future short term emission rates for Units 7 and 8, GTs 1 & 2 and the Aux. Boiler

References:

No. 1 AP-42, Section 1.3
No. 2 62-296.405(1)(c), F.A.C.
No. 3 0.125 lb/mmBtu per 62-296.405(1)(b) & 62-210.700(3) F.A.C. (assumes 3 hrs/day soot blowing)
No. 4 Typical densities of oil (#2 and #6) at Purdom site (from analytical data).
No. 5 Title V Application (11/04/96)
No. 6 GE Data Sheet (10/02/96)
No. 7 AP-42, Section 3.1
No. 8 EPRI Synthesis Report , 1994
No. 9 AP-42, Section 1.4(emission facors adjusted per footnote (a) table 1.4-2)
No. 10 H. Frediani Calc. #17
No. 11 Aux Boiler Permit Application
No. 12 Analysis of City of Tallahassee Oil

General Information for Oil firing

	Unit No.				
	7 (l)	8 (a)	8 (h)	GT 1(m)	GT 2 (m)
mmBTU/hr (e)	621	1219.9	1779.5	228.0	228.0
gal/hr	4140	9242	13481	1727	1727.0
oil density(4)	8.05	6.75	6.75	6.75	6.75
lb Oil/hr	33327	62381	90997	11657	11657

General Information for Natural Gas firing

	Unit No.				
	7 (l)	8 (h)	GT 1(m)	GT 2 (m)	Aux B.(11)
mmBTU/hr (e)	621	1563.2	228	228	16.738
Btu/cf (*)	1040	904	904	904	1000.0
mmCF/hr	0.597	1.729	0.252	0.252	0.017

(*) Typical HHV of COT Natural Gas , LHV from GE data sheet used for all Combustion Turbines, HHV value for Aux. Boiler from manf.

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
Ckd. By: D. Graziani, PE DJD **Date:** 1/9/97
Rvd. By: M. Bilello 3/4/97 **Date:** 03/04/97
Client: City of Tallahassee
Project: Purdom Unit 8

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future ST Rates

Calculations

	UNIT											
Pollutant	7 em. factor		7 (g/s)	8 (a) 20oF 50% em. factor		8 (a) (g/s)	GT1 em. factor		GT1 (g/s)	GT2 em. factor		GT1 (g/s)
SO2	1.87	lb/mmBtu (5)	146.45	62	lb/hr(6)	7.82	0.05	%S(c)	1.47	0.05	%S(c)	1.47
NO2	0.33	lb/mmBtu(b)	25.84	217	lb/hr(6)	27.37	0.698	lb/mmBtu(7)	20.07	0.698	lb/mmBtu(7)	20.07
PM	0.125	lb/mmBtu(3)	9.79	17	lb/hr(6)	2.14	0.038	lb/mmBtu(7)(f)	1.09	0.038	lb/mmBtu(7)(f)	1.09
CO	5	lb/Kgal (1)	2.61	192	lb/hr(6)	24.21	0.048	lb/mmBtu(7)	1.38	0.048	lb/mmBtu(7)	1.38
Be	4.2	lb/10^12Btu(1)	0.0003	3.30E-07	lb/mmBtu(7)	0.00005	3.30E-07	lb/mmBtu(7)	0.00001	3.30E-07	lb/mmBtu(7)	0.00001
Pb	194.0	lb/10^12Btu(1)	0.0152	5.80E-05	lb/mmBtu(7)	0.00892	5.80E-05	lb/mmBtu(7)	0.00167	5.80E-05	lb/mmBtu(7)	0.00167
Hg	32.0	lb/10^12Btu(1)	0.0025	9.10E-07	lb/mmBtu(7)	0.00014	9.10E-07	lb/mmBtu(7)	0.00003	9.10E-07	lb/mmBtu(7)	0.00003
Fl	0.00016	lb/gal (12)	0.0835	0.00014	lb/gal (12)	0.1632	0.00014	lb/gal (12)	0.0305	0.00014	lb/gal (12)	0.0305
VOC	0.76	lb/Kgal(1)	0.40	17.0	lb/hr(6)	2.14	0.02	lb/mmBtu(7)(i)	0.48873	0.02	lb/mmBtu(7)(i)	0.48873
H2SO4	12.99	lb/Kgal (1)	6.78	7.0	lb/hr(6)	0.88	NA	NA	NA	NA	NA	NA

The VOC emission rate is used to calculate TPY it is not used for modelling

Pollutant	COOLING TOWER em. factor		COOL T. (g/s)	Aux Boiler em. factor (g)		Aux. B (g/s)	8 (h) 59oF Base Load em. factor		8 (h) (g/s)	8 (h) 59oF Base Load em. factor		8 (h) (g/s)
SO2	NA	NA	NA	0.6	lb/mmCF (9)	0.001	92	lb/hr(6)	11.60	92	lb/hr(6)	11.60
NO2	NA	NA	NA	140	lb/mmCF (9)	0.296	322	lb/hr(6)	40.61	322	lb/hr(6)	40.61
PM	2.392	lb/hr (10)	0.30	6.2	lb/mmCF (9)	0.013	17	lb/hr(6)	2.14	17	lb/hr(6)	2.14
CO	NA	NA	NA	35	lb/mmCF (9)	0.074	113.67	lb/hr(6)	14.34	96	lb/hr(6)	12.11
Be	NA	NA	NA	NA	NA	NA	3.30E-07	lb/mmBtu(7)	0.00007	3.30E-07	lb/mmBtu(7)	0.00007
Pb	NA	NA	NA	NA	NA	NA	5.80E-05	lb/mmBtu(7)	0.01302	5.80E-05	lb/mmBtu(7)	0.01302
Hg	NA	NA	NA	NA	NA	NA	9.10E-07	lb/mmBtu(7)	0.00020	9.10E-07	lb/mmBtu(7)	0.00020
Fl	NA	NA	NA	NA	NA	NA	0.00014	lb/gal (12)	2.38E-01	0.00014	lb/gal (12)	2.38E-01
VOC	NA	NA	NA	2.784	lb/mmCF (9)(j)	0.008	9.1	lb/hr(6)	1.15	7.5	lb/hr(6)	0.95
H2SO4	NA	NA	NA	na	na	na	10.0	lb/hr(6)	1.26	10.0	lb/hr(6)	1.26

The VOC emission rate is used to calculate TPY it is not used for modelling

Aux Boiler fires ONLY Nat. Gas

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
Ckd. By: D. Graziani, PE **Date:** 1/9/97
Rvd. By: M. Bilello 3/4/97 **Date:** 03/04/97
Client: City of Tallahassee
Project: Purdom Unit 8

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future ST Rates

Calculations for Natural gas not used in the short term modelling analysis but needed for netting analysis

	UNIT											
Pollutant	7 em. factor		7 (g/s)	8 69oF base load em. factor		8 (g/s)	GT1 em. factor		GT1 (g/s)	GT2 em. factor		GT1 (g/s)
SO2	0.32	gr/100CF	6.88E-02	0.32	gr/100CF	1.99E-01	0.32	gr/100CF	2.91E-02	0.32	gr/100CF	2.91E-02
NO2	0.23	lb/mmBTU(b)	18.01	58	lb/hr(6)	7.31	0.44	lb/mmBtu(7)	12.64947	0.44	lb/mmBtu(7)	12.64947
PM	5.2	lb/mmCF(9)	0.39	9	lb/hr(6)	1.14	0.0193	lb/mmBtu (7)	0.55485	0.0193	lb/mmBtu (7)	0.55485
CO	41.6	lb/mmCF(9)	3.13	33.56	lb/hr(6)	4.23	0.11	lb/mmBtu (7)	3.16237	0.11	lb/mmBtu (7)	3.16237
Be	na	na	na	na	na	na	na	na	na	na	na	na
Pb	na	na	na	na	na	na	na	na	na	na	na	na
Hg	0.00078	lb/10^12 Btu (8)	6.11E-08	0.00078	lb/10^12 Btu (8)	1.54E-07	0.00078	lb/10^12 Btu (8)	2.24E-08	0.00078	lb/10^12 Btu (8)	2.24E-08
Fl	na	na	na	na	na	na	na	na	na	na	na	na
VOC	1.41	lb/mmCF (9) (k)	0.11	2.8	lb/hr(6)	0.35	0.02400	lb/mmBtu(7)(i)	0.68997	0.02400	lb/mmBtu(7)(i)	0.68997
H2SO4	na	na	na	na	na	na	na	na	na	na	na	na

The VOC emission rate is used to calculate TPY it is not used for modelling

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/22/96
Ckd. By: D. Graziani, PE DJG **Date:** 1/9/97
Rvd. By: M. Bilello 3/4/97 **Date:** 03/04/97
Client: City of Tallahassee
Project: Purdom Unit 8

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future ST Rates

Calculations for FARCS (OIL FIRING)

	UNIT										
Pollutant	7 em. factor		7 (g/s)	8 (a) em. factor		8 (a) (g/s)	GT1 em. factor		GT1 (g/s)	GT2 em. factor		GT1 (g/s)
As	114	lb/Btu10^12 (1)	8.93E-03	4.90E-06	lb/mmBtu (7)	7.54E-04	4.90E-06	lb/mmBtu (7)	1.41E-04	4.90E-06	lb/mmBtu (7)	1.41E-04
Be	4.2	lb/Btu10^12 (1)	3.29E-04	3.30E-07	lb/mmBtu (7)	5.08E-05	3.30E-07	lb/mmBtu (7)	9.49E-06	3.30E-07	lb/mmBtu (7)	9.49E-06
Cd	46.2	lb/Btu10^12 (12	3.62E-03	4.20E-06	lb/mmBtu (7)	6.46E-04	4.20E-06	lb/mmBtu (7)	1.21E-04	4.20E-06	lb/mmBtu (7)	1.21E-04
Cr	128	lb/Btu10^12 (1)	1.00E-02	4.70E-05	lb/mmBtu (7)	7.23E-03	4.70E-05	lb/mmBtu (7)	1.35E-03	4.70E-05	lb/mmBtu (7)	1.35E-03
Pb	194	lb/Btu10^12 (1)	1.52E-02	5.80E-05	lb/mmBtu (7)	8.92E-03	5.80E-05	lb/mmBtu (7)	1.67E-03	5.80E-05	lb/mmBtu (7)	1.67E-03
Mn	74	lb/Btu10^12 (1)	5.80E-03	3.30E-04	lb/mmBtu (7)	5.08E-02	3.30E-04	lb/mmBtu (7)	9.49E-03	3.30E-04	lb/mmBtu (7)	9.49E-03
Hg	32	lb/Btu10^12 (1)	2.51E-03	9.10E-07	lb/mmBtu (7)	1.40E-04	9.10E-07	lb/mmBtu (7)	2.62E-05	9.10E-07	lb/mmBtu (7)	2.62E-05
Ni	2330	lb/Btu10^12 (1)	1.82E-01	1.20E-03	lb/mmBtu (7)	1.85E-01	1.20E-03	lb/mmBtu (7)	3.45E-02	1.20E-03	lb/mmBtu (7)	3.45E-02
Co	121	lb/Btu10^12 (1)	9.48E-03	9.10E-06	lb/mmBtu (7)	1.40E-03	9.10E-06	lb/mmBtu (7)	2.62E-04	9.10E-06	lb/mmBtu (7)	2.62E-04
Sb	46	lb/Btu10^12 (1)	3.60E-03	2.20E-05	lb/mmBtu (7)	3.38E-03	2.20E-05	lb/mmBtu (7)	6.32E-04	2.20E-05	lb/mmBtu (7)	6.32E-04
V	0.2656	lb/Kgal(8)	1.39E-01	4.40E-06	lb/mmBtu (7)	6.77E-04	4.40E-06	lb/mmBtu (7)	1.26E-04	4.40E-06	lb/mmBtu (7)	1.26E-04
POM	0.000615	lb/Kgal(8)	3.21E-04	0.00317	lb/Kgal(8)	3.69E-03	0.00317	lb/Kgal(8)	6.90E-04	0.00317	lb/Kgal(8)	6.90E-04
Ben(a)P	5.70E-07	lb/Kgal(8)	2.98E-07	5.36E-07	lb/Kgal(8)	6.24E-07	5.36E-07	lb/Kgal(8)	1.17E-07	5.36E-07	lb/Kgal(8)	1.17E-07
Benzene	0.000165	lb/Kgal(8)	8.61E-05	0.000155	lb/Kgal(8)	1.81E-04	0.000155	lb/Kgal(8)	3.38E-05	0.000155	lb/Kgal(8)	3.38E-05
Toluene	0.001485	lb/Kgal(8)	7.75E-04	0.001396	lb/Kgal(8)	1.63E-03	0.001396	lb/Kgal(8)	3.04E-04	0.001396	lb/Kgal(8)	3.04E-04
Se	38	lb/Btu10^12 (1)	2.98E-03	5.30E-06	lb/mmBtu (7)	8.15E-04	5.30E-06	lb/mmBtu (7)	1.52E-04	5.30E-06	lb/mmBtu (7)	1.52E-04
HCL	0.842446	lb/Kgal(12)	4.40E-01	0.997988	lb/Kgal(8)	1.16E+00	0.997988	lb/Kgal(8)	2.17E-01	0.997988	lb/Kgal(8)	2.17E-01
HF	0.16	lb/Kgal(12)	8.35E-02	0.14	lb/Kgal(12)	1.63E-01	0.14	lb/Kgal(12)	3.05E-02	0.14	lb/Kgal(12)	3.05E-02
2378 TCDD	1.25E-09	lb/Kgal(8)	6.53E-10	1.17E-09	lb/Kgal(8)	1.36E-09	1.17E-09	lb/Kgal(8)	2.55E-10	1.17E-09	lb/Kgal(8)	2.55E-10
HCOH	405	lb/Btu10^12 (1)	3.17E-02	0.00282	lb/Kgal(8)	3.29E-03	0.00282	lb/Kgal(8)	6.14E-04	0.00282	lb/Kgal(8)	6.14E-04

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future ST Rates

These natural gase emission rates are NOT used for short term modelling BUT are used in calculating the annual emissions
Calculations for FARCS on Natural Gas

	UNIT											
Pollutant	7 em. factor		7 (g/s)	8 (h) em. factor		8 (a) (g/s)	GT1 em. factor		GT1 (g/s)	GT2 em. factor		GT2 (g/s)
As	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Be	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cd	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cr	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pb	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mn	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hg	7.80E-04	lb/Btu10^12 (8)	6.11E-08	7.80E-04	lb/Btu10^12 (8)	1.54E-07	7.80E-04	lb/Btu10^12 (8)	2.24E-08	7.80E-04	lb/Btu10^12 (8)	2.24E-08
Ni	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Co	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sb	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
V	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ben(a)P	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.8	lb/Btu10^12 (8)	6.27E-05	0.8	lb/Btu10^12 (8)	1.58E-04	0.8	lb/Btu10^12 (8)	2.30E-05	0.8	lb/Btu10^12 (8)	2.30E-05
Toluene	10	lb/Btu10^12 (8)	7.83E-04	NA	NA	NA	NA	NA	NA	NA	NA	NA
Se	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HCL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HF	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2378 TCDD	1.20E-06	lb/Btu10^12 (8)	9.40E-11	NA	NA	NA	NA	NA	NA	NA	NA	NA
HCOH	34	lb/Btu10^12 (8)	2.66E-03	34	lb/Btu10^12 (8)	6.70E-03	34	lb/Btu10^12 (8)	9.77E-04	34	lb/Btu10^12 (8)	9.77E-04

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

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Rvd. By: M. Bilello 3/4/97 **Date:** 03/04/97
Client: City of Tallahassee
Project: Purdom Unit 8

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Future ST Rates

Calculations for FARCS AUX Boiler on Natural Gas / Unit 8 Oil @ 59oF Base Load

	UNIT					
Pollutant	AUX BOILER em. factor		AUX (g/s)	8 (h) 59oF Base Load em. factor		8 (h) (g/s)
As	NA	NA	NA	4.90E-06	lb/mmBtu (7)	1.10E-03
Be	NA	NA	NA	3.30E-07	lb/mmBtu (7)	7.41E-05
Cd	NA	NA	NA	4.20E-06	lb/mmBtu (7)	9.43E-04
Cr	NA	NA	NA	4.70E-05	lb/mmBtu (7)	1.05E-02
Pb	NA	NA	NA	5.80E-05	lb/mmBtu (7)	1.30E-02
Mn	NA	NA	NA	3.30E-04	lb/mmBtu (7)	7.41E-02
Hg	7.80E-04	lb/Btu10^12 (8)	1.65E-09	9.10E-07	lb/mmBtu (7)	2.04E-04
Ni	NA	NA	NA	1.20E-03	lb/mmBtu (7)	2.69E-01
Co	NA	NA	NA	9.10E-06	lb/mmBtu (7)	2.04E-03
Sb	NA	NA	NA	2.20E-05	lb/mmBtu (7)	4.94E-03
V	NA	NA	NA	4.40E-06	lb/mmBtu (7)	9.87E-04
POM	NA	NA	NA	0.00317	lb/Kgal(8)	5.39E-03
BaP	NA	NA	NA	5.36E-07	lb/Kgal(8)	9.11E-07
Benzene	NA	NA	NA	0.000155	lb/Kgal(8)	2.64E-04
Toluene	NA	NA	NA	0.001396	lb/Kgal(8)	2.37E-03
Se	NA	NA	NA	5.30E-06	lb/mmBtu (7)	1.19E-03
HCL	NA	NA	NA	0.997988	lb/Kgal(8)	1.70E+00
HF	NA	NA	NA	0.842446	lb/Kgal(8)	1.43E+00
2378 diox.	NA	NA	NA	1.17E-09	lb/Kgal(8)	1.99E-09
HCOH	NA	NA	NA	0.00282	lb/Kgal(8)	4.79E-03

(a) BASED ON 20oF 50% LOAD (worst case ambient impacts)
(b) Unit 7 NO2 emission factor from CEM data
(c) 0.05% S is what will be fired when Unit 8 is constructed.
(d) Unit 8 fuel usage based on lower heat value of oil - 132,000 Btu/gal
(e) heat inputs for Units 5,6&7 are from Ref.5 , Unit 8 value is from Ref.6
(f) Includes only filterable fraction of particulates
(g) Heating value for natural gas used in Aux Boiler Permit was 1000 Btu/CF
(h) BASED ON 59oFBASE LOAD (FOR ANNUAL ANALYSIS) (execpt CO and VOC which is based on 59oF 19% of time at 50% load and 81% of time at 100% load)
(I) VOC as methane
(j) Total Organic Compounds (TOC) emission factor adjusted for 52% methane (see ref 9 table 1.4-3 footnote g)
(k) TOC emission factor adjusted for 17% methane (see ref 9 table 1.4-3 footnote f)
(l) Operating at 100% load
(m) Operating at 100% load Site conditions (80oF)

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello — Date: 11/25/96 — OFS No.: 1584.0005.0008
Ckd. By: D. Graziani DJG 3/4/97 — Date: 1/8/97 — File: P8EMISS.XLS
Rvd. By: M. Bilello — Date: 03/04/97 — Sheet: Current LT Rates
Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the CURRENT (1995,96) LONG term emission rates for Units 5, 6, and 7, GTs 1 & 2

References:

No. 1	AP-42, Section 1.3
No. 2	62-296.405(1)(c), F.A.C.
No. 3	0.125 lb/mmBtu per 62-296.405(1)(b) & 62-210.700(3) F.A.C. (assumes 3 hrs/day soot blowing)
No. 4	AP-42, Appendix A
No. 5	Title V Application (11/04/96)
No. 7	AP-42, Section 3.1
No. 8	Letter from Kennard F. Kosky (KBN) to Howard Rhodes (FDEP) 4-28-95Re: Florida [Electric Power] Coordinating Group Emission Factors for Title [V] Permit Applications dated 4-28-95
No.9	FGT average S content of Natural Gas (0.32 gr/100CF)
No. 10	Calcs. 961007CJT001, 961007CJT003, EMISS.XLS- UNIT7-GT1-GT2
No. 11	Analysis of City of Tallahassee Oil

(b) Unit 7 NO2 emission factor from CEM data (0.23 lb/mmBtu Gas) (0.33 lb/mmBtu Oil)
(e) heat inputs for Units 5,6&7 are from Ref.5
(f) includes only filterable fraction of particulates
(g) NO2 emissions for Unit 7 are from CEM data which did not separate oil and gas Total oil + gas is presented in the natural gas table..
(h) Table 1-1 of the Plan of Study presents the sum of GT1 & GT2 this SUM is shown as GT2

Assume	150000	Btu/gal heat content for #6 Oil or 0.15 mmBtu/gal
Assume	132000	Btu/gal heat content for #2 Oil or 0.132 mmBtu/gal
Assume	1040	Btu/scf heat content for natural gas, or 0.00104 mmBtu/scf

Operating Data

	Unit 5		Unit 6		Unit 7		GT1		GT2	
	Nat. Gas CFx10^3	Oil bbls	Nat. Gas CFx10^3	Oil bbls	Nat. Gas CFx10^3	Oil bbls	Nat. Gas CFx10^3	Oil gal	Nat. Gas CFx10^3	Oil gal
Aug-94	3260	0	82494	183	120125	2994	1646	0	2359	0
Sep-94	23090	0	8430	0	150492	6474	150	0	122	0
Oct-94	62290	0	59683	0	127718	2468	158	0	205	0
Nov-94	0	0	0	0	167291	4502	0	0	0	0
Dec-94	0	0	0	0	139865	5469	86	0	41	0
Jan-95	0	0	0	0	148227	90	432	0	464	0
Feb-95	0	0	0	0	138958	2912	455	0	528	0
Mar-95	2704	0	0	0	79162	0	148	0	112	0
Apr-95	31730	0	39050	0	155279	127	134	0	134	0
May-95	17517	0	10897	0	207271	300	205	0	140	0
Jun-95	0	0	0	0	153582	0	1978	0	536	0
Jul-95	72792	0	88809	770	201694	710	423	0	832	0
Aug-95	96088	0	104573	163	199229	4347	6020	0	6613	0
Sep-95	24548	0	27249	253	82389	589	183	0	140	0
Oct-95	7219	0	3152	0	203212	0	733	0	462	0
Nov-95	82087	0	44200	0	169909	237	3424	2782	3275	0
Dec-95	74483	0	50463	0	198234	3003	1377	2415	788	4082
Jan-96	85785	0	80979	295	231836	861	1010	12501	2188	0
Feb-96	42865	0	42509	299	171262	3909	4280	0	4169	0
Mar-96	87763	0	77917	85	212566	1136	883	0	843	0
Apr-96	3323	0	13354	0	160524	1087	1316	0	1908	0
May-96	96317	107	103368	0	187689	1715	1887	0	1841	0
Jun-96	35758	0	66899	0	223591	0	2188	0	1934	0
Jul-96	103506	0	70225	0	231499	0	869	0	748	0
Total	953125	107	974251	2048	4061604	42928	29965	17698	30182	4082
Annual average	476562.5	53.5	487125.5	1024	2030802	21464	14982.5	8849	15091	2041
Annual Average mmBtu(1,2,3)	495625	337.05	506610.52	6451.2	2112034.08	135223.2	15581.8	1168.068	15694.64	269.412

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello
Ckd. By: D. Graziani DJG 3/4/97
Rvd. By: M. Bilello
Client: City of Tallahassee
Project: Purdom Unit 8

Date: 11/25/96
Date: 1/9/97
Date: 03/04/97

OFS No.: 1584.0005.0008
File: P8EMISS.XLS
Sheet: Current LT Rates

Calculations Oil Fired

Pollutant	UNIT 5 em. factor	5 TPY	6 em. factor	6 TPY
SO2	Ref (10)	3.00E-01	Ref (10)	3.53E+00
NO2	Ref (10)	5.00E-02	Ref (10)	1.44E+00
PM	Ref (10)	1.00E-02	Ref (10)	1.70E-01
CO	Ref (10)	1.00E-02	Ref (10)	1.10E-01
Be	4.2 lb/10^12Btu(1)	7.08E-07	4.2 lb/10^12Btu(1)	1.35E-05
Pb	194.0 lb/10^12Btu(1)	3.27E-05	194.0 lb/10^12Btu(1)	6.26E-04
Hg	32.0 lb/10^12Btu(1)	5.39E-06	32.0 lb/10^12Btu(1)	1.03E-04
Fl	0.00016 lb/gal (11)	1.80E-04	0.00016 lb/gal (11)	3.44E-03

Calculations Oil Fired

Pollutant	UNIT 7 em. factor	7 TPY	GT1 em. factor	GT1 TPY	GT2 em. factor	GT2 TPY
SO2	Ref (10)	7.46E+01	Ref (10)	(h)	Ref (10)	2.30E-01
NO2	Ref (10)	(g)	Ref (10)	(h)	Ref (10)	5.00E-01
PM	Ref (10)	2.30E+00	Ref (10)	(h)	Ref (10)	4.40E-02
CO	Ref (10)	2.26E+00	Ref (10)	(h)	Ref (10)	3.00E-02
Be	4.2 lb/10^12Btu(1)	2.84E-04	3.30E-07 lb/mmBtu(7)	1.93E-13	3.30E-07 lb/mmBtu(7)	4.45E-14
Pb	194.0 lb/10^12Btu(1)	1.31E-02	5.80E-05 lb/mmBtu(7)	3.39E-11	5.80E-05 lb/mmBtu(7)	7.81E-12
Hg	32.0 lb/10^12Btu(1)	2.16E-03	9.10E-07 lb/mmBtu(7)	5.31E-13	9.10E-07 lb/mmBtu(7)	1.23E-13
Fl	0.00016 lb/gal (11)	1.72E+00	0.00014 lb/gal (11)	6.19E-04	0.00014 lb/gal (11)	1.43E-04

Calculations Natural Gas Fired

Pollutant	UNIT 5 em. factor	5 TPY	6 em. factor	6 TPY
SO2	Ref (10)	2.20E-01	Ref (10)	2.20E-01
NO2	Ref (10)	6.81E+01	Ref (10)	1.39E+02
PM	Ref (10)	1.24E+00	Ref (10)	1.22E+00
CO	Ref (10)	9.90E+00	Ref (10)	1.01E+01
Be		na		na
Pb		na		na
Hg	0.00078 lb/tbtu (8)		0.00078 lb/tbtu (8)	
Fl		na		na

Calculations Natural Gas Fired

Pollutant	UNIT 7 em. factor	7 TPY	GT1 em. factor	GT1 TPY	GT2 em. factor	GT2 TPY
SO2	Ref (10)	9.30E-01	Ref (10)	(h)	Ref (10)	1.30E-02
NO2	Ref (10)(g)	2.51E+02	Ref (10)	(h)	Ref (10)	5.96E+00
PM	Ref (10)	5.28E+00	Ref (10)	(h)	Ref (10)	3.90E-01
CO	Ref (10)	4.22E+01	Ref (10)	(h)	Ref (10)	1.49E+00
Be		na		na		0.00E+00
Pb		na		na		0.00E+00
Hg	0.00078 lb/tbtu (8)		0.00078 lb/tbtu (8)		0.00078 lb/tbtu (8)	
Fl		na		na		0.00E+00

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello — Date: 11/25/96 — OFS No.: 1584.0005.0008
Ckd. By: D. Graziani DJG 3/4/97 — Date: 1/9/97 — File: P8EMISS.XLS
Rvd. By: M. Bilello — Date: 03/04/97 — Sheet: Current LT Rates
Client: City of Tallahassee
Project: Purdom Unit 8

Annualized Emission Rates =[Oil (tpy) + Gas(tpy)] x 2000lb/ton x 454gr/lb /8760hr/yr / 3600sec/hr

	UNIT					
	5		5	6		6
Pollutant	Oil(TPY)	Gas TPY	g/s	Oil(TPY)	Gas TPY	g/s
SO2	3.00E-01	2.20E-01	1.50E-02	3.53E+00	2.20E-01	1.08E-01
NO2	5.00E-02	6.81E+01	1.96E+00	1.44E+00	1.39E+02	4.05E+00
PM	1.00E-02	1.24E+00	3.60E-02	1.70E-01	1.22E+00	4.00E-02
CO	1.00E-02	9.90E+00	2.85E-01	1.10E-01	1.01E+01	2.95E-01
Be	7.08E-07	na	2.04E-08	1.35E-05	na	3.90E-07
Pb	3.27E-05	na	9.41E-07	6.26E-04	na	1.80E-05
Hg	5.39E-06	0.00E+00	1.55E-07	1.03E-04	0.00E+00	2.97E-06
Fl	1.80E-04	na	5.18E-06	3.44E-03	na	9.91E-05

Annualized Emission Rates

	UNIT								
	7		7	GT1		GT1	GT2		GT2
Pollutant	Oil(TPY)	Gas TPY	g/s	Oil(TPY)	Gas TPY	g/s	Oil(TPY)	Gas TPY	g/s
SO2	7.46E+01	9.30E-01	2.17E+00	Ref (10)		(h)	2.30E-01	1.30E-02	7.00E-03
NO2	(g)	2.51E+02	7.23E+00	Ref (10)		(h)	5.00E-01	5.96E+00	1.86E-01
PM	2.30E+00	5.28E+00	2.18E-01	Ref (10)		(h)	4.40E-02	3.90E-01	1.25E-02
CO	2.26E+00	4.22E+01	1.28E+00	Ref (10)		(h)	3.00E-02	1.49E+00	4.38E-02
Be	2.84E-04	na	8.18E-06	1.93E-13	na	5.55E-15	4.45E-14	0.00E+00	1.28E-15
Pb	1.31E-02	na	3.78E-04	3.39E-11	na	9.75E-13	7.81E-12	0.00E+00	2.25E-13
Hg	2.16E-03	0.00E+00	6.23E-05	5.31E-13	0.00E+00	1.53E-14	1.23E-13	0.00E+00	3.53E-15
Fl	1.72E+00	na	4.94E-02	6.19E-04	na	1.78E-05	1.43E-04	0.00E+00	4.11E-06

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: Mike Bilello **Date:** 11/25/96 **OFS No.:** 1584.0005.0008
Ckd. By: D. Graziani, PE DJG 3/4/97 **Date:** 1/9/97 **File:** P8EMISS.XLS
Rvd. By: M. Bilello **Date:** 03/04/97 **Sheet:** Current ST Rates

Client: City of Tallahassee
Project: Purdom Unit 8

Description: This calculation provides the CURRENT (1995,96) short term emission rates for Units 5, 6, and 7, GTs 1 & 2

References:

No. 1 AP-42, Section 1.3
No. 3 0.125 lb/mmBtu per 62-296.405(1)(b) & 62-210.700(3) F.A.C. (assumes 3 hrs/day soot blowing)
No. 4 Typical densities of oil (#2 and #6) at Purdom site (from analytical data).
No. 5 Title V Application (11/04/96)
No. 7 AP-42, Section 3.1
No. 8 Letter from Kennard F. Kosky (KBN) to Howard Rhodes (FDEP) 4-28-95Re: Florida [Electric Power] Coordinating Group [,Inc.]Emission Factors for Title [V] Permit Applications dated 4-28-95
No.9 Analysis of City of Tallahasse oil

General Information

	Unit No.			Unit No.	
	5	6	7	GT 1	GT 2
mmBTU/hr (e)	300	300	621	228.0	228.0
gal/hr	2,000	2000	4140	1727	1727.0
oil density(4)	8.05	8.05	8.05	6.75	6.75
lb Oil/hr	16100	16100	33327	11657	11657

Calculations

	UNIT					
	5		5	6		6
Pollutant	em. factor		(g/s)	em. factor		(g/s)
SO2	1.3	lb/mmBtu (5)	**49.18**	1.3	lb/mmBtu (5)	**49.18**
NO2	42	lb/Kgal (1)	**10.59**	67	lb/Kgal (1)	**16.90**
PM	0.125	lb/mmBtu(3)	**4.73**	0.125	lb/mmBtu(3)	**4.73**
CO	5	lb/Kgal (1)	**1.26**	5	lb/Kgal (1)	**1.26**
Be	4.2	lb/10^12Btu(1)	**0.0002**	4.2	lb/10^12Btu(1)	**0.0002**
Pb	194.0	lb/10^12Btu(1)	**0.0073**	194.0	lb/10^12Btu(1)	**0.0073**
Hg	32.0	lb/10^12Btu(1)	**0.0012**	32.0	lb/10^12Btu(1)	**0.0012**
Fl	0.00016	lb/gal (9)	**0.0404**	0.00016	lb/gal (9)	**0.0404**

Calculations

	UNIT											
	7		7	GT1		GT1	GT2		GT2
Pollutant	em. factor		(g/s)	em. factor		(g/s)	em. factor		(g/s)
SO2	1.87	lb/mmBtu (5)	**146.45**	0.4	%S (5)	**11.76**	0.4	%S (5)	**11.76**
NO2	0.33	lb/mmBtu(b)	**25.84**	0.698	lb/mmBtu(7)	**20.07**	0.698	lb/mmBtu(7)	**20.07**
PM	0.125	lb/mmBtu(3)	**9.79**	0.038	lb/mmBtu(7)(f)	**1.09**	0.038	lb/mmBtu(7)(f)	**1.09**
CO	5	lb/Kgal (1)	**2.61**	0.048	lb/mmBtu(7)	**1.38**	0.048	lb/mmBtu(7)	**1.38**
Be	4.2	lb/10^12Btu(1)	**0.0003**	3.30E-07	lb/mmBtu(7)	**0.00001**	3.30E-07	lb/mmBtu(7)	**0.00001**
Pb	194.0	lb/10^12Btu(1)	**0.0152**	5.80E-05	lb/mmBtu(7)	**0.00167**	5.80E-05	lb/mmBtu(7)	**0.00167**
Hg	32.0	lb/10^12Btu(1)	**0.0026**	9.10E-07	lb/mmBtu(7)	**0.00003**	9.10E-07	lb/mmBtu(7)	**0.00003**
Fl	0.00016	lb/gal (9)	**0.0835**	0.00014	lb/gal (9)	**0.0305**	0.00014	lb/gal (9)	**0.0305**

all emission rates based on firing oil

(b) Unit 7 NO2 emission factor from CEM data
(e) heat inputs for Units 5,6&7 are from Ref.5
(f) includes only filterable fraction of particulates

	gal/hr x	lb/gal x	gm/lb *	S in SO2	/ sec/hr	%fuel S	=g/s							
calc for unit 7 SO2 firing 1% S Fuel	4140	8.05	454	2	3600	0.01	84.1							
		(1) Facitlity cap TPY from Calcs. 961007CJT001, 961007CJT003, EMISS.XLS- UNIT7-GT1-GT2 (CT 1 and CT2 TPY subtracted)												
		(2) Unit 7 emission rate based on FGT average S content of 0.32 grain/100CF												
		(3) Unit 7 emission rate based on AP-42 Emission Factor for Natural Gas (high end of range)												
		(4) Unit 7 emission rate based on CEM data (0.23 lb/mmBtu NO2) Emission Rate for Natural Gas												
		(5) Unit 7 emission rate based on 1.87 lb/mmBtu SO2												
		(6) Unit 7 emission ratebased on 0.125 lb/mmBtu PM Emission Rate for Fuel Oil												
		(7) Unit 7 emission ratebased on CEM data (0.33 lb/mmBtu NO2) Emission Rate for Fuel Oil												
		(8) Unit 7 emission rate based on typical #6 fuel oil currently in use. (1% S)												
		Note: Shaded hours denote pollutant (NO2 *or* SO2) which limits hours based on faciltiy cap.												
		ALL CALCULATIONS BASED ON UNITS OPERATING AT 100% LOAD												

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJG 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 8 AS CONTROLLING UNIT OPERATING 8760 HOURS ON NATURAL GAS / UNIT 7 FIRING #6 OIL SO2 LIMIT 1.57 lb/mmBtu												
SCENARIO 1														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(5)	TPY	HOURS	g/s(6)	TPY	HOURS	g/s (7)	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	125.51	146.45	72.8753	xxx	9.79	xxx	1987.9	25.84	203.7	2.61	1.3	0.40	0.20
UNIT 7 ANNUALIZED			2.10			0.14			0.37					
ACCURACY														
Unit 8	Natural Gas	8760	0.20	6.92472	8760	1.14	39.4	8760.0	7.31	254.0	4.23	147.0	0.35	12.26
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		72.9			4.9			12.9		1.3		0.20
based on limiting unit		Unit 8		6.9			39.4			254.0		147.0		12.26
TPY		Total		79.8			44.3			266.9		148.3		12.46
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.73		0.1		0.11
	Change from recent actuals			0.0			34.2			-190.8		148.2		12.35

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJG 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 8 AS CONTROLLING UNIT OPERATING MAX HOURS ON #2 FUEL OIL / NO OPERATION OF UNIT 7												
SCENARIO 2														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(5)	TPY	HOURS	g/s(6)	TPY	HOURS	g/s (7)	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	0	146.45	0	xxx	9.79	xxx	0.0	25.84	0.0	2.61	0.0	0.40	0.00
UNIT 7 ANNUALIZED		0	0	0	0	0.00	0.0	0.0	0.00	0.0				
Unit 8	#2 Fuel	1734.78	11.60	79.8	1734.78	2.14	14.7	2843.0	40.61	457.7	14.34	98.6	1.15	7.91
UNIT 8 ANNUALIZED			2.30			0.42			8.04					
facitlity cap(1`)				79.8			na			457.7				
Facility annual emissions		Unit 7		0.0			0.0			0.0		0.0		0.00
based on limiting unit		Unit 8		79.8			14.7			279.3		98.6		7.91
TPY		Total		79.8			14.7			279.3		98.6		7.91
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.73		0.1		0.11
	Change from recent actuals			0.0			4.7			-178.4		98.5		7.80

		UNIT 7 AS CONTROLLING UNIT MAX HOURS ON #6 FUEL OIL / NO OPERATION OF UNIT 8												
SCENARIO 3														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(5)	TPY	HOURS	g/s(6)	TPY	HOURS	g/s (7)	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	137.436	146.45	79.8	xxx	9.79	xxx	4467.2	25.84	457.7	2.61	1.4	0.40	0.22
UNIT 7 ANNUALIZED			2.30			0.15			0.41					
Unit 8	Natural Gas	0	0.20	0	0	1.14	0.0	0.0	7.31	0.0	4.23	0.0	0.35	0.00
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		79.8			5.3			14.1		1.4		0.22
based on limiting unit		Unit 8		0.0			0.0			0.0		0.0		0.00
TPY		Total		79.8			5.3			14.1		1.4		0.22
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			0.0			-4.7			-443.6		1.3		0.11

By. M. Bilello Date: 11/21/96 DJB 3/4/97
Ckd By:D.Graziani Date:1/9/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 8 AS CONTROLLING UNIT OPERATING 8760 HOURS ON NATURAL GAS / UNIT 7 OPERATING ON # 6 OIL ASSUME TYPICAL S C												
SCENARIO 4														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(5)	TPY	HOURS	g/s(6)	TPY	HOURS	g/s (7)	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	218.667	84.1	72.8753	xxx	9.79	xxx	1987.9	25.84	203.7	2.61	2.3	0.40	0.34
UNIT 7 ANNUALIZED			2.10			0.24			0.65					
Unit 8	Natural Gas	8760	0.20	6.92472	8760	1.14	39.4	8760.0	7.31	254.0	4.23	147.0	0.35	12.26
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		72.9			8.5			22.4		2.3		0.34
based on limiting unit		Unit 8		6.9			39.4			254.0		147.0		12.26
TPY		Total		79.8			47.9			276.4		149.3		12.61
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			0.0			37.8			-181.3		149.1		12.50

By. M. Bilello Date: 11/21/96 DJB 3/4/97
Ckd By:D.Graziani Date:1/9/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 8 AS CONTROLLING UNIT OPERATING 8760 HOURS ON NATURAL GAS / UNIT 7 OPERATION ON NATURAL GAS												
SCENARIO 5														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(2)	TPY	HOURS	g/s(3)	TPY	HOURS	g/s(4)	TPY	g/s	TPY	g/s	TPY
Unit 7	NAT. GAS	8760	0.0688	72.8753	xxx	0.39	xxx	2852.2	18.01	203.7	3.13	35.4	0.11	1.20
UNIT 7 ANNUALIZED			0.02			0.13			5.86					
Unit 8	Natural Gas	8760	0.20	6.92472	8760	1.14	39.4	8760.0	7.31	254.0	4.23	147.0	0.35	12.26
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		0.8			4.4			203.7		35.4		1.20
based on limiting unit		Unit 8		6.9			39.4			254.0		147.0		12.26
TPY		Total		7.7			43.8			457.7		182.4		13.47
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			-72.1			33.8			0.0		182.3		13.36

		UNIT 7 AS CONTROLLING UNIT MAX HOURS ON #6 FUEL OIL ASSUME TYPICAL S CONTENT												
SCENARIO 6														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(8)	TPY	HOURS	g/s(6)	TPY	HOURS	g/s (7)	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	239.445	84.1	79.8	xxx	9.79	xxx	4467.2	25.84	457.7	2.61	2.5	0.40	0.38
UNIT 7 ANNUALIZED			2.30			0.27			0.71					
Unit 8	Natural Gas	0	0.20	0	0	1.14	0.0	0.0	7.31	0.0	4.23	0.0	0.35	0.00
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		79.8			9.3			24.5		2.5		0.38
based on limiting unit		Unit 8		0.0			0.0			0.0		0.0		0.00
TPY		Total		79.8			9.3			24.5		2.5		0.38
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			0.0			-0.8			-433.2		2.4		0.27

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJG 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 7 AS CONTROLLING UNIT MAX HOURS ON NATURAL GAS												
SCENARIO 7														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(2)	TPY	HOURS	g/s(3)	TPY	HOURS	g/s(4)	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	8760	0.0688	79.8	xxx	0.39	xxx	8409.4	18.01	457.7	3.13	79.6	0.11	2.70
UNIT 7 ANNUALIZED			0.05			0.29			13.18					
Unit 8	Natural Gas	0	0.20	0	0	1.14	0.0	0.0	7.31	0.0	4.23	0.0	0.35	0.00
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		1.7			10.0			457.7		79.6		2.70
based on limiting unit		Unit 8		0.0			0.0			0.0		0.0		0.00
TPY		Total		1.7			10.0			457.7		79.6		2.70
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			-78.1			-0.1			0.0		79.5		2.59

By. M. Bilello Date: 11/21/96 3/4/97
Ckd By:D.Graziani Date:1/9/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 8 AS CONTROLLING UNIT OPERATING 8260 HOURS ON NATURAL GAS & 500 HR ON #2 OIL / UNIT 7 ON #6 OIL ASSUME TYPIC												
SCENARIO 8														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(8)	TPY	HOURS	g/s(8)	TPY	HOURS	g/s (7)	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	150.84	84.1	50.2705	xxx	9.79	xxx	1343.8	25.84	137.7	2.61	1.8	0.40	0.24
UNIT 7 ANNUALIZED			1.20			0.14			0.37					
Unit 8	Natural Gas	8260	0.20	6.52947	8260	1.14	37.2	8260.0	7.31	239.5	4.23	138.6	0.35	11.56
Unit 8	#2 Oil	500	11.60	23	500	2.14	4.3	500.0	40.61	80.5	14.34	28.4	1.15	2.28
Unit 8	Total			29.5295			41.4			320.0		167.0		13.84
Unit 8 Annualized Nat. Gas			0.19			1.07			6.90					
Unit 8 Annualized #2 Oil			0.66			0.12			2.32					
Unit 8 Annualized Total			0.85			1.19			9.21					
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		50.3			5.9			15.5		1.8		0.24
based on limiting unit		Unit 8		29.5			41.4			320.0		167.0		13.84
TPY		Total		79.8			47.3			335.5		168.8		14.08
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			0.0			37.2			-122.2		168.5		13.97

		UNIT 8 AS CONTROLLING UNIT OPERATING 8260 HOURS ON NATURAL GAS & 500 HR ON #2 OIL / UNIT 7 ON NATURAL GAS												
SCENARIO 9														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(2)	TPY	HOURS	g/s(3)	TPY	HOURS	g/s(4)	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	8760	0.0688	50.2705	xxx	0.39	xxx	1928.0	18.01	137.7	3.13	23.9	0.11	0.81
UNIT 7 ANNUALIZED			0.00			0.01			0.26					
Unit 8	Natural Gas	8260	0.20	6.52947	8260	1.14	37.2	8260.0	7.31	239.5	4.23	138.6	0.35	11.56
Unit 8	#2 Oil	500	11.60	23	500	2.14	4.3	500.0	40.61	80.5	14.34	28.4	1.15	2.28
Unit 8	Total			29.5295			41.4			320.0		167.0		13.84
Unit 8 Annualized Nat. Gas			0.19			1.07			6.90					
Unit 8 Annualized #2 Oil			0.66			0.12			2.32					
Unit 8 Annualized Total			0.85			1.19			9.21					
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		*Unit 7*		0.5			3.0			137.7		23.9		0.81
based on limiting unit		Unit 8		29.5			41.4			320.0		167.0		13.84
TPY		Total		30.1			44.4			457.7		191.0		14.66
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			-49.7			34.3			0.0		190.9		14.55

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJG 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 8 AS CONTROLLING UNIT OPERATING 7021 HRS ON NATURAL GAS & 425 HR ON #2 OIL / UNIT 7 ON #6 OIL ASSUME typical S												
SCENARIO 10														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(5)	TPY	HOURS	g/s(6)	TPY	HOURS	g/s (7)	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	164.131	84.1	54.6999	xxx	9.79	xxx	1812.3	25.84	185.7	2.61	1.7	0.40	0.26
UNIT 7 ANNUALIZED			1.20			0.14			0.37					
Unit 8	Natural Gas	7021	0.20	5.55005	7021	1.14	31.6	7021.0	7.31	203.6	4.23	117.8	0.35	9.83
Unit 8	#2 Oil	425	11.60	19.55	425	2.14	3.6	425.0	40.61	68.4	14.34	24.2	1.15	1.94
Unit 8	Total			25.1001			35.2			272.0		142.0		11.77
Unit 8 Annualized Nat. Gas			0.16			0.91			5.86					
Unit 8 Annualized #2 Oil			0.56			0.10			1.97					
Unit 8 Annualized Total			0.72			1.01			7.83					
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		54.7			6.4			16.8		1.7		0.26
based on limiting unit		Unit 8		25.1			35.2			272.0		142.0		11.77
TPY		Total		79.8			41.6			288.9		143.7		12.03
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			0.0			31.5			-168.9		143.6		11.92

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJH 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		UNIT 8 AS CONTROLLING UNIT (85% CAP.) OPERATING 7201 HOURS ON NATURAL GAS & 425 HR ON #2 OIL / UNIT 7 ON NATURAL												
SCENARIO 11														
	FUEL		SO2			PM			NO2		CO		VOC	
		HOURS	g/s(2)	TPY	HOURS	g/s(3)	TPY	HOURS	g/s(4)	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	8760	0.0688	54.6999	xxx	0.39	xxx	2600.2	18.01	185.7	3.13	32.3	0.11	1.10
UNIT 7 ANNUALIZED			0.001			0.01			0.26					
Unit 8	Natural Gas	7021	0.20	5.55005	7021	1.14	31.6	7021.0	7.31	203.6	4.23	117.8	0.35	9.83
Unit 8	#2 Oil	425	11.60	19.55	425	2.14	3.6	425.0	40.61	68.4	14.34	24.2	1.15	1.94
Unit 8	Total			25.1001			35.2			272.0		142.0		11.77
Unit 8 Annualized Nat. Gas			0.16			0.91			5.86					
Unit 8 Annualized #2 Oil			0.58			0.10			1.97					
Unit 8 Annualized Total			0.72			1.01			7.83					
facitlity cap(1)				79.8			na			457.7				
Facility annual emissions		Unit 7		0.7			4.0			185.7		32.3		1.10
based on limiting unit		Unit 8		25.1			35.2			272.0		142.0		11.77
TPY		Total		25.8			39.2			457.7		174.3		12.86
Recent actuals Units 5,6,7 (1)	minus aux boiler emissions			79.8			10.1			457.7		0.1		0.11
	Change from recent actuals			-54.0			29.2			0.0		174.2		12.75

SCENARIO 1														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	#6 Fuel	1.52E-02	7.56E-03	6.78	3.37E+00	8.35E-02	4.16E-02	2.51E-03	1.25E-03	3.29E-04	1.64E-04	8.93E-03	4.44E-03	3.62E-03
UNIT 7 ANNUALIZED														
ACCURACY														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	5.34E-08	0	0.00E+00	0	0.00E+00	0
facitlity cap(1)														
Facility annual emissions			7.56E-03		3.37E+00		4.16E-02		1.25E-03		1.64E-04		4.44E-03	
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		5.34E-08		0.00E+00		0.00E+00	
TPY			7.56E-03		3.37E+00		4.16E-02		1.25E-03		1.64E-04		4.44E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
	Change from rec		-2.44E-03		8.04E-01		-2.68E-01		-7.47E-04		-1.36E-04		na	

SCENARIO 2														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	#6 Fuel	1.52E-02	0.00E+00	6.78	0.00E+00	8.35E-02	0.00E+00	2.51E-03	0.00E+00	3.29E-04	0.00E+00	8.93E-03	0.00E+00	3.62E-03
UNIT 7 ANNUALIZED														
Unit 8	#2 Fuel	1.30E-02	8.95E-02	1.26	8.67E+00	2.38E-01	1.64E+00	2.04E-04	1.40E-03	7.41E-05	5.09E-04	1.10E-03	7.56E-03	9.43E-04
UNIT 8 ANNUALIZED														
facitlity cap(1')														
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
based on limiting unit			8.95E-02		8.67E+00		1.64E+00		1.40E-03		5.09E-04		7.56E-03	
TPY			8.95E-02		8.67E+00		1.64E+00		1.40E-03		5.09E-04		7.56E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
Change from rec			7.95E-02		6.10E+00		1.33E+00		-5.95E-04		2.09E-04		na	

SCENARIO 3														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	#6 Fuel	1.52E-02	8.28E-03	6.78	3.69E+00	8.35E-02	4.55E-02	2.51E-03	1.37E-03	3.29E-04	1.79E-04	8.93E-03	4.86E-03	3.62E-03
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	0.00E+00	0	0.00E+00	0	0.00E+00	0
facitlity cap(1)														
Facility annual emissions			8.28E-03		3.69E+00		4.55E-02		1.37E-03		1.79E-04		4.86E-03	
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
TPY			8.28E-03		3.69E+00		4.55E-02		1.37E-03		1.79E-04		4.86E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
	Change from rec		-1.72E-03		1.12E+00		-2.64E-01		-6.34E-04		-1.21E-04		na	

		NTENT												
SCENARIO 4														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	#6 Fuel	1.52E-02	1.32E-02	6.78	5.88E+00	8.35E-02	7.24E-02	2.51E-03	2.17E-03	3.29E-04	2.85E-04	8.93E-03	7.74E-03	3.62E-03
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.54E-07	5.34E-08	0	0.00E+00	0	0.00E+00	0
facility cap(1)														
Facility annual emissions			1.32E-02		5.88E+00		7.24E-02		2.17E-03		2.85E-04		7.74E-03	
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		5.34E-08		0.00E+00		0.00E+00	
TPY			1.32E-02		5.88E+00		7.24E-02		2.18E-03		2.85E-04		7.74E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
	Change from rec		3.17E-03		3.31E+00		-2.38E-01		1.78E-04		-1.48E-05		na	

SCENARIO 5														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	NAT. GAS	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	6.1E-08	6.91E-07	0	0.00E+00	0	0.00E+00	0
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.54E-07	5.34E-06	0	0.00E+00	0	0.00E+00	0
facitlity cap(1)														
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		6.91E-07		0.00E+00		0.00E+00	
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		5.34E-06		0.00E+00		0.00E+00	
TPY			0.00E+00		0.00E+00		0.00E+00		6.03E-06		0.00E+00		0.00E+00	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		5.70E-01		3.10E-01		2.00E-03		3.00E-04		na	
Change from rec			-1.00E-02		-5.70E-01		-3.10E-01		-1.99E-03		-3.00E-04		na	

SCENARIO 6

	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	#6 Fuel	1.52E-02	1.44E-02	6.78	6.44E+00	8.35E-02	7.93E-02	2.51E-03	2.38E-03	3.29E-04	3.12E-04	8.93E-03	8.48E-03	3.62E-03
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	0.00E+00	0	0.00E+00	0	0.00E+00	0
facitlity cap(1)														
Facility annual emissions			1.44E-02		6.44E+00		7.93E-02		2.38E-03		3.12E-04		8.48E-03	
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
TPY			1.44E-02		6.44E+00		7.93E-02		2.38E-03		3.12E-04		8.48E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
	Change from rec		4.42E-03		3.87E+00		-2.31E-01		3.79E-04		1.23E-05		na	

SCENARIO 7

	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	6.1E-08	1.55E-06	0	0.00E+00	0	0.00E+00	0
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	0.00E+00	0	0.00E+00	0	0.00E+00	0
facitlity cap(1)														
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		1.55E-06		0.00E+00		0.00E+00	
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00	
TPY			0.00E+00		0.00E+00		0.00E+00		1.55E-06		0.00E+00		0.00E+00	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
Change from rec			-1.00E-02		-2.57E+00		-3.10E-01		-2.00E-03		-3.00E-04		na	

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJD 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		L S CONTENT												
SCENARIO 8														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	#6 Fuel	1.52E-02	9.09E-03	6.78	4.06E+00	8.35E-02	5.00E-02	2.51E-03	1.50E-03	3.29E-04	1.97E-04	8.93E-03	5.34E-03	3.62E-03
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	5.04E-06	0	0.00E+00	0	0.00E+00	0
Unit 8	#2 Oil	1.30E-02	2.58E-02	1.26	2.50E+00	2.38E-01	4.72E-01	2.04E-04	4.05E-04	7.41E-05	1.47E-04	1.10E-03	2.18E-03	9.43E-04
Unit 8	Total		2.58E-02		2.50E+00		4.72E-01		4.10E-04		1.47E-04		2.18E-03	
Unit 8 Annualized Nat. Gas														
Unit 8 Annualized #2 Oil														
Unit 8 Annualized Total														
facitlity cap(1)														
Facility annual emissions			9.09E-03		4.06E+00		5.00E-02		1.50E-03		1.97E-04		5.34E-03	
based on limiting unit			2.58E-02		2.50E+00		4.72E-01		4.10E-04		1.47E-04		2.18E-03	
TPY			3.49E-02		6.56E+00		5.22E-01		1.91E-03		3.44E-04		7.52E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
	Change from rec		2.49E-02		3.99E+00		2.12E-01		-9.11E-05		4.35E-05		na	

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJ 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

SCENARIO 9														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	6.1E-08	4.67E-07	0	0.00E+00	0	0.00E+00	0
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	5.04E-06	0	0.00E+00	0	0.00E+00	0
Unit 8	#2 Oil	1.30E-02	2.58E-02	1.26	2.50E+00	2.38E-01	4.72E-01	2.04E-04	4.05E-04	7.41E-05	1.47E-04	1.10E-03	2.18E-03	9.43E-04
Unit 8	Total		2.58E-02		2.50E+00		4.72E-01		4.10E-04		1.47E-04		2.18E-03	
Unit 8 Annualized Nat. Gas														
Unit 8 Annualized #2 Oil														
Unit 8 Annualized Total														
facitlity cap(1)														
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		4.67E-07		0.00E+00		0.00E+00	
based on limiting unit			2.58E-02		2.50E+00		4.72E-01		4.10E-04		1.47E-04		2.18E-03	
TPY			2.58E-02		2.50E+00		4.72E-01		4.10E-04		1.47E-04		2.18E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
	Change from rec		1.58E-02		-7.00E-02		1.62E-01		-1.59E-03		-1.53E-04		na	

		ontent												
SCENARIO 10														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	#6 Fuel	1.52E-02	9.89E-03	6.78	4.41E+00	8.35E-02	5.44E-02	2.51E-03	1.63E-03	3.29E-04	2.14E-04	8.93E-03	5.81E-03	3.62E-03
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	4.28E-06	0	0.00E+00	0	0.00E+00	0
Unit 8	#2 Oil	1.30E-02	2.19E-02	1.26	2.13E+00	2.38E-01	4.01E-01	2.04E-04	3.44E-04	7.41E-05	1.25E-04	1.10E-03	1.85E-03	9.43E-04
Unit 8	Total		2.19E-02		2.13E+00		4.01E-01		3.48E-04		1.25E-04		1.85E-03	
Unit 8 Annualized Nat. Gas														
Unit 8 Annualized #2 Oil														
Unit 8 Annualized Total														
facitlity cap(1)														
Facility annual emissions			9.89E-03		4.41E+00		5.44E-02		1.63E-03		2.14E-04		5.81E-03	
based on limiting unit			2.19E-02		2.13E+00		4.01E-01		3.48E-04		1.25E-04		1.85E-03	
TPY			3.18E-02		6.54E+00		4.55E-01		1.98E-03		3.39E-04		7.66E-03	
Recent actuals Units 5,6,7 (1)	minus aux boiler		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		na	
	Change from rec		2.18E-02		3.97E+00		1.45E-01		-2.05E-05		3.88E-05		na	

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJB 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

		AS												
SCENARIO 11														
	FUEL	Pb		H2SO4		Fl		Hg		Be		As		Cd
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s
Unit 7	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	6.1E-08	6.30E-07	0	0.00E+00	0	0.00E+00	0
UNIT 7 ANNUALIZED														
Unit 8	Natural Gas	0	0.00E+00	0.00	0.00E+00	0	0.00E+00	1.5E-07	4.28E-06	0	0.00E+00	0	0.00E+00	0
Unit 8	#2 Oil	1.30E-02	2.19E-02	1.26	2.13E+00	2.38E-01	4.01E-01	2.04E-04	3.44E-04	7.41E-05	1.25E-04	1.10E-03	1.85E-03	9.43E-04
Unit 8	Total		2.19E-02		2.13E+00		4.01E-01		3.48E-04		1.25E-04		1.85E-03	
Unit 8 Annualized Nat. Gas														
Unit 8 Annualized #2 Oil														
Unit 8 Annualized Total														
facitlity cap(1)														
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		6.30E-07		0.00E+00		0.00E+00	
based on limiting unit			2.19E-02		2.13E+00		4.01E-01		3.48E-04		1.25E-04		1.85E-03	
TPY			2.19E-02		2.13E+00		4.01E-01		3.49E-04		1.25E-04		1.85E-03	
Recent actuals Units 5,6,7 (1)	*minus aux boiler*		1.00E-02		2.57E+00		3.10E-01		2.00E-03		3.00E-04		*na*	
	Change from rec		1.19E-02		-4.45E-01		9.11E-02		-1.65E-03		-1.75E-04		na	

	gal/hr x							
calc for unit 7 SO2 firing 1% S Fuel	4140							

SCENARIO 1								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	1.80E-03	1.00E-02	4.99E-03	5.80E-03	2.88E-03	1.82E-01	9.08E-02
UNIT 7 ANNUALIZED								
ACCURACY								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)								
Facility annual emissions		1.80E-03		4.99E-03		2.88E-03		9.08E-02
based on limiting unit		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY		1.80E-03		4.99E-03		2.88E-03		9.08E-02
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 2								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	0.00E+00	1.00E-02	0.00E+00	5.80E-03	0.00E+00	1.82E-01	0.00E+00
UNIT 7 ANNUALIZED								
Unit 8	#2 Fuel	6.48E-03	1.05E-02	7.25E-02	7.41E-02	5.09E-01	2.69E-01	1.85E+00
UNIT 8 ANNUALIZED								
facitlity cap(1`)								
Facility annual emissions		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit		6.48E-03		7.25E-02		5.09E-01		1.85E+00
TPY		6.48E-03		7.25E-02		5.09E-01		1.85E+00
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 3								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	1.97E-03	1.00E-02	5.46E-03	5.80E-03	3.16E-03	1.82E-01	9.08E-02
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)								
Facility annual emissions		1.97E-03		5.46E-03		3.16E-03		9.08E-02
based on limiting unit		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY		1.97E-03		5.46E-03		3.16E-03		9.08E-02
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 4								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	3.14E-03	1.00E-02	8.69E-03	5.80E-03	5.02E-03	1.82E-01	1.58E-01
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)								
Facility annual emissions		3.14E-03		8.69E-03		5.02E-03		1.58E-01
based on limiting unit		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY		3.14E-03		8.69E-03		5.02E-03		1.58E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 5								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	NAT. GAS	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)								
Facility annual emissions		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY		0.00E+00		0.00E+00		0.00E+00		0.00E+00
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 6								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	3.43E-03	1.00E-02	9.52E-03	5.80E-03	5.50E-03	1.82E-01	1.73E-01
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)								
Facility annual emissions		3.43E-03		9.52E-03		5.50E-03		1.73E-01
based on limiting unit		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY		3.43E-03		9.52E-03		5.50E-03		1.73E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 7								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)								
Facility annual emissions		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY		0.00E+00		0.00E+00		0.00E+00		0.00E+00
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 8								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	2.16E-03	1.00E-02	5.99E-03	5.80E-03	3.47E-03	1.82E-01	1.09E-01
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	1.87E-03	1.05E-02	2.09E-02	7.41E-02	1.47E-01	2.69E-01	5.34E-01
Unit 8	Total	1.87E-03		2.09E-02		1.47E-01		5.34E-01
Unit 8 Annualized Nat. Gas								
Unit 8 Annualized #2 Oil								
Unit 8 Annualized Total								
facitlity cap(1)								
Facility annual emissions		2.16E-03		5.99E-03		3.47E-03		1.09E-01
based on limiting unit		1.87E-03		2.09E-02		1.47E-01		5.34E-01
TPY		4.03E-03		2.69E-02		1.50E-01		6.43E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 9								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	1.87E-03	1.05E-02	2.09E-02	7.41E-02	1.47E-01	2.69E-01	5.34E-01
Unit 8	Total	1.87E-03		2.09E-02		1.47E-01		5.34E-01
Unit 8 Annualized Nat. Gas								
Unit 8 Annualized #2 Oil								
Unit 8 Annualized Total								
facitlity cap(1)								
Facility annual emissions		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit		1.87E-03		2.09E-02		1.47E-01		5.34E-01
TPY		1.87E-03		2.09E-02		1.47E-01		5.34E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 10								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	2.35E-03	1.00E-02	6.52E-03	5.60E-03	3.77E-03	1.62E-01	1.19E-01
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	1.59E-03	1.05E-02	1.78E-02	7.41E-02	1.25E-01	2.69E-01	4.54E-01
Unit 8	Total	1.59E-03		1.78E-02		1.25E-01		4.54E-01
Unit 8 Annualized Nat. Gas								
Unit 8 Annualized #2 Oil								
Unit 8 Annualized Total								
facitlity cap(1)								
Facility annual emissions		2.35E-03		6.52E-03		3.77E-03		1.19E-01
based on limiting unit		1.59E-03		1.78E-02		1.25E-01		4.54E-01
TPY		3.94E-03		2.43E-02		1.29E-01		5.73E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 11								
	FUEL		Cr		Mn		Ni	
		TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED								
Unit 8	Natural Gas	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	1.59E-03	1.05E-02	1.78E-02	7.41E-02	1.25E-01	2.69E-01	4.54E-01
Unit 8	Total	1.59E-03		1.78E-02		1.25E-01		4.54E-01
Unit 8 Annualized Nat. Gas								
Unit 8 Annualized #2 Oil								
Unit 8 Annualized Total								
facitlity cap(1)								
Facility annual emissions		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit		1.59E-03		1.78E-02		1.25E-01		4.54E-01
TPY		1.59E-03		1.78E-02		1.25E-01		4.54E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler	na		na		na		na
	Change from rec	na		na		na		na

SCENARIO 1											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	9.48E-03	4.72E-03	3.60E-03	1.79E-03	1.39E-01	6.90E-02	3.21E-04	1.60E-04	2.98E-07	1.48E-07
UNIT 7 ANNUALIZED											
ACCURACY											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)											
Facility annual emissions			4.72E-03		1.79E-03		6.90E-02		1.60E-04		1.48E-07
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			4.72E-03		1.79E-03		6.90E-02		1.60E-04		1.48E-07
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 2											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	9.48E-03	0.00E+00	3.60E-03	0.00E+00	1.39E-01	0.00E+00	3.21E-04	0.00E+00	2.98E-07	0.00E+00
UNIT 7 ANNUALIZED											
Unit 8	#2 Fuel	2.04E-03	1.40E-02	4.94E-03	3.40E-02	9.87E-04	6.79E-03	5.39E-03	3.71E-02	9.11E-07	6.27E-06
UNIT 8 ANNUALIZED											
facitlity cap(1`)											
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit			1.40E-02		3.40E-02		6.79E-03		3.71E-02		6.27E-06
TPY			1.40E-02		3.40E-02		6.79E-03		3.71E-02		6.27E-06
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 3											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	9.48E-03	4.72E-03	3.60E-03	1.96E-03	1.39E-01	7.56E-02	3.21E-04	1.75E-04	2.98E-07	1.62E-07
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)											
Facility annual emissions			4.72E-03		1.96E-03		7.56E-02		1.75E-04		1.62E-07
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			4.72E-03		1.96E-03		7.56E-02		1.75E-04		1.62E-07
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
Change from rec			na		na		na		na		na

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJB 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

SCENARIO 4											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	9.48E-03	8.22E-03	3.60E-03	3.12E-03	1.39E-01	1.20E-01	3.21E-04	2.78E-04	2.98E-07	2.58E-07
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)											
Facility annual emissions			8.22E-03		3.12E-03		1.20E-01		2.78E-04		2.58E-07
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			8.22E-03		3.12E-03		1.20E-01		2.78E-04		2.58E-07
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 5											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	NAT. GAS	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)											
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 6											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	9.48E-03	9.00E-03	3.60E-03	3.42E-03	1.39E-01	1.32E-01	3.21E-04	3.05E-04	2.98E-07	2.83E-07
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)											
Facility annual emissions			9.00E-03		3.42E-03		1.32E-01		3.05E-04		2.83E-07
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			9.00E-03		3.42E-03		1.32E-01		3.05E-04		2.83E-07
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 7											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
facitlity cap(1)											
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 8											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	9.48E-03	5.67E-03	3.60E-03	2.15E-03	1.39E-01	8.29E-02	3.21E-04	1.92E-04	2.98E-07	1.78E-07
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	2.04E-03	4.05E-03	4.94E-03	9.79E-03	9.87E-04	1.96E-03	5.39E-03	1.07E-02	9.11E-07	1.81E-06
Unit 8	Total		4.05E-03		9.79E-03		1.96E-03		1.07E-02		1.81E-06
Unit 8 Annualized Nat. Gas											
Unit 8 Annualized #2 Oil											
Unit 8 Annualized Total											
facitlity cap(1)											
Facility annual emissions			5.67E-03		2.15E-03		8.29E-02		1.92E-04		1.78E-07
based on limiting unit			4.05E-03		9.79E-03		1.96E-03		1.07E-02		1.81E-06
TPY			9.72E-03		1.19E-02		8.49E-02		1.09E-02		1.98E-06
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 9											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	2.04E-03	4.05E-03	4.94E-03	9.79E-03	9.87E-04	1.96E-03	5.39E-03	1.07E-02	9.11E-07	1.81E-06
Unit 8	Total		4.05E-03		9.79E-03		1.96E-03		1.07E-02		1.81E-06
Unit 8 Annualized Nat. Gas											
Unit 8 Annualized #2 Oil											
Unit 8 Annualized Total											
facitlity cap(1)											
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit			4.05E-03		9.79E-03		1.96E-03		1.07E-02		1.81E-06
TPY			4.05E-03		9.79E-03		1.96E-03		1.07E-02		1.81E-06
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 10											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	9.48E-03	6.17E-03	3.60E-03	2.34E-03	1.39E-01	9.02E-02	3.21E-04	2.09E-04	2.98E-07	1.94E-07
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	2.04E-03	3.44E-03	4.94E-03	8.32E-03	9.87E-04	1.66E-03	5.39E-03	9.08E-03	9.11E-07	1.53E-06
Unit 8	Total		3.44E-03		8.32E-03		1.66E-03		9.08E-03		1.53E-06
Unit 8 Annualized Nat. Gas											
Unit 8 Annualized #2 Oil											
Unit 8 Annualized Total											
facitlity cap(1)											
Facility annual emissions			6.17E-03		2.34E-03		9.02E-02		2.09E-04		1.94E-07
based on limiting unit			3.44E-03		8.32E-03		1.66E-03		9.08E-03		1.53E-06
TPY			9.61E-03		1.07E-02		9.19E-02		9.29E-03		1.73E-06
Recent actuals Units 5,6,7 (1) minus aux boiler			na		na		na		na		na
Change from rec			na		na		na		na		na

SCENARIO 11											
	FUEL	Co		Sb		V		POM		Ben(a)P	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
UNIT 7 ANNUALIZED											
Unit 8	Natural Gas	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00
Unit 8	#2 Oil	2.04E-03	3.44E-03	4.94E-03	8.32E-03	9.87E-04	1.66E-03	5.39E-03	9.08E-03	9.11E-07	1.53E-06
Unit 8	Total		3.44E-03		8.32E-03		1.66E-03		9.08E-03		1.53E-06
Unit 8 Annualized Nat. Gas											
Unit 8 Annualized #2 Oil											
Unit 8 Annualized Total											
facitlity cap(1)											
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit			3.44E-03		8.32E-03		1.66E-03		9.08E-03		1.53E-06
TPY			3.44E-03		8.32E-03		1.66E-03		9.08E-03		1.53E-06
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na
	Change from rec		na		na		na		na		na

SCENARIO 1													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	8.61E-05	4.29E-05	7.75E-04	3.86E-04	2.98E-03	1.48E-03	4.40E-01	2.19E-01	6.53E-10	3.25E-10	3.17E-02	1.58E-02
UNIT 7 ANNUALIZED													
ACCURACY													
Unit 8	Natural Gas	0.000158	5.48E-03	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	2.33E-01
facitlity cap(1)													
Facility annual emissions			4.29E-05		3.86E-04		1.48E-03		2.19E-01		3.25E-10		1.58E-02
based on limiting unit			5.48E-03		0.00E+00		0.00E+00		0.00E+00		0.00E+00		2.33E-01
TPY			5.52E-03		3.86E-04		1.48E-03		2.19E-01		3.25E-10		2.49E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

SCENARIO 2													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	8.61E-05	0.00E+00	7.75E-04	0.00E+00	2.98E-03	0.00E+00	4.40E-01	0.00E+00	6.53E-10	0.00E+00	3.17E-02	0.00E+00
UNIT 7 ANNUALIZED													
Unit 8	#2 Fuel	2.64E-04	1.81E-03	2.37E-03	1.63E-02	1.19E-03	8.18E-03	1.70E+00	1.17E+01	1.99E-09	1.37E-08	4.79E-03	3.30E-02
UNIT 8 ANNUALIZED													
facitlity cap(1`)													
Facility annual emissions			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
based on limiting unit			1.81E-03		1.63E-02		8.18E-03		1.17E+01		1.37E-08		3.30E-02
TPY			1.81E-03		1.63E-02		8.18E-03		1.17E+01		1.37E-08		3.30E-02
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

SCENARIO 3													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	8.61E-05	4.69E-05	7.75E-04	4.22E-04	2.98E-03	1.62E-03	4.40E-01	2.40E-01	6.53E-10	3.56E-10	3.17E-02	1.73E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	0.00E+00
facitlity cap(1)													
Facility annual emissions			4.69E-05		4.22E-04		1.62E-03		2.40E-01		3.56E-10		1.73E-02
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			4.69E-05		4.22E-04		1.62E-03		2.40E-01		3.56E-10		1.73E-02
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
Change from rec			na		na		na		na		na		na

SCENARIO 4													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	8.61E-05	7.47E-05	7.75E-04	6.72E-04	2.98E-03	2.58E-03	4.40E-01	3.81E-01	6.53E-10	5.66E-10	3.17E-02	2.75E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	5.48E-03	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	2.33E-01
facitlity cap(1)													
Facility annual emissions			7.47E-05		6.72E-04		2.58E-03		3.81E-01		5.66E-10		2.75E-02
based on limiting unit			5.48E-03		0.00E+00		0.00E+00		0.00E+00		0.00E+00		2.33E-01
TPY			5.55E-03		6.72E-04		2.58E-03		3.81E-01		5.66E-10		2.60E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

SCENARIO 5													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	NAT. GAS	6.27E-05	7.08E-04	0.000783	8.86E-03	0	0.00E+00	0	0.00E+00	9.398E-11	1.06E-09	0	0.00E+00
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	5.48E-03	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	2.33E-01
facitlity cap(1)													
Facility annual emissions			7.08E-04		8.86E-03		0.00E+00		0.00E+00		1.06E-09		0.00E+00
based on limiting unit			5.48E-03		0.00E+00		0.00E+00		0.00E+00		0.00E+00		2.33E-01
TPY			6.19E-03		8.86E-03		0.00E+00		0.00E+00		1.06E-09		2.33E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

SCENARIO 6

	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	8.61E-05	8.18E-05	7.75E-04	7.36E-04	2.98E-03	2.83E-03	4.40E-01	4.18E-01	6.53E-10	6.20E-10	3.17E-02	3.01E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	0.00E+00
facitlity cap(1)													
Facility annual emissions			8.18E-05		7.36E-04		2.83E-03		4.18E-01		6.20E-10		3.01E-02
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			8.18E-05		7.36E-04		2.83E-03		4.18E-01		6.20E-10		3.01E-02
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
Change from rec			na		na		na		na		na		na

SCENARIO 7

	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	6.27E-05	1.59E-03	0.000783	1.99E-02	0	0.00E+00	0	0.00E+00	9.398E-11	2.39E-09	2.66E-03	6.77E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	0.00E+00
facitlity cap(1)													
Facility annual emissions			1.59E-03		1.99E-02		0.00E+00		0.00E+00		2.39E-09		6.77E-02
based on limiting unit			0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00		0.00E+00
TPY			1.59E-03		1.99E-02		0.00E+00		0.00E+00		2.39E-09		6.77E-02
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
Change from rec			na		na		na		na		na		na

SCENARIO 8													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	8.61E-05	5.15E-05	7.75E-04	4.64E-04	2.98E-03	1.78E-03	4.40E-01	2.63E-01	6.53E-10	3.90E-10	3.17E-02	1.90E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	5.16E-03	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	2.20E-01
Unit 8	#2 Oil	2.64E-04	5.22E-04	2.37E-03	4.70E-03	1.19E-03	2.36E-03	1.70E+00	3.36E+00	1.99E-09	3.94E-09	4.79E-03	9.50E-03
Unit 8	Total		5.69E-03		4.70E-03		2.36E-03		3.36E+00		3.94E-09		2.29E-01
Unit 8 Annualized Nat. Gas													
Unit 8 Annualized #2 Oil													
Unit 8 Annualized Total													
facitlity cap(1)													
Facility annual emissions			5.15E-05		4.64E-04		1.78E-03		2.63E-01		3.90E-10		1.90E-02
based on limiting unit			5.69E-03		4.70E-03		2.36E-03		3.36E+00		3.94E-09		2.29E-01
TPY			5.74E-03		5.17E-03		4.14E-03		3.63E+00		4.33E-09		2.48E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

SCENARIO 9													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	6.27E-05	4.79E-04	0.000783	5.99E-03	0	0.00E+00	0	0.00E+00	9.398E-11	7.18E-10	0.0026627	2.04E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	5.16E-03	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	2.20E-01
Unit 8	#2 Oil	2.64E-04	5.22E-04	2.37E-03	4.70E-03	1.19E-03	2.36E-03	1.70E+00	3.36E+00	1.99E-09	3.94E-09	4.79E-03	9.50E-03
Unit 8	Total		5.69E-03		4.70E-03		2.36E-03		3.36E+00		3.94E-09		2.29E-01
Unit 8 Annualized Nat. Gas													
Unit 8 Annualized #2 Oil													
Unit 8 Annualized Total													
facitlity cap(1)													
Facility annual emissions			4.79E-04		5.99E-03		0.00E+00		0.00E+00		7.18E-10		2.04E-02
based on limiting unit			5.69E-03		4.70E-03		2.36E-03		3.36E+00		3.94E-09		2.29E-01
TPY			6.17E-03		1.07E-02		2.36E-03		3.36E+00		4.66E-09		2.49E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

By. M. Bilello Date: 11/21/96
Ckd By:D.Graziani Date:1/9/97 DJG 3/4/97
Rvd By:M. Bilello Date:03/04/97

FOSTER WHEELER ENVIRONMENTAL CORPORATION

OFS No. 1584.0005.0008

Client: City of Tallahassee
Project:Purdom Unit 8

SCENARIO 10													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	#6 Fuel	6.61E-05	5.61E-05	7.75E-04	5.05E-04	2.98E-03	1.94E-03	4.40E-01	2.86E-01	6.53E-10	4.25E-10	3.17E-02	2.06E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	4.39E-03	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	1.87E-01
Unit 8	#2 Oil	2.64E-04	4.44E-04	2.37E-03	4.00E-03	1.19E-03	2.00E-03	1.70E+00	2.86E+00	1.99E-09	3.35E-09	4.79E-03	8.08E-03
Unit 8	Total		4.83E-03		4.00E-03		2.00E-03		2.86E+00		3.35E-09		1.95E-01
Unit 8 Annualized Nat. Gas													
Unit 8 Annualized #2 Oil													
Unit 8 Annualized Total													
facitlity cap(1)													
Facility annual emissions			5.61E-05		5.05E-04		1.94E-03		2.86E-01		4.25E-10		2.06E-02
based on limiting unit			4.83E-03		4.00E-03		2.00E-03		2.86E+00		3.35E-09		1.95E-01
TPY			4.89E-03		4.50E-03		3.94E-03		3.15E+00		3.78E-09		2.15E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

SCENARIO 11													
	FUEL	Benzene		Toluene		Se		HCl		2378 TCDD		HCOH	
		g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY	g/s	TPY
Unit 7	Natural Gas	6.27E-05	6.46E-04	0.000783	8.07E-03	0	0.00E+00	0	0.00E+00	9.398E-11	9.69E-10	2.66E-03	2.75E-02
UNIT 7 ANNUALIZED													
Unit 8	Natural Gas	0.000158	4.39E-03	0	0.00E+00	0	0.00E+00	0	0.00E+00	0	0.00E+00	0.0067027	1.87E-01
Unit 8	#2 Oil	2.64E-04	4.44E-04	2.37E-03	4.00E-03	1.19E-03	2.00E-03	1.70E+00	2.86E+00	1.99E-09	3.35E-09	4.79E-03	8.08E-03
Unit 8	Total		4.83E-03		4.00E-03		2.00E-03		2.86E+00		3.35E-09		1.95E-01
Unit 8 Annualized Nat. Gas													
Unit 8 Annualized #2 Oil													
Unit 8 Annualized Total													
facitlity cap(1)													
Facility annual emissions			6.46E-04		8.07E-03		0.00E+00		0.00E+00		9.69E-10		2.75E-02
based on limiting unit			4.83E-03		4.00E-03		2.00E-03		2.86E+00		3.35E-09		1.95E-01
TPY			5.48E-03		1.21E-02		2.00E-03		2.86E+00		4.32E-09		2.22E-01
Recent actuals Units 5,6,7 (1)	minus aux boiler		na		na		na		na		na		na
	Change from rec		na		na		na		na		na		na

April 28, 1995

Mr. Howard L. Rhodes, Director
Division of Air Resources Management
Florida Department of Environmental Protection
2600 Blair Stone Road, M.S. 5505
Tallahassee, FL 32399-2400

RE: Florida Electric Power Coordinating Group (FCG)
Emission Factors for Title Permit Applications

Dear Howard:

This correspondence is being submitted on behalf of the FCG to obtain FDEP concurrence with proposed emission factors that would be used in the preparation of Title V permit applications. This submittal is consistent with your letter dated September 27, 1993, in which the division has agreed to consider industry proposals for industry-specific emission factors in the absence of EPA-approved factors and encourages facilities to submit new or updated air pollutant emission information that become available. The emission factors in this correspondence were developed based on the latest information available for the various types of air emission sources at electric generating utilities. It is the intent that the proposed emission factors and referenced material be used in determining emissions for Item 5. of Section E. Pollutant Information in FDEP Form No.62.62-210.900(1). The exception will be if the utility has more direct information on emissions or there is an applicable air construction or operating permit requirement.

EPA emission factors from AP-42 are proposed for many of the criteria pollutants where permit limits are not in the specific conditions of the air construction or operating permit. Many of the emission factors for trace emissions were based on the Electric Power Research Institute's (EPRI) Electric Utility Trace Substances Synthesis Report, November, 1994. This report which was submitted to EPA at the end of last year will be used in EPA's report to Congress later this year on estimated toxic air emissions from electric utility units. Where information is not available from AP-42 or EPRI, other utility data or EPA information were used.

The emission factors and/or references are in the form of tables which list the type of emission sources, the pollutants, the emission factor units, the proposed emission factor and the basis for the emission factor or present the reference to existing emission factors. The tables presented in this correspondence include emission factors for utility and industrial boilers which fire coal, natural gas, or oil (see Tables SUM-1 through SUM-4). References for emission factors are also presented for combustion turbines as well as particulate and volatile organic compound emissions from sources which are generally considered as fugitive. A general summary of recommended emission factors for these emission sources is presented in Table SUM-5.

KBN ENGINEERING AND APPLIED SCIENCES, INC.

8241 Northwest 23rd Street, Suite 500, Gainesville, Florida 32653-1500, 904-336-5600 FAX 904-336-6603
5405 West Cypress Street, Suite 215, Tampa, Florida 33607, 813-287-1717 FAX 813-287-1716
1801 Clint Moore Road, Suite 105, Boca Raton, Florida 33487, 407-994-9910, FAX 407-994-9393
7785 Baymeadows Way, Suite 105, Jacksonville, Florida 32256, 904-739-5600 FAX 904-739-7777
1616 'P' Street N.W., Suite 450, Washington, D.C. 20036, 202-462-1100, FAX 202-462-2270

I have provided a general certification regarding the overall use of these emissions factors. If there are any questions, Dwain Waters and I can meet with your staff or have a conference call to address any comments. Mr. Dwain Waters of Gulf Power Company is the FCG representative on this issue.

Your consideration in this matter is appreciated.

Sincerely,

Kennard F. Kosky, P.E.
President

cc: Dwain Waters, FCG
Bob McCann, KBN
Clair Fancy, FDEP
John Brown, FDEP

15053A/2

PROFESSIONAL ENGINEER STATEMENT

I, the undersigned, hereby certify that:

To the best of my knowledge, the emission factors presented herein are true, accurate, and complete and are based upon available techniques and information for calculating reasonable estimates of emissions from electric utility emission units.

Kennard F. Kosky, P.E.

4/27/95
Date

Table SUM-1. Coal Combustion for Utility Boilers- Summary of Recommended Emission Factors, Uncontrolled and Controlled

Pollutant	Units	PC/ DB-WF Value	PC/ DB-WF Equation a	PC/ DB-WF Equation b	PC/ DB-TF Value	PC/ DB-TF Equation a	PC/ DB-TF Equation b	PC/ WB Value	PC/ WB Equation a	PC/ WB Equation b	Basis
Criteria And Precursor Pollutants											
Sulfur Dioxide	lb/ton	38(S%).95			38(S%).95			38(S%).95			AP-42
Particulate Matter	lb/ton	10(A%)			10(A%)			7(A%)			AP-42
Particulate Matter (PM10)	lb/ton	2.3(A%)			2.3(A%)			2.6(A%)			AP-42
Nitrogen Oxides	lb/ton	21.7			14.4			34			AP-42
Carbon Monoxide	lb/ton	0.5			0.5			0.5			AP-42
Volatile Organic Compounds	lb/ton	0.06			0.06			0.04			AP-42
Lead	lb/10^12 Btu	EQN	3.4	0.8	EQN	3.4	0.8	EQN	3.4	0.8	EPRI
NSPS/NESHAP Pollutants											
Arsenic	lb/10^12 Btu	EQN	3.1	0.85	EQN	3.1	0.85	EQN	3.1	0.85	EPRI
Beryllium	lb/10^12 Btu	EQN	1.2	1.1	EQN	1.2	1.1	EQN	1.2	1.1	EPRI
Fluorides (as HF)	lb/10^12 Btu	CON			CON			CON			EPRI
Hydrogen Chloride	lb/10^12 Btu	CON			CON			CON			EPRI
Mercury	lb/10^12 Btu	8.33			8.33			8.33			FCG (1)
Radionuclides	pCi/gram PM	52.75			52.75			52.75			EPRI
Sulfuric Acid Mist	lb/ton	38(S%)x.00858			38(S%)x.00858			38(S%)x.00858			AP-42 (2)
2,3,7,8-TCDD equiv. (dioxin/furan)	lb/10^12 Btu	2.00E-08			2.00E-08			2.00E-08			EPRI
Other Regulated Air Pollutants											
Acetaldehyde	lb/10^12 Btu	--			--			--			--
Acrolein	lb/10^12 Btu	--			--			--			--
Antimony	lb/10^12 Btu	EQN	0.92	0.63	EQN	0.92	0.63	EQN	0.92	0.63	EPRI
Benzene	lb/10^12 Btu	3.8			3.8			3.8			EPRI
Cadmium	lb/10^12 Btu	EQN	3.3	0.5	EQN	3.3	0.5	EQN	3.3	0.5	EPRI
Chromium	lb/10^12 Btu	EQN	3.7	0.58	EQN	3.7	0.58	EQN	3.7	0.58	EPRI
Cobalt	lb/10^12 Btu	EQN	1.7	0.69	EQN	1.7	0.69	EQN	1.7	0.69	EPRI
Formaldehyde	lb/10^12 Btu	3			3			3			EPRI
Manganese	lb/10^12 Btu	EQN	3.8	0.6	EQN	3.8	0.6	EQN	3.8	0.6	EPRI
Methane	lb/ton	0.04			0.04			0.05			AP-42
Nickel	lb/10^12 Btu	EQN	4.4	0.48	EQN	4.4	0.48	EQN	4.4	0.48	EPRI
Phosphorous	lb/10^12 Btu	--			--			--			--
Polycyclic Organic Matter	lb/10^12 Btu	2.08			2.4			2.4			AP-42
Selenium	lb/10^12 Btu	CON			CON			CON			--
Toluene	lb/10^12 Btu	1.4			1.4			1.4			EPRI

Table 8UM-1. Coal Combustion for Utility Boilers- Summary of Recommended Emission Factors, Uncontrolled and Controlled

Pollutant	Units	PC/ DB-WF Value	PC/ DB-WF Equation a	PC/ DB-WF Equation b	PC/ DB-TF Value	PC/ DB-TF Equation a	PC/ DB-TF Equation b	PC/ WB Value	PC/ WB Equation a	PC/ WB Equation b	Basis
Xylene	lb/10^12 Btu	--			--			--			--
Non-regulated Pollutants											
Carbon Dioxide	lb/ton	73.3(C%)			73.3(C%)			73.3(C%)			
Controlled Emission Factors (3)											

Note: PC= pulverized coal; DB-WF= dry bottom- wall-fired; DB-TF= dry bottom, tangentially-fired; WB= wet bottom.
EQN means equation used to calculate factor- a (X) ^b where X= (coal ppm/ash fraction) x PM emissions (lb/10^12 Btu)
CON means concentration in coal input (e.g., mg/kg)
S= sulfur content (%)
C= carbon content (%)

(1) Based on mercury concentration of 0.10 ppm and coal heat content of 12,000 Btu/lb.
(2) Based on SO3 emission factor and adjusting for molecular weight of H2SO4/ SO3 (98/80).
(3) Controlled factors can be obtained by multiplying the following fractions for emission controls (representative of control efficiencies) by the uncontrolled emission factors:

Pollutant	ESP	Baghouse	Scrubber	
SO2/SO3	1	1	0.1	
PM	0.008	0.002	0.06	
PM10	0.02174	0.006896	0.1826	
As, Be, Cd, Co, Cr, Mn, Ni, Pb, Sb	0.1	0.1	0.1	(multiply by X in EQN, see note above)
Mercury	0.70	0.70	0.55	
Selenium	0.55	0.55	0.12	
HCl, HF	1.00	1.00	0.03	
Formaldehyde	0.10	0.10	0.10	

		LNB	LNB+OFA	LNB(LNC3)	SCR
NOx	DB-WF	0.625	0.45	1.00	0.25
	WB	0.625	0.45	1.00	0.25
	DB-TF	0.775	0.65	0.56	0.25

GASFAC01
4/16/95

Table SUM-2. Natural Gas Combustion for Utility Boilers- Summary of Emission Factors, Uncontrolled and Controlled

Pollutant	Units	FCG- Recommendation Heat Input Rate (MMBtu/hr) > 100	10-100	Basis
Criteria And Precursor Pollutants				
Sulfur Dioxide	lb/Mmcf	6.00E-01	6.00E-01	AP-42 (1)
Particulate Matter	lb/Mmcf	3.00E+00	1.37E+01	AP-42
Particulate Matter (PM10)	lb/Mmcf	3.00E+00	1.37E+01	AP-42
Nitrogen Oxides	lb/Mmcf	5.50E+02	1.40E+02	AP-42
Nitrogen Oxides (tangentially-fired)	lb/Mmcf	2.75E+00		AP-42
Carbon Monoxide	lb/Mmcf	4.00E+01	3.50E+01	AP-42
Volatile Organic Compounds	lb/Mmcf	1.41E+00	2.78E+00	AP-42
Lead	lb/10^12 Btu	NA	NA	EPRI
NSPS/NESHAP Pollutants				
Arsenic	lb/10^12 Btu	NA	NA	EPRI
Beryllium	lb/10^12 Btu	NA	NA	EPRI
Fluorides (as HF)	lb/10^12 Btu	NA	NA	NA
Hydrogen Chloride	lb/10^12 Btu	NA	NA	NA
Mercury	lb/10^12 Btu	7.80E-04	7.80E-04	FCG
Radionuclides	pCi/gram	NA	NA	NA
Sulfuric Acid Mist	lb/10^12 Btu	??	??	??
2,3,7,8-TCDD equiv. (dioxin/furans)	lb/10^12 Btu	1.20E-06	1.20E-06	EPRI
Other Regulated Air Pollutants				
Acetaldehyde	lb/10^12 Btu	NA	NA	NA
Acrolein	lb/10^12 Btu	NA	NA	NA
Antimony	lb/10^12 Btu	NA	NA	NA
Benzene	lb/10^12 Btu	8.00E-01	8.00E-01	EPRI
Cadmium	lb/10^12 Btu	NA	NA	EPRI
Chromium	lb/10^12 Btu	NA	NA	EPRI
Cobalt	lb/10^12 Btu	NA	NA	EPRI
Formadehyde	lb/10^12 Btu	3.40E+01	3.40E+01	EPRI
Manganese	lb/10^12 Btu	NA	NA	EPRI
Methane	lb/10^12 Btu	2.90E-01	2.90E-01	AP-42
Nickel	lb/10^12 Btu	NA	NA	EPRI
Phosphorous	lb/10^12 Btu	NA	NA	NA
Polycyclic Organic Matter	lb/10^12 Btu	NA	NA	NA
Selenium	lb/10^12 Btu	NA	NA	EPRI
Toluene	lb/10^12 Btu	1.00E+01	1.00E+01	EPRI
Xylene	lb/10^12 Btu	NA	NA	NA
Non-regulated Pollutants				
Carbon dioxide	lb/10^12 Btu	1.20E+05	1.20E+05	AP-42
Controlled Emission Factors				
Nitrogen Oxides LNB	lb/Mmcf	8.10E+01	8.10E+01	AP-42
FGR	lb/Mmcf	5.30E+01	3.00E+01	AP-42
SCR	lb/Mmcf	1.21E+02	1.21E+02	AP-42
Carbon Monoxide LNB	lb/Mmcf	NA	8.10E+01	AP-42
FGR	lb/Mmcf	NA	3.70E+01	AP-42

Note: LNB= low NOx burner; FGR= flue gas recirculation; SCR- selective catalytic reduction.

(1) Based on 0.2 grain sulfur/ 100 cf; sulfur content may be higher if delivered by pipeline (2.86 lb/MMBtu; assuming 1.0 gr/100 cf).

OILFAC01
4/16/95

Table SUM-3. Oil Combustion for Utility Boilers- Summary of Recommended Emission Factors, Uncontrolled and Controlled

Pollutant	Units	FCG- Recommendation No. 6	No. 5	No. 4	No. 2	Basis
Criteria And Precursor Pollutants						
Sulfur Dioxide	lb/10^3 gal	157(S%)	157(S%)	150(S%)	142(S%)	AP-42
Particulate Matter	lb/10^3 gal	9.19(S%)+3.22	10	7	2	AP-42
Particulate Matter (PM10)	lb/10^3 gal	[9.19(S%)+3.22] 0.7	7.1	4.97	1	AP-42
Nitrogen Oxides	lb/10^3 gal	67	67	67	20	AP-42
Nitrogen Oxides (tangential-firing)	lb/10^3 gal	42	42	42	20	AP-42
Carbon Monoxide	lb/10^3 gal	5	5	5	5	AP-42
Volatile Organic Compounds	lb/10^3 gal	0.76	0.76	0.76	0.2	AP-42
Lead	lb/10^12 Btu	7	7	7	8.9	EPRI/Radian (No. 2
NSPS/NESHAP Pollutants						
Arsenic	lb/10^12 Btu	5.5	5.5	5.5	4.2	EPRI/Radian (No. 2
Beryllium	lb/10^12 Btu	0.2	0.2	0.2	0.2	EPRI
Fluorides (as HF) (1)	lb/10^3 gal	0.842	0.842	0.842	0.842	FCG
Hydrogen Chloride (2)	lb/10^3 gal	0.998	0.998	0.998	0.998	FCG
Mercury	lb/10^12 Btu	1	1	1	1	FCG
Radionuclides	pCi/gram	1.9	1.9	1.9	1.9	EPRI
Sulfuric Acid Mist (3)	lb/10^3 gal	6.983(S%)	6.983(S%)	6.983(S%)	2.45(S%)	AP-42
2,3,7,8-TCDD equiv. (dioxins/furans)	lb/10^12 Btu	8.30OE-06	8.3E-06	8.3E-06	8.3E-06	EPRI
Other Regulated Air Pollutants						
Acetaldehyde	lb/10^12 Btu	NA	NA	NA	NA	NA
Acrolein	lb/10^12 Btu	NA	NA	NA	NA	NA
Antimony	lb/10^12 Btu	35	35	35	35	AP-42
Benzene	lb/10^12 Btu	1.1	1.1	1.1	1.1	EPRI
Cadmium	lb/10^12 Btu	1.3	1.3	1.3	1.3	EPRI
Chromium	lb/10^12 Btu	5.2	4	4	4	EPRI
Cobalt	lb/10^12 Btu	37	37	37	37	EPRI
Formaldehyde	lb/10^12 Btu	20	20	20	20	EPRI
Manganese	lb/10^12 Btu	13	13	13	13	EPRI
Methane	lb/10^3 gal	0.26	0.26	0.26	0.052	AP-42
Nickel	lb/10^12 Btu	720	370	370	170	EPRI
Phosphorous	lb/10^12 Btu	NA	NA	NA	NA	NA
Polycyclic Organic Matter	lb/10^12 Btu	4.1	4.1	4.1	22.5	Radian
Selenium	lb/10^12 Btu	2	2	2	2	EPRI
Toluene	lb/10^12 Btu	9.9	9.9	9.9	9.9	EPRI
Xylene	lb/10^12 Btu	NA	NA	NA	NA	NA
Non-regulated Pollutants						
Carbon dioxide	lb/10^3 gal	288 (C%)	288 (C%)	288 (C%)	259 (C%)	AP-42
PCB Used Oil Only (4)	lb/10^3 gal	NA	NA	NA	NA	FCG- 0.4 lb/10^3 g
Vanadium	lb/10^3 gal	0.2656	0.2656	0.2656	0.2656	FCEM
Controlled Emission Factors (5)						

(1) Based on 100 ppm fluorine content and oil density of 8.0 lb/gal.
(2) Based on 121.3 ppm chlorine content and oil density of 8.0 lb/gal.
(3) Based on SO3 emission factor and adjusting for molecular weight ratio (MW H2SO4/MW SO3= 98/80)
(4) Based on PCB concentration of 50 ppm.
(5) Controlled factors can be obtained by multiplying the following fractions for emission controls (representative of control efficiencies) by the uncontrolled emission factors:

Pollutant	ESP	Baghouse	Scrubber
SO2/SO3	1.0	1.0	0.1
PM	0.008	--	0.06
PM10	0.007119	--	0.008475

	LNB	LNB+OFA	LNB(LNC3)	SCR
NOx- Normal firing	0.625	0.45	--	0.25
- Tangential firing	0.775	0.65	--	0.25

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Table SUM-4. Oil Combustion for Industrial Boilers- Summary of Recommended Emission Factors, Uncontrolled and Controlled

Pollutant	Units	FCG- Recommendation No. 6	No. 5	No. 4	No. 2	Basis
Criteria And Precursor Pollutants						
Sulfur Dioxide	lb/10^3 gal	157(S%)	157(S%)	150(S%)	142(S%)	AP-42
Particulate Matter	lb/10^3 gal	9.19(S%)+3.22	10	7	2	AP-42
Particulate Matter (PM10)	lb/10^3 gal	[9.19(S%)+3.22] 0.7	7.1	4.97	1	AP-42
Nitrogen Oxides	lb/10^3 gal	67	67	67	20	AP-42
Nitrogen Oxides (tangential-firing)	lb/10^3 gal	55	55	20	20	AP-42
Carbon Monoxide	lb/10^3 gal	5	5	5	5	AP-42
Volatile Organic Compounds	lb/10^3 gal	0.28	0.28	0.28	0.2	AP-42
Lead	lb/10^12 Btu	7	7	7	8.9	EPRI/Radian (No. 2
NSPS/NESHAP Pollutants						
Arsenic	lb/10^12 Btu	5.5	5.5	5.5	4.2	EPRI/Radian (No. 2
Beryllium	lb/10^12 Btu	0.2	0.2	0.2	0.2	EPRI
Fluorides (as HF) (1)	lb/10^3 gal	0.842	0.842	0.842	0.842	FCG
Hydrogen Chloride (2)	lb/10^3 gal	0.998	0.998	0.998	0.998	FCG
Mercury	lb/10^12 Btu	1	1	1	1	FCG
Radionuclides	pCi/gram	1.9	1.9	1.9	1.9	EPRI
Sulfuric Acid Mist (3)	lb/10^3 gal	6.983(S%)	6.983(S%)	6.983(S%)	2.45(S%)	AP-42
2,3,7,8-TCDD equiv. (dioxins/furans)	lb/10^12 Btu	8.30DE-06	8.3E-06	8.3E-06	8.3E-06	EPRI
Other Regulated Air Pollutants						
Acetaldehyde	lb/10^12 Btu	NA	NA	NA	NA	NA
Acrolein	lb/10^12 Btu	NA	NA	NA	NA	NA
Antimony	lb/10^12 Btu	35	35	35	35	AP-42
Benzene	lb/10^12 Btu	1.1	1.1	1.1	1.1	EPRI
Cadmium	lb/10^12 Btu	1.3	1.3	1.3	1.3	EPRI
Chromium	lb/10^12 Btu	5.2	4	4	4	EPRI
Cobalt	lb/10^12 Btu	37	37	37	37	EPRI
Formaldehyde	lb/10^12 Btu	20	20	20	20	EPRI
Manganese	lb/10^12 Btu	13	13	13	13	EPRI
Methane	lb/10^3 gal	1	1	0.052	0.052	AP-42
Nickel	lb/10^12 Btu	720	370	370	170	EPRI
Phosphorous	lb/10^12 Btu	NA	NA	NA	NA	NA
Polycyclic Organic Matter	lb/10^12 Btu	4.1	4.1	4.1	22.5	Radian
Selenium	lb/10^12 Btu	2	2	2	2	EPRI
Toluene	lb/10^12 Btu	9.9	9.9	9.9	9.9	EPRI
Xylene	lb/10^12 Btu	NA	NA	NA	NA	NA
Non-regulated Pollutants						
Carbon dioxide	lb/10^3 gal	288 (C%)	288 (C%)	288 (C%)	259 (C%)	AP-42
PCB Used Oil Only (4)	lb/10^3 gal	NA	NA	NA	NA	FCG- 0.4 lb/10^3 g
Vanadium	lb/10^3 gal	0.2656	0.2656	0.2656	0.2656	FCEM
Controlled Emission Factors (5)						

(1) Based on 100 ppm fluorine content and oil density of 8.0 lb/gal.
(2) Based on 121.3 ppm chlorine content and oil density of 8.0 lb/gal.
(3) Based on SO3 emission factor and adjusting for molecular weight ratio (MW H2SO4/MW SO3= 98/80)
(4) Based on PCB concentration of 50 ppm.
(5) Controlled factors can be obtained by multiplying the following fractions for emission controls (representative of control efficiencies) by the uncontrolled emission factors:

Pollutant	ESP	Baghouse	Scrubber
SO2/SO3	1	1	0.1
PM	0.008	--	0.08
PM10	0.007119	--	0.008475

	LNB	LNB+OFA	LNB(LNC3)	SCR
NOx- Normal firing	0.625	0.45	--	0.25
- Tangential firing	0.775	0.65	--	0.25

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Table SUM-5. General Summary of Recommended Emission Factors

Fuel/ Pollutant	Emission Type	Size	References	Comments
1. Boilers				
Coal- Bituminous Sub-bituminous	Utility Dry bottom wall-fired Dry bottom tangentially fired Wet bottom		AP-42, EPRI, FCG	See Table SUM-1
Coal/Petroleum coke (50-50 blend)			Same as Coal	Default to Coal
Coal/ Tire derived fuel (90-10 blend)			Same as Coal	Default to Coal, except additional margin for NOx, CO, Mn, Co
Coal/ Wood (90-10 blend)			Same as Coal	Default to Coal
Natural Gas	Utility	> 100 MMBtu/hr	AP-42, EPRI, FCG	See Table SUM-2
		10 - 100 MMBtu/hr	AP-42, EPRI, FCG	See Table SUM-2
	Industrial	> 100 MMBtu/hr	Same as Utility Gas	See Table SUM-2
		10 - 100 MMBtu/hr	Same as Utility Gas	See Table SUM-2
Propane	Industrial		AP-42	
Butane	Industrial		AP-42	
Fuel Oil- Residual (No. 6,5, Distillate (No. 2)	Utility Normal- fired Tangentially- fired		AP-42, EPRI, Radian, FCG, FCEM	See Table SUM-3
	Industrial		AP-42, EPRI, Radian, FCG, FCEM	See Table SUM-4
Used oil	All Boilers		FCG- default to residual or distillate with exceptions	See Tables SUM-3 and4 (in part); Exceptions for: On-spec- PCB Off-spec- As, Cd, Cr, Pb, HCl, P
2. Combustion Turbines				
Natural Gas	Utility, Industrial		AP-42, FCG	FCG- mercury
Fuel Oil	Utility, Industrial		AP-42, see Utility Boilers	For factors not in AP-42, use factors for utility fuel oil; Controls for NOx, CO for SCR, water and steam injection

GENFAC01
4/16/95

Table SUM-5. General Summary of Recommended Emission Factors

Fuel/ Pollutant	Emission Type	Size	References	Comments
3. Fugitive Emission Sources				
Particulate Matter	Continuous Drop Batch Drop Wind Erosion- Active Storage Pile Unpaved and Paved Roads Abrasive Blasting		AP-42	Based on permit reference; use of site characteristic data
Particulate Matter	Wet Cooling Tower		AP-42	
Volatile Organic Compounds	Painting Operations		Manufacturer	Normal- 6 lb/gal; Low VOC- 3.5 lb/gal
	Petroleum Industry Cooling towers; Pipeline valves, flanges, etc.		Fire/ AP-42	
	Storage tanks		AP-42	Calculate breathing, working losses, etc. with EPA's TANKS Program
As, Be, Cd, Cr, Pb, Hg, Se, Ag	Boiler Cleaning Waste Evaporation		TCLP limits	

References:
AP-42- EPA document, "Air Pollutant Emission Factors for Stationary Point Sources"
EPRI- Synthesis Report, November, 1994.
Radian- "Estimating Air Toxics Emissions from Coal and Oil Combustion Sources, April, 1989.
FCG- Based on specific information from available fuel data.
FCEM- EPRI's Field Chemical Emission Monitoring Program.
Fire- EPA's Factor Information Retrieval System

APPENDIX D

EPA BACT/LAER CLEARINGHOUSE
COMBUSTION TURBINE
QUERY RESULTS

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
AL-0069	INTERNATIONAL PAPER CO. RIVERDALE MILL	ALABAMA DEPT OF ENVIRONMENTAL MGMT	(205) 271-7861	TURBINE, STATIONARY (GAS-FIRED) WITH DUCT BURNER	40.00	MW	CO	2.21E+01	LB/HR	DESIGN	0.000	BACT-PSD
AL-0069	INTERNATIONAL PAPER CO. RIVERDALE MILL	ALABAMA DEPT OF ENVIRONMENTAL MGMT	(205) 271-7861	TURBINE, STATIONARY (GAS-FIRED) WITH DUCT BURNER	40.00	MW	NOX	8.00E-02	LB/MMBTU (GAS)	STEAM INJECTION INTO THE TURBINE	0.000	BACT-PSD
AL-0069	INTERNATIONAL PAPER CO. RIVERDALE MILL	ALABAMA DEPT OF ENVIRONMENTAL MGMT	(205) 271-7861	TURBINE, STATIONARY (GAS-FIRED) WITH DUCT BURNER	40.00	MW	PM10	1.00E-02	LB/MMBTU (GAS)	FUEL SPECIFICATION	0.000	BACT-PSD
AL-0069	INTERNATIONAL PAPER CO. RIVERDALE MILL	ALABAMA DEPT OF ENVIRONMENTAL MGMT	(205) 271-7861	TURBINE, STATIONARY (GAS-FIRED) WITH DUCT BURNER	40.00	MW	VOC	8.30E+00	LB/HR (GAS)	DESIGN	0.000	BACT-PSD
AL-0074	FLORIDA GAS TRANSMISSION COMPANY	ALABAMA DEPT OF ENVIRONMENTAL MGMT	(205) 271-7861	TURBINE, NATURAL GAS	12800.00	BHP	CO	4.20E-01	GM/HP HR	AIR-TO-FUEL RATIO CONTROL, DRY COMBUSTION CONTROLS	0.000	BACT-PSD
AL-0074	FLORIDA GAS TRANSMISSION COMPANY	ALABAMA DEPT OF ENVIRONMENTAL MGMT	(205) 271-7861	TURBINE, NATURAL GAS	12800.00	BHP	NOX	5.80E-01	GM/HP HR	AIR-TO-FUEL RATIO CONTROL, DRY LOW NOX COMBUSTION	71.000	BACT-PSD
AZ-0010	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, GAS, SOLAR CENTAUR H	5500.00	HP	CO	1.05E+01	PPM @ 15% O2	FUEL SPEC: LEAN FUEL MIX	0.000	BACT-PSD
AZ-0010	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, GAS, SOLAR CENTAUR H	5500.00	HP	NOX	8.49E+01	PPM @ 15% O2	LEAN BURN	0.000	NSPS
AZ-0010	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, GAS, SOLAR CENTAUR H	5500.00	HP	NOX	4.20E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	51.000	BACT-PSD
AZ-0011	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, GAS, SOLAR CENTAUR H	5500.00	HP	CO	1.05E+01	PPM @ 15% O2	FUEL SPEC: LEAN FUEL MIX	0.000	BACT-PSD
AZ-0011	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, GAS, SOLAR CENTAUR H	5500.00	HP	NOX	6.51E+01	PPM @ 15% O2	FUEL SPEC: LEAN FUEL MIX	0.000	NSPS
AZ-0011	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, GAS, SOLAR CENTAUR H	5500.00	HP	NOX	4.20E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	51.000	BACT-PSD
AZ-0012	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, NAT. GAS TRANSM., GE FRAME 3	12000.00	HP	CO	6.00E+01	PPM @ 15% O2	LEAN BURN	0.000	BACT-PSD
AZ-0012	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, NAT. GAS TRANSM., GE FRAME 3	12000.00	HP	NOX	2.25E+02	PPM @ 15% O2	LEAN BURN	0.000	BACT-PSD
AZ-0012	EL PASO NATURAL GAS	EPA REGION IX	(415)-744-1263	TURBINE, NAT. GAS TRANSM., GE FRAME 3	12000.00	HP	NOX	4.20E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	80.000	BACT-PSD
CA-0418	SOUTHERN CALIFORNIA GAS	KERN COUNTY APCD (DESERT PORTION), CA	(805)-861-3682	TURBINE, GAS-FIRED	47.64	MMBTU/H	CO	7.74E+00	PPM @ 15% O2	HIGH TEMPERATURE OXIDATION CATALYST	80.000	BACT-PSD
CA-0418	SOUTHERN CALIFORNIA GAS	KERN COUNTY APCD (DESERT PORTION), CA	(805)-861-3682	TURBINE, GAS-FIRED	47.64	MMBTU/H	HC	1.94E+00	PPM @ 15% O2	HIGH TEMPERATURE OXIDATION CATALYST	50.000	BACT-PSD
CA-0418	SOUTHERN CALIFORNIA GAS	KERN COUNTY APCD (DESERT PORTION), CA	(805)-861-3682	TURBINE, GAS-FIRED	47.64	MMBTU/H	NOX	8.00E+00	PPMVD @ 15% O2	HIGH TEMPERATURE SELECTIVE CATALYTIC REDUCTION	93.000	BACT-PSD
CA-0437	KINGSBURG ENERGY SYSTEMS	FRESNO APCD, CA	(209)-445-3239	TURBINE, NATURAL GAS FIRED, DUCT BURNER	34.50	MW	NOX	6.00E+00	PPM @ 15% O2	SCR, STEAM INJECTION	90.000	BACT-PSD
CA-0441	GRANITE ROAD LIMITED	SAN JOAQUIN COUNTY APCD, CA	(805)-861-3682	TURBINE, GAS, ELECTRIC GENERATION	460.90	MMBTU/H*	NOX	3.50E+00	PPMVD @ 15% O2	SCR, STEAM INJECTION	97.000	BACT-PSD
CA-0463	SOUTHERN CALIFORNIA GAS	KERN COUNTY APCD (DESERT PORTION), CA	(805)-861-3682	TURBINE, GAS FIRED, SOLAR MODEL H	5500.00	HP	CO	7.74E+00	PPM @ 15% O2	HIGH TEMP OXIDATION CATALYST	80.000	BACT-PSD
CA-0463	SOUTHERN CALIFORNIA GAS	KERN COUNTY APCD (DESERT PORTION), CA	(805)-861-3682	TURBINE, GAS FIRED, SOLAR MODEL H	5500.00	HP	HC	1.94E+00	PPM @ 15% O2	HIGH TEMP OXIDATION CATALYST	50.000	BACT-PSD
CA-0463	SOUTHERN CALIFORNIA GAS	KERN COUNTY APCD (DESERT PORTION), CA	(805)-861-3682	TURBINE, GAS FIRED, SOLAR MODEL H	5500.00	HP	NOX	8.00E+00	PPM @ 15% O2	HIGH TEMP SELECT. CAT. REDUCTION	93.000	BACT-PSD
CA-0544	GOAL LINE, LP ICEFLOE	SAN DIEGO COUNTY APCD, CA	(619) 694-3316	TURBINE, COMBUSTION (NATURAL GAS) (42.4 MW)	386.00	MMBTU/HR	NOX	5.00E+00	PPMVD @ 15% OXYGE	WATER INJECTION & SCR W/ AUTOMATIC AMMONIA INJECT.	88.000	BACT-OTHER
CA-0811	BANK OF AMERICA LOS ANGELES DATA CENTER	SOUTH COAST AQMD, CA	(909) 396-2638	TURBINE, DIESEL & GENERATOR (SEE NOTES)	0.00		NOX	1.63E+02	PPM @ 15% O2	FUEL SPEC: LOW NOX DIESEL FUEL (SEE NOTES)	0.000	BACT-OTHER
CA-0813	UNOCAL	SOUTH COAST AQMD, CA	(909) 396-2606	TURBINE, GAS (SEE NOTES)	0.00		CO	1.00E+01	PPM @ 15% O2	OXIDATION CATALYST	75.000	BACT-OTHER
CA-0813	UNOCAL	SOUTH COAST AQMD, CA	(909) 396-2606	TURBINE, GAS (SEE NOTES)	0.00		NOX	9.00E+00	PPM @ 15% O2	SELECTIVE CATALYTIC REDUCTION (SCR), WATER INJECTN	80.000	BACT-OTHER
CO-001	THERMO INDUSTRIES, LTD.	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE, GAS FIRED, 5 EACH	246.00	MMBTU/H	CO	2.50E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
CO-001	THERMO INDUSTRIES, LTD.	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE, GAS FIRED, 5 EACH	246.00	MMBTU/H	NOX	2.50E+01	PPM @ 15% O2	DRY LOW NOX TECH.	0.000	BACT-PSD
CO-001	THERMO INDUSTRIES, LTD.	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE, GAS FIRED, 5 EACH	246.00	MMBTU/H	PM	2.66E+01	LB/H	FUEL SPEC: NATURAL GAS FIRED	0.000	OTHER
CO-001	THERMO INDUSTRIES, LTD.	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE, GAS FIRED, 5 EACH	246.00	MMBTU/H	SOX	1.90E+00	LB/H		0.000	OTHER
CO-001	THERMO INDUSTRIES, LTD.	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE, GAS FIRED, 5 EACH	246.00	MMBTU/H	VOC	1.67E+01	LB/H		0.000	OTHER
CO-001	BRUSH COGENERATION PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE	350.00	MMBTU/H	NOX	2.50E+01	PPM @ 15% O2	DRY LOW NOX BURNER	74.000	BACT-PSD
CO-001	BRUSH COGENERATION PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE	350.00	MMBTU/H	PM	9.90E+00	T/YR		0.000	OTHER
CO-001	BRUSH COGENERATION PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE	350.00	MMBTU/H	PM10	9.90E+00	T/YR		0.000	OTHER
CO-001	BRUSH COGENERATION PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE	350.00	MMBTU/H	SO2	3.20E+00	T/YR		0.000	OTHER
CO-001	BRUSH COGENERATION PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINE	350.00	MMBTU/H	VOC	2.87E+01	T/YR		0.000	OTHER
CO-001	COLORADO POWER PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINES, 2 NAT GAS & 2 DUCT BURNERS	385.00	MMBTU/H	CO	2.24E+01	PPM @ 15% O2		0.000	BACT-PSD
CO-001	COLORADO POWER PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINES, 2 NAT GAS & 2 DUCT BURNERS	385.00	MMBTU/H	NOX	4.20E+01	PPM @ 15% O2	WATER INJECTION	86.000	BACT-PSD
CO-001	COLORADO POWER PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINES, 2 NAT GAS & 2 DUCT BURNERS	385.00	MMBTU/H	PM	1.24E+01	T/YR		0.000	OTHER
CO-001	COLORADO POWER PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINES, 2 NAT GAS & 2 DUCT BURNERS	385.00	MMBTU/H	PM10	1.24E+01	T/YR		0.000	OTHER
CO-001	COLORADO POWER PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINES, 2 NAT GAS & 2 DUCT BURNERS	385.00	MMBTU/H	SO2	3.20E+00	T/YR		0.000	OTHER
CO-001	COLORADO POWER PARTNERSHIP	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-692-3176	TURBINES, 2 NAT GAS & 2 DUCT BURNERS	385.00	MMBTU/H	VOC	3.52E+01	T/YR		0.000	OTHER
CO-002	CIMARRON CHEMICAL	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-331-8593	TURBINE #2, GE FRAME 6	33.00	MW	CO	2.50E+02	T/YR, LESS THAN	CO CATALYST	0.000	OTHER
CO-002	CIMARRON CHEMICAL	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-331-8593	TURBINE #1, GE FRAME 6	33.00	MW	NOX	2.50E+01	PPM @ 15% O2	WATER INJECTION	0.000	OTHER
CO-002	CIMARRON CHEMICAL	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303)-331-8593	TURBINE #2, GE FRAME 6	33.00	MW	NOX	9.00E+00	PPM @ 15% O2	SCR	0.000	OTHER
CO-002	NORTHWEST PIPELINE CORPORATION	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303) 692-3176	TURBINE, SOLAR TAURUS	45.00	MMBTU/HR	NO2	9.50E+01	PPMVD (UNTIL 11/98)	DRY LOW NOX COMBUSTOR (BY 11/01/98)	0.000	BACT-PSD
CO-002	PHOENIX POWER PARTNERS	COLORADO DEPT OF HEALTH - AIR POLL CTRL	(303) 692-3176	TURBINE (NATURAL GAS)	311.00	MMBTU/HR	NOX	2.20E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTION	0.000	BACT-OTHER
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 1 EACH	80.00	MW	CO	2.50E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 1 EACH	80.00	MW	CO	2.50E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 1 EACH	80.00	MW	H2SO4	0.00E+00		FUEL SPEC: LIMIT FUEL SULFUR CONTENT	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 1 EACH	80.00	MW	H2SO4	0.00E+00		FUEL SPEC: LIMIT FUEL SULFUR CONTENT	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 1 EACH	80.00	MW	NOX	2.50E+01	PPM @ 15% O2	WET INJECTION	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 1 EACH	80.00	MW	NOX	4.20E+01	PPM @ 15% O2	WET INJECTION	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 1 EACH	80.00	MW	PM	6.00E-03	LB/MMBTU	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 1 EACH	80.00	MW	PM	2.50E-02	LB/MMBTU	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 1 EACH	80.00	MW	SO2	0.00E+00		FUEL SPEC: LIMIT FUEL SULFUR CONTENT	0.000	BACT-PSD
FL-0045	CHARLES LARSEN POWER PLANT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 1 EACH	80.00	MW	SO2	0.00E+00		FUEL SPEC: LIMIT FUEL SULFUR CONTENT	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	400.00	MW	CO	3.00E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
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RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	400.00	MW	CO	3.30E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, CG, 4 EACH	400.00	MW	CO	3.30E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	400.00	MW	NOX	2.50E+01	PPM @ 15% O2	LOW NOX COMBUSTORS	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	400.00	MW	NOX	8.50E+01	PPM @ 15% O2	LOW NOX COMBUSTORS	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, CG, 4 EACH	400.00	MW	NOX	4.20E+01	PPM @ 15% O2	LOW NOX COMBUSTORS	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	400.00	MW	PM	1.80E+01	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	400.00	MW	PM	6.06E+01	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, CG, 4 EACH	400.00	MW	PM	1.80E+01	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	400.00	MW	SO2	9.15E+01	LB/H	FUEL SPEC: NATURAL GAS AS FUEL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	400.00	MW	SO2	9.20E+02	LB/H	FUEL SPEC: NO. 2 FUEL OIL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, CG, 4 EACH	400.00	MW	SO2	8.34E-02	LB/H	FUEL SPEC: COAL DERIVED GAS	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	400.00	MW	VOC	1.80E+00	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	400.00	MW	VOC	6.00E+00	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0052	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, CG, 4 EACH	400.00	MW	VOC	9.00E+00	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	240.00	MW	CO	3.00E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	0.00		CO	3.30E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	240.00	MW	H2SO4	0.00E+00		FUEL SPEC: NATURAL GAS AS FUEL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	0.00		H2SO4	0.00E+00		FUEL SPEC: FIRING #2 FUEL OIL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	240.00	MW	NOX	4.20E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	0.00		NOX	8.50E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	240.00	MW	PM	1.54E+01	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	0.00		PM	5.80E+01	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	240.00	MW	SO2	0.00E+00		FUEL SPEC: NATURAL GAS AS FUEL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	0.00		SO2	0.00E+00		FUEL SPEC: NO. 2 FUEL OIL AS FUEL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	240.00	MW	VOC	1.00E+00	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0053	FLORIDA POWER AND LIGHT	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	0.00		VOC	6.00E+00	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0054	LAKE COGEN LIMITED	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 2 EACH	42.00	MW	CO	4.20E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0054	LAKE COGEN LIMITED	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	42.00	MW	CO	7.80E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0054	LAKE COGEN LIMITED	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 2 EACH	42.00	MW	NOX	2.50E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0054	LAKE COGEN LIMITED	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	42.00	MW	NOX	4.20E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0054	LAKE COGEN LIMITED	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 2 EACH	42.00	MW	PM	8.50E-03	LB/MMBTU	COMBUSTION CONTROL, FUEL SPEC: CLEAN FUEL	0.000	BACT-PSD
FL-0054	LAKE COGEN LIMITED	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 2 EACH	42.00	MW	PM	2.80E-02	LB/MMBTU	COMBUSTION CONTROL, FUEL SPEC: CLEAN FUEL	0.000	BACT-PSD
FL-0056	ORLANDO UTILITIES COMMISSION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	35.00	MW	CO	1.00E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0056	ORLANDO UTILITIES COMMISSION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	35.00	MW	CO	1.00E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0056	ORLANDO UTILITIES COMMISSION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	35.00	MW	NOX	4.20E+01	PPM @ 15% O2	WET INJECTION	70.000	BACT-PSD
FL-0056	ORLANDO UTILITIES COMMISSION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	35.00	MW	NOX	8.50E+01	PPM @ 15% O2	WET INJECTION	0.000	BACT-PSD
FL-0056	ORLANDO UTILITIES COMMISSION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS, 4 EACH	35.00	MW	VOC	7.00E+00	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0056	ORLANDO UTILITIES COMMISSION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 4 EACH	35.00	MW	VOC	7.00E+00	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0057	FLORIDA POWER GENERATION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 8 EACH	92.90	MW	CO	5.40E+01	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0057	FLORIDA POWER GENERATION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 8 EACH	92.90	MW	H2SO4	7.80E+01	LB/H	FUEL SPEC: #2 FUEL OIL	0.000	BACT-PSD
FL-0057	FLORIDA POWER GENERATION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 8 EACH	92.90	MW	NOX	4.20E+01	PPM @ 15% O2	WET INJECTION	0.000	BACT-PSD
FL-0057	FLORIDA POWER GENERATION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 8 EACH	92.90	MW	PM	1.50E+01	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0057	FLORIDA POWER GENERATION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 8 EACH	92.90	MW	SO2	5.55E+02	LB/H	FUEL SPEC: #2 FUEL OIL	0.000	BACT-PSD
FL-0057	FLORIDA POWER GENERATION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, OIL, 8 EACH	92.90	MW	VOC	5.00E+00	LB/H	COMBUSTION CONTROL	0.000	BACT-PSD
FL-0059	SEMINOLE FERTILIZER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904)-488-1344	TURBINE, GAS	28.00	MW	NOX	9.00E+00	PPM @ 15% O2	SCR	0.000	BACT-PSD
FL-0068	ORANGE COGENERATION LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS, 2	368.30	MMBTU/H	CO	3.00E+01	PPMVD	GOOD COMBUSTION	0.000	BACT-PSD
FL-0068	ORANGE COGENERATION LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS, 2	368.30	MMBTU/H	NOX	1.50E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
FL-0068	ORANGE COGENERATION LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS, 2	368.30	MMBTU/H	PM	6.00E+00	LB/H	GOOD COMBUSTION	0.000	BACT-PSD
FL-0068	ORANGE COGENERATION LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS, 2	368.30	MMBTU/H	VOC	1.00E+01	PPMVD	GOOD COMBUSTION	0.000	BACT-PSD
FL-0072	TIGER BAY LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, GAS	1614.80	MMBTU/H	CO	4.90E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0072	TIGER BAY LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1849.90	MMBTU/H	CO	9.84E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0072	TIGER BAY LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, GAS	1614.80	MMBTU/H	NOX	1.50E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
FL-0072	TIGER BAY LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1849.90	MMBTU/H	NOX	4.20E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-PSD
FL-0072	TIGER BAY LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, GAS	1614.80	MMBTU/H	PM	9.00E+00	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0072	TIGER BAY LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1849.90	MMBTU/H	PM	1.70E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0074	FLORIDA GAS TRANSMISSION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, GAS	131.59	MMBTU/H	NOX	2.50E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS	869.00	MMBTU/H	CO	5.40E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	928.00	MMBTU/H	CO	8.50E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS	367.00	MMBTU/H	CO	4.00E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
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RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	371.00	MMBTU/H	CO	7.80E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	928.00	MMBTU/H	H2SO4	5.70E+00	LB/H	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	371.00	MMBTU/H	H2SO4	2.20E+00	LB/H	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS	869.00	MMBTU/H	NOX	1.50E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	928.00	MMBTU/H	NOX	4.20E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS	367.00	MMBTU/H	NOX	1.50E+01	PPM @ 15% O2	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	371.00	MMBTU/H	NOX	4.20E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS	869.00	MMBTU/H	PM	7.00E+00	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	928.00	MMBTU/H	PM	1.50E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS	367.00	MMBTU/H	PM	8.00E+00	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	371.00	MMBTU/H	PM	1.00E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	928.00	MMBTU/H	SO2	5.20E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
FL-0078	KISSIMMEE UTILITY AUTHORITY	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	371.00	MMBTU/H	SO2	2.00E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE,GAS	1214.00	MMBTU/H	CO	1.50E+01	PPMVD	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1170.00	MMBTU/H	CO	2.50E+01	PPMVD	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE,GAS	1214.00	MMBTU/H	H2SO4	7.50E+00	LB/H	FUEL SPEC: LOW SULFUR IN NATURAL GAS	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1170.00	MMBTU/H	H2SO4	1.40E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE,GAS	1214.00	MMBTU/H	NOX	1.50E+01	PPMVD @ 15 % O2	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1170.00	MMBTU/H	NOX	4.20E+01	PPMVD @ 15 % 02	STEAM INJECTION	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE,GAS	1214.00	MMBTU/H	PM	1.36E-02	LB/MMBTU	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1170.00	MMBTU/H	PM	4.72E-02	LB/MMBTU	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE,GAS	1214.00	MMBTU/H	SO2	4.00E+01	LB/H	FUEL SPEC: LOW SULFUR IN NATURAL GAS	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1170.00	MMBTU/H	SO2	7.00E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE,GAS	1214.00	MMBTU/H	VOC	6.00E+00	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0080	AUBURNDALE POWER PARTNERS, LP	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1170.00	MMBTU/H	VOC	1.00E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0081	TECO POLK POWER STATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	1785.00	MMBTU/H	CO	4.00E+01	PPMVD	GOOD COMBUSTION	0.000	BACT-PSD
FL-0081	TECO POLK POWER STATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	1785.00	MMBTU/H	NOX	4.20E+01	PPMVD @ 15 % O2	WET INJECTION	0.000	BACT-PSD
FL-0081	TECO POLK POWER STATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	1785.00	MMBTU/H	PM	9.00E-03	LB/MMBTU	GOOD COMBUSTION	0.000	BACT-PSD
FL-0081	TECO POLK POWER STATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	1785.00	MMBTU/H	SO2	4.80E-02	LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
FL-0081	TECO POLK POWER STATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL	1785.00	MMBTU/H	VOC	2.80E-02	LB/MMBTU	GOOD COMBUSTION	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS (2)	1510.00	MMBTU/H	CO	2.60E+01	PPMVD	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL (2)	1730.00	MMBTU/H	CO	3.00E+01	PPMVD	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS (2)	1510.00	MMBTU/H	NOX	1.20E+01	PPMVD @15 % O2	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL (2)	1730.00	MMBTU/H	NOX	4.20E+01	PPMVD @ 15 %O2	WATER INJECTION	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS (2)	1510.00	MMBTU/H	PM	9.00E+00	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL (2)	1730.00	MMBTU/H	PM	1.70E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS (2)	1510.00	MMBTU/H	SO2	9.90E-01	LB/H	FUEL SPEC: LOW SULFUR IN NATURAL GAS	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL (2)	1730.00	MMBTU/H	SO2	9.40E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL OIL (MAX 0.05 % SULFUR)	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, NATURAL GAS (2)	1510.00	MMBTU/H	VOC	7.00E+00	PPMVW	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0082	FLORIDA POWER CORPORATION POLK COUNTY SITE	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, FUEL OIL (2)	1730.00	MMBTU/H	VOC	7.00E+00	PPMVW	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1029.00	MMBTU/H	CO	5.40E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1866.00	MMBTU/H	CO	7.90E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1029.00	MMBTU/H	H2SO4	1.80E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1866.00	MMBTU/H	H2SO4	2.80E+01	LB/H	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1029.00	MMBTU/H	NOX	4.20E+01	PPMVD @ 15 % O2	WET INJECTION	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1866.00	MMBTU/H	NOX	4.20E+01	PPMVD @ 15 % O2	WET INJECTION	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1029.00	MMBTU/H	PM	1.50E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1866.00	MMBTU/H	PM	1.70E+01	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1029.00	MMBTU/H	SO2	2.22E+02	LB/H	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1866.00	MMBTU/H	SO2	4.07E+02	LB/H	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1029.00	MMBTU/H	VOC	5.00E+00	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0083	FLORIDA POWER CORPORATION	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, OIL	1866.00	MMBTU/H	VOC	9.00E+00	LB/H	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0092	GAINESVILLE REGIONAL UTILITIES	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	SIMPLE CYCLE COMBUSTION TURBINE, GAS/NO 2 OIL B-U	74.00	MW	H2SO4	3.00E+00	LB/HR AT 20 F (GAS)	FUEL SPEC: LOW SULFUR OIL BACKUP FUEL AND NAT GAS PRIMARY 0.05% S OIL	0.000	BACT-PSD
FL-0092	GAINESVILLE REGIONAL UTILITIES	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	SIMPLE CYCLE COMBUSTION TURBINE, GAS/NO 2 OIL B-U	74.00	MW	NOX	1.50E+01	PPM AT 15% OXYGEN	DRY LOW NOX BURNERS	0.000	BACT-PSD
FL-0092	GAINESVILLE REGIONAL UTILITIES	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	OIL FIRED COMBUSTION TURBINE	74.00	MW	NOX	4.20E+01	PPM AT 15% OXYGEN	WATER INJECTION	0.000	BACT-PSD
FL-0092	GAINESVILLE REGIONAL UTILITIES	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	SIMPLE CYCLE COMBUSTION TURBINE, GAS/NO 2 OIL B-U	74.00	MW	PM	7.00E+00	LB/HR AT 20 F	FUEL SPEC: LOW SULFUR FUELS	0.000	BACT-PSD
FL-0092	GAINESVILLE REGIONAL UTILITIES	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	SIMPLE CYCLE COMBUSTION TURBINE, GAS/NO 2 OIL B-U	74.00	MW	SO2	2.90E+01	LB/HR AT 20 F (GAS)	FUEL SPEC: LOW SULFUR OIL BACKUP FUEL AND NAT GAS PRIMARY 0.05% S	0.000	BACT-PSD
FL-0092	GAINESVILLE REGIONAL UTILITIES	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	OIL FIRED COMBUSTION TURBINE	74.00	MW	SO2	5.30E+01	LB/HR AT 20 F	FUEL SPEC: LOW S OIL 0.05% S	0.000	BACT-PSD
FL-0102	PANDA-KATHLEEN, L.P.	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	COMBINED CYCLE COMBUSTION TURBINE (TOTAL 115MW)	75.00	MW	CO	2.50E+01	PPM @ 15% O2	COMBUSTION CONTROLS	0.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
FL-0102	PANDA-KATHLEEN, L.P.	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	COMBINED CYCLE COMBUSTION TURBINE (TOTAL 115MW)	75.00	MW	NOX	1.50E+01	PPM @ 15% O2	DRY LOW NOX BURNER	0.000	BACT-PSD
FL-0104	SEMINOLE HARDEE UNIT 3	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	COMBINED CYCLE COMBUSTION TURBINE	140.00	MW	CO	2.00E+01	PPM (NAT. GAS)	DRY LNB - GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
FL-0104	SEMINOLE HARDEE UNIT 3	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	COMBINED CYCLE COMBUSTION TURBINE	140.00	MW	NOX	1.50E+01	PPM @ 15% O2	DRY LNB - STAGED COMBUSTION	0.000	BACT-PSD
FL-0104	SEMINOLE HARDEE UNIT 3	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	COMBINED CYCLE COMBUSTION TURBINE	140.00	MW	PM/PM10	7.00E+00	LB/HR (NAT. GAS)	DRY LNB - FUEL SPEC: LOW S OIL, LIMITED OPERATION ON OIL. GOOD COMBUSTION	0.000	BACT-PSD
FL-0104	SEMINOLE HARDEE UNIT 3	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	COMBINED CYCLE COMBUSTION TURBINE	140.00	MW	SO2	1.00E+00	GRAIN S/100 SCF GAS	FUEL SPEC: LOW S FUEL OIL OR NATURAL GAS FUEL; COMBUSTION OF CLEAN FUELS	0.000	BACT-PSD
FL-0109	KEY WEST CITY ELECTRIC SYSTEM	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, EXISTING CT RELOCATION TO A NEW PLANT	23.00	MW	CO	2.00E+01	PPM @ 15% O2 FULL L	GOOD COMBUSTION	0.000	BACT-PSD
FL-0109	KEY WEST CITY ELECTRIC SYSTEM	FLORIDA DEPT OF ENV REGULATION	(904) 488-1344	TURBINE, EXISTING CT RELOCATION TO A NEW PLANT	23.00	MW	NOX	7.50E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	1032.00	MMBTU/H, NAT GAS	CO	9.00E+00	PPM @ 15% O2	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	972.00	MMBTU/H, #2 OIL	CO	9.00E+00	PPM @ 15% O2	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	1032.00	MMBTU/H, NAT GAS	HG	9.00E-01	LB/E11 BTU	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	972.00	MMBTU/H, #2 OIL	HG	2.60E+00	LB/E12 BTU	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	1032.00	MMBTU/H, NAT GAS	NOX	2.50E+01	PPM @ 15% O2	MAX WATER INJECTION	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	972.00	MMBTU/H, #2 OIL	NOX	0.00E+00	SEE NOTES	MAX WATER INJECTION	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	1032.00	MMBTU/H, NAT GAS	PM	8.00E-03	LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	972.00	MMBTU/H, #2 OIL	PM	1.20E-02	LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	972.00	MMBTU/H, #2 OIL	SO2	5.00E-01	% S MAX	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	1032.00	MMBTU/H, NAT GAS	VOC	3.00E-03	LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0052	SAVANNAH ELECTRIC AND POWER CO.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404)-363-7000	TURBINES, 8	972.00	MMBTU/H, #2 OIL	VOC	4.20E-03	LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL OIL	0.000	BACT-PSD
GA-0053	HARTWELL ENERGY LIMITED PARTNERSHIP	GEORGIA, OTHER	(404) 363-7000	TURBINE, GAS FIRED (2 EACH)	1817.00	M BTU/HR	CO	2.50E+01	PPMVD @ FULL LOAD	FUEL SPEC: CLEAN BURNING FUELS	0.000	BACT-PSD
GA-0053	HARTWELL ENERGY LIMITED PARTNERSHIP	GEORGIA, OTHER	(404) 363-7000	TURBINE, OIL FIRED (2 EACH)	1840.00	M BTU/HR	CO	2.50E+01	PPMVD @ FULL LOAD	FUEL SPEC: CLEAN BURNING FUELS	0.000	BACT-PSD
GA-0053	HARTWELL ENERGY LIMITED PARTNERSHIP	GEORGIA, OTHER	(404) 363-7000	TURBINE, GAS FIRED (2 EACH)	1817.00	M BTU/HR	NOX	2.50E+01	PPM @ 15% O2	MAXIMUM WATER INJECTION	0.000	BACT-PSD
GA-0053	HARTWELL ENERGY LIMITED PARTNERSHIP	GEORGIA, OTHER	(404) 363-7000	TURBINE, OIL FIRED (2 EACH)	1840.00	M BTU/HR	NOX	2.50E+01	PPMVD, FUEL N AFLOW	MAXIMUM WATER INJECTION	0.000	BACT-PSD
GA-0053	HARTWELL ENERGY LIMITED PARTNERSHIP	GEORGIA, OTHER	(404) 363-7000	TURBINE, GAS FIRED (2 EACH)	1817.00	M BTU/HR	PM	6.40E-03	LB/M BTU	FUEL SPEC: CLEAN BURNING FUELS	0.000	BACT-PSD
GA-0053	HARTWELL ENERGY LIMITED PARTNERSHIP	GEORGIA, OTHER	(404) 363-7000	TURBINE, OIL FIRED (2 EACH)	1840.00	M BTU/HR	PM	1.56E-02	LB/M BTU	FUEL SPEC: CLEAN BURNING FUELS	0.000	BACT-PSD
GA-0053	HARTWELL ENERGY LIMITED PARTNERSHIP	GEORGIA, OTHER	(404) 363-7000	TURBINE, OIL FIRED (2 EACH)	1840.00	M BTU/HR	SO2	5.00E-02	% S IN FUEL	FUEL SPEC: CLEAN BURNING FUELS	0.000	BACT-PSD
GA-0056	GEORGIA POWER COMPANY, ROBINS TURBINE PROJECT	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	TURBINE, COMBUSTION, NATURAL GAS	80.00	MW	NOX	2.50E+01	PPM	WATER INJECTION, FUEL SPEC: NATURAL GAS	0.000	BACT-PSD
GA-0056	GEORGIA POWER COMPANY, ROBINS TURBINE PROJECT	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	TURBINE, COMBUSTION, NATURAL GAS	80.00	MW	SO2	5.80E+01	PPM	FUEL SPEC: LOW SULFUR FUEL (.3% AVG) FUEL 0.1	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), NATURAL GAS	116.00	MW	CO	1.00E+01	PPMVD	COMPLETE COMBUSTION	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), FUEL OIL	116.00	MW	CO	3.00E+01	PPMVD	COMPLETE COMBUSTION	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), NATURAL GAS	116.00	MW	NOX	9.00E+00	PPMVD	DRY LOW NOX BURNER WITH SCR	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), FUEL OIL	116.00	MW	NOX	2.00E+01	PPMVD	WATER INJECTION WITH SCR	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), NATURAL GAS	116.00	MW	PM	1.80E+01	LB/HR	CLEAN FUEL	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), FUEL OIL	116.00	MW	PM	5.50E+01	LB/HR	CLEAN FUEL	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), FUEL OIL	116.00	MW	SO2	5.00E-02	% SULFUR IN FUEL	FUEL SPEC: VERY LOW SULFUR IN FUEL	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), NATURAL GAS	116.00	MW	VOC	8.00E+00	PPMVD	COMPLETE COMBUSTION	0.000	BACT-PSD
GA-0083	MID-GEORGIA COGEN.	GEORGIA DEPARTMENT OF NATURAL RESOU	(404) 363-7110	COMBUSTION TURBINE (2), FUEL OIL	116.00	MW	VOC	3.00E+01	PPMVD	COMPLETE COMBUSTION	0.000	BACT-PSD
HI-0013	MAUI ELECTRIC COMPANY, LTD.	HAWAII CLEAN AIR BRANCH	(808)-586-4200	TURBINE, FUEL OIL #2	28.00	MW	CO	0.00E+00	SEE NOTES	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
HI-0013	MAUI ELECTRIC COMPANY, LTD.	HAWAII CLEAN AIR BRANCH	(808)-586-4200	TURBINE, FUEL OIL #2	28.00	MW	NOX	4.20E+01	PPM	WATER INJECTION	71.000	BACT-PSD
HI-0013	MAUI ELECTRIC COMPANY, LTD.	HAWAII CLEAN AIR BRANCH	(808)-586-4200	TURBINE, FUEL OIL #2	28.00	MW	PM	4.50E-02	GR/DSCF	FUEL SPEC: 0.4 % SULFUR	0.000	BACT-PSD
HI-0013	MAUI ELECTRIC COMPANY, LTD.	HAWAII CLEAN AIR BRANCH	(808)-586-4200	TURBINE, FUEL OIL #2	28.00	MW	SO2	7.80E+01	PPM	FUEL SPEC: 0.4 % SULFUR	0.000	BACT-PSD
HI-0013	MAUI ELECTRIC COMPANY, LTD.	HAWAII CLEAN AIR BRANCH	(808)-586-4200	TURBINE, FUEL OIL #2	28.00	MW	VOC	0.00E+00	SEE NOTES	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	CO	2.68E+01	LB/HR @ 100% PEAKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	CO	5.64E+01	LB/H @ 75-<100% PKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	CO	1.81E+02	LB/H @ 50-<75% PKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	CO	4.76E+02	LB/H @ 25-<50% PKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	NOX	4.23E+01	LB/HR	COMBUSTOR WATER INJECTOR, WATER INJECTION	70.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	PM	1.97E+01	LB/HR	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	SO2	1.10E+02	LB/HR	COMBUSTOR WATER INJECTOR, FUEL SPEC: 0.4% SULFUR FUEL	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	VOC	8.00E-01	LB/HR @ 100% PEAKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	VOC	2.60E+00	LB/H @ 75-<100% PKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	VOC	2.81E+01	LB/H @ 50-<75% PKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0014	HAWAII ELECTRIC LIGHT CO., INC.	HAWAII, OTHER	(808) 586-4200	TURBINE, FUEL OIL #2	20.00	MW	VOC	2.98E+02	LB/H @ 25-<50% PKLD	COMBUSTION DESIGN	0.000	BACT-PSD
HI-0015	MAUI ELECTRIC COMPANY, LTD.MAALAEA GENERATING S	HAWAII CLEAN AIR BRANCH	(808) 586-4200	TURBINE, COMBINED-CYCLE COMBUSTION	28.00	MW	CO	2.89E+01	LB/HR	COMBUSTION TECHNOLOGY/DESIGN	0.000	BACT-OTHER
HI-0015	MAUI ELECTRIC COMPANY, LTD.MAALAEA GENERATING S	HAWAII CLEAN AIR BRANCH	(808) 586-4200	TURBINE, COMBINED-CYCLE COMBUSTION	28.00	MW	NOX	4.23E+01	LB/HR	WATER INJECTION	69.000	BACT-OTHER
HI-0015	MAUI ELECTRIC COMPANY, LTD.MAALAEA GENERATING S	HAWAII CLEAN AIR BRANCH	(808) 586-4200	TURBINE, COMBINED-CYCLE COMBUSTION	28.00	MW	PM	1.97E+01	LB/HR	COMBUSTION TECHNOLOGY/DESIGN	0.000	BACT-OTHER
HI-0015	MAUI ELECTRIC COMPANY, LTD.MAALAEA GENERATING S	HAWAII CLEAN AIR BRANCH	(808) 586-4200	TURBINE, COMBINED-CYCLE COMBUSTION	28.00	MW	SO2	1.10E+02	LB/HR	FUEL SPEC: 0.4 PERCENT SULFUR CONTENT	0.000	BACT-OTHER
HI-0015	MAUI ELECTRIC COMPANY, LTD.MAALAEA GENERATING S	HAWAII CLEAN AIR BRANCH	(808) 586-4200	TURBINE, COMBINED-CYCLE COMBUSTION	28.00	MW	VOC	8.00E-01	LB/HR	COMBUSTION TECHNOLOGY/DESIGN	0.000	BACT-OTHER
KY-0053	KENTUCKY UTILITIES COMPANY	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINE, #2 FUEL OIL/NATURAL GAS (8)	1500.00	MM BTU/HR	CO	7.50E+01	LB/HR (EACH)	COMBUSTION CONTROL	0.000	BACT-PSD
KY-0053	KENTUCKY UTILITIES COMPANY	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINE, #2 FUEL OIL/NATURAL GAS (8)	1500.00	MM BTU/HR	N2O	6.50E+01	PPM @ 15% O2, OIL	WATER INJECTION	0.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
KY-0053	KENTUCKY UTILITIES COMPANY	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINE, #2 FUEL OIL/NATURAL GAS (8)	1500.00	MM BTU/HR	NOX	4.20E+01	PPM @ 15% O2, N. GAS	WATER INJECTION	0.000	BACT-PSD
KY-0053	KENTUCKY UTILITIES COMPANY	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINE, #2 FUEL OIL/NATURAL GAS (8)	1500.00	MM BTU/HR	PM/PM10	8.70E+01	LB/HR (EACH)	COMBUSTION CONTROL	0.000	BACT-PSD
KY-0053	KENTUCKY UTILITIES COMPANY	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINE, #2 FUEL OIL/NATURAL GAS (8)	1500.00	MM BTU/HR	SO2	4.44E+02	LB/HR (EACH)	FUEL SPEC: LOW SULFUR FUEL (0.3% SULFUR FUEL)	0.000	BACT-PSD
KY-0053	KENTUCKY UTILITIES COMPANY	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINE, #2 FUEL OIL/NATURAL GAS (8)	1500.00	MM BTU/HR	VOC	2.04E+01	LB/HR (EACH)	COMBUSTION CONTROL	0.000	BACT-PSD
KY-0057	EAST KENTUCKY POWER COOPERATIVE	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINES (5), #2 FUEL OIL AND NAT. GAS FIRED	1492.00	MM BTU/HR	CO	7.50E+01	LBS/H (EACH)	PROPER COMBUSTION TECHNIQUES	0.000	BACT-OTHER
KY-0057	EAST KENTUCKY POWER COOPERATIVE	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINES (5), #2 FUEL OIL AND NAT. GAS FIRED	1492.00	MM BTU/HR	H2SO4	1.50E+01	LBS/H (EACH)	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-OTHER
KY-0057	EAST KENTUCKY POWER COOPERATIVE	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINES (5), #2 FUEL OIL AND NAT. GAS FIRED	1492.00	MM BTU/HR	NOX	4.20E+01	PPM @ 15% O2 (OIL)	WATER INJECTION	46.000	SEE NOTES
KY-0057	EAST KENTUCKY POWER COOPERATIVE	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINES (5), #2 FUEL OIL AND NAT. GAS FIRED	1492.00	MM BTU/HR	PM/PM10	5.40E+01	LBS/H (EACH)	PROPER COMBUSTION TECHNIQUES	0.000	BACT-OTHER
KY-0057	EAST KENTUCKY POWER COOPERATIVE	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINES (5), #2 FUEL OIL AND NAT. GAS FIRED	1492.00	MM BTU/HR	SO2	5.00E+02	LBS/H (EACH)	FUEL SPEC: LOW SULFUR FUEL (0.3% SULFUR FUEL)	0.000	SEE NOTES
KY-0057	EAST KENTUCKY POWER COOPERATIVE	KENTUCKY DEP, DIV FOR AIR QUALITY	(502) 564-3382	TURBINES (5), #2 FUEL OIL AND NAT. GAS FIRED	1492.00	MM BTU/HR	VOC	2.60E+01	LBS/H (EACH)	PROPER COMBUSTION TECHNIQUES	0.000	BACT-OTHER
LA-0079	ENRON LOUISIANA ENERGY COMPANY	LOUISIANA DEPARTMENT OF ENV QUALITY	(504)-765-0195	TURBINE, GAS, 2	39.10	MM BTU/HR	CO	9.00E+01	PPM @ 15% O2	BASE CASE, NO ADDITIONAL CONTROLS	0.000	BACT-PSD
LA-0079	ENRON LOUISIANA ENERGY COMPANY	LOUISIANA DEPARTMENT OF ENV QUALITY	(504)-765-0195	TURBINE, GAS, 2	39.10	MM BTU/HR	NOX	4.00E+01	PPM @ 15% O2	H2O INJECT 0.67 LB/LB	71.000	BACT-PSD
LA-0086	INTERNATIONAL PAPER	LOUISIANA DEPARTMENT OF ENV QUALITY	(504) 765-0199	TURBINE/HRSG, GAS COGEN	338.00	MM BTU/HR	CO	1.86E+02	LB/HR	COMBUSTION CONTROL	0.000	BACT
LA-0086	INTERNATIONAL PAPER	LOUISIANA DEPARTMENT OF ENV QUALITY	(504) 765-0199	TURBINE/HRSG, GAS COGEN	338.00	MM BTU/HR	NOX	2.50E+01	PPMV 15% O2 TURBINE	DRY LOW NOX COMBUSTOR/COMBUSTION CONTROL	0.000	BACT
LA-0086	INTERNATIONAL PAPER	LOUISIANA DEPARTMENT OF ENV QUALITY	(504) 765-0199	TURBINE/HRSG, GAS COGEN	338.00	MM BTU/HR	VOC	3.80E+00	LB/HR COMBINED	COMBUSTION CONTROLS, FUEL SELECTION	0.000	BACT
LA-0089	FORMOSA PLASTICS CORPORATION, LOUISIANA	LOUISIANA DEPARTMENT OF ENV QUALITY	(504) 765-0199	TURBINE/HRSG, GAS COGENERATION	450.00	MM BTU/HR	CO	2.58E+01	LB/HR	PROPER OPERATION	0.000	BACT-PSD
LA-0089	FORMOSA PLASTICS CORPORATION, LOUISIANA	LOUISIANA DEPARTMENT OF ENV QUALITY	(504) 765-0199	TURBINE/HRSG, GAS COGENERATION	450.00	MM BTU/HR	NOX	9.00E+00	PPMV	DRY LOW NOX BURNER/COMBUSTION DESIGN AND CONTROL	0.000	LAER
MA-0015	PEABODY MUNICIPAL LIGHT PLANT	MASSACHUSETTS DIV OF AIR QUAL CONTROL	(617) 292-5630	TURBINE, 38 MW NATURAL FAS FIRED	412.00	MM BTU/HR	CO	4.00E+01	PPM @ 15% O2	GOOD COMBUSTION PRACTICES	0.000	BACT-OTHER
MA-0015	PEABODY MUNICIPAL LIGHT PLANT	MASSACHUSETTS DIV OF AIR QUAL CONTROL	(617) 292-5630	TURBINE, 38 MW NATURAL FAS FIRED	412.00	MM BTU/HR	NOX	2.50E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-OTHER
MA-0015	PEABODY MUNICIPAL LIGHT PLANT	MASSACHUSETTS DIV OF AIR QUAL CONTROL	(617) 292-5630	TURBINE, 38 MW OIL FIRED	412.00	MM BTU/HR	NOX	4.00E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-OTHER
MA-0015	PEABODY MUNICIPAL LIGHT PLANT	MASSACHUSETTS DIV OF AIR QUAL CONTROL	(617) 292-5630	TURBINE, 38 MW OIL FIRED	412.00	MM BTU/HR	PM	5.00E-02	LB/MMBTU	FUEL SPECIFICATION: NO. 2 LIGHT OIL	0.000	BACT-OTHER
MD-001	SOUTHERN MARYLAND ELECTRIC COOPERATIVE (SMECO	MARYLAND, OTHER	(410) 631-3215	TURBINE, NATURAL GAS FIRED ELECTRIC	90.00	MW	NO2	1.99E+02	LB/HR	WATER INJECTION	0.000	BACT-PSD
MD-001	SOUTHERN MARYLAND ELECTRIC COOPERATIVE (SMECO	MARYLAND, OTHER	(410) 631-3215	TURBINE, OIL FIRED ELECTRIC	90.00	MW	NO2	4.00E+02	LB/HR	WATER INJECTION	0.000	BACT-PSD
MD-001	SOUTHERN MARYLAND ELECTRIC COOPERATIVE (SMECO	MARYLAND, OTHER	(410) 631-3215	TURBINE, OIL FIRED ELECTRIC	90.00	MW	SO2	0.00E+00		FUEL SPEC: FUEL LIMITED AND 0.3 % S	0.000	BACT-PSD
MD-001	PEPCO - CHALK POINT PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 105 MW NATURAL GAS FIRED ELECTRIC	105.00	MW	NO2	7.70E+01	PPM @ 15% O2	DRY PREMIX AND WATER INJECTION	0.000	BACT-PSD
MD-001	PEPCO - CHALK POINT PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 105 MW OIL FIRED ELECTRIC	105.00	MW	NO2	2.50E+01	PPM @ 15% O2	DRY PREMIX BURNER	0.000	BACT-PSD
MD-001	PEPCO - CHALK POINT PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 84 MW NATURAL GAS FIRED ELECTRIC	84.00	MW	NO2	2.50E+01	PPM @ 15% O2	QUIET COMBUSTION AND WATER INJECTION	0.000	BACT-PSD
MD-001	PEPCO - CHALK POINT PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 84 MW OIL FIRED ELECTRIC	84.00	MW	NO2	5.80E+01	PPM @ 15% O2	QUIET COMBUSTION AND WATER INJECTION	0.000	BACT-PSD
MD-001	BALTIMORE GAS & ELECTRIC - PERRYMAN PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 140 MW NATURAL GAS FIRED ELECTRIC	140.00	MW	CO	2.00E+01	PPM @ 15% O2	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
MD-001	BALTIMORE GAS & ELECTRIC - PERRYMAN PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 140 MW NATURAL GAS FIRED ELECTRIC	140.00	MW	NO2	1.50E+01	PPM @ 15% O2	DRY BURN LOW NOX BURNERS	91.000	BACT-PSD
MD-001	BALTIMORE GAS & ELECTRIC - PERRYMAN PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 140 MW OIL FIRED ELECTRIC	140.00	MW	NO2	6.50E+01	PPM @ 15% O2	WATER INJECTION	72.000	BACT-PSD
MD-001	BALTIMORE GAS & ELECTRIC - PERRYMAN PLANT	MARYLAND, OTHER	(410) 631-3215	TURBINE, 140 MW OIL FIRED ELECTRIC	140.00	MW	SO2	8.70E+01	LB/HR	FUEL SPEC: LOW SULFUR OIL (0.05%)	75.000	BACT-PSD
MD-002	PEPCO - STATION A	MARYLAND, OTHER	(410) 631-3215	TURBINE, 124 MW NATURAL GAS FIRED	125.00	MW	NO2	4.20E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-PSD
MD-002	PEPCO - STATION A	MARYLAND, OTHER	(410) 631-3215	TURBINE, 124 MW OIL FIRED	125.00	MW	NO2	7.70E+01	PPM @ 15% O2	WATER INJECTION	0.000	BACT-PSD
MI-0208	KALAMAZOO POWER LIMITED	MICHIGAN DEPARTMENT OF NATURAL RESOU	(517)-373-7023	TURBINE, GAS-FIRED, 2, W/ WASTE HEAT BOILERS	1805.90	MMBTU/H	CO	2.00E+01	PPMV	DRY LOW NOX TURBINES	0.000	BACT-PSD
MI-0208	KALAMAZOO POWER LIMITED	MICHIGAN DEPARTMENT OF NATURAL RESOU	(517)-373-7023	TURBINE, GAS-FIRED, 2, W/ WASTE HEAT BOILERS	1805.90	MMBTU/H	NOX	1.50E+01	PPMV	DRY LOW NOX TURBINES	0.000	BACT-PSD
MN-002	LSP-COTTAGE GROVE, L.P.	MINNESOTA POLL CTRL AGCY, AIR QUAL DIV	(612) 296-7625	COMBUSTION TURBINE/GENERATOR	1970.00	MMBTU/HR	H2SO4	3.70E-01	LB/HR GAS	FUEL SELECTION	0.000	BACT-PSD
MN-002	LSP-COTTAGE GROVE, L.P.	MINNESOTA POLL CTRL AGCY, AIR QUAL DIV	(612) 296-7625	COMBUSTION TURBINE/GENERATOR	1970.00	MMBTU/HR	NOX	4.50E+00	PPM @ 15% O2 GAS	SELECTIVE CATALYTIC REDUCTION (SCR)	70.000	BACT-PSD
MN-002	LSP-COTTAGE GROVE, L.P.	MINNESOTA POLL CTRL AGCY, AIR QUAL DIV	(612) 296-7625	COMBUSTION TURBINE/GENERATOR	1970.00	MMBTU/HR	PM10	1.07E+01	LB/HR GAS	FUEL SELECTION; GOOD COMBUSTION	0.000	BACT-PSD
MN-002	LSP-COTTAGE GROVE, L.P.	MINNESOTA POLL CTRL AGCY, AIR QUAL DIV	(612) 296-7625	COMBUSTION TURBINE/GENERATOR	1970.00	MMBTU/HR	VOC	1.80E+01	LB/HR GAS	FUEL SELECTION, GOOD COMBUSTION	0.000	BACT-PSD
MS-0028	SOUTH MISSISSIPPI ELECTRIC POWER ASSOC.	MISSISSIPPI DEPT OF ENV QUALITY	(601) 961-5242	COMBUSTION TURBINE, COMBINED CYCLE	1299.00	MMBTU/HR	CO	2.63E+01	PPM @ 15% O2, GAS	GOOD COMBUSTION CONTROLS	0.000	BACT-PSD
MS-0028	SOUTH MISSISSIPPI ELECTRIC POWER ASSOC.	MISSISSIPPI DEPT OF ENV QUALITY	(601) 961-5242	COMBUSTION TURBINE, COMBINED CYCLE	1299.00	MMBTU/HR	PM	8.10E+00	LB/HR, GAS	GOOD COMBUSTION CONTROLS	0.000	BACT-PSD
MS-0028	SOUTH MISSISSIPPI ELECTRIC POWER ASSOC.	MISSISSIPPI DEPT OF ENV QUALITY	(601) 961-5242	COMBUSTION TURBINE, COMBINED CYCLE	1299.00	MMBTU/HR	VOC	5.20E+00	PPM @ 15% O2, GAS	GOOD COMBUSTION CONTROLS	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1247.00	MM BTU/HR	CO	8.00E+01	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1313.00	MM BTU/HR	CO	5.90E+01	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1247.00	MM BTU/HR	H2SO4	2.51E+01	LB/HR	FUEL SPEC: 0.2% SULFUR FUEL OIL	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1247.00	MM BTU/HR	NOX	2.67E+02	LB/HR	MULTINOZZLE COMBUSTOR, MAXIMUM WATER INJECTION	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1313.00	MM BTU/HR	NOX	1.19E+02	LB/HR	MULTINOZZLE COMBUSTOR, MAXIMUM WATER INJECTION	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1313.00	MM BTU/HR	PM10	5.00E+00	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1247.00	MM BTU/HR	SO2	2.41E+02	LB/HR	FUEL SPEC: 0.2% SULFUR FUEL OIL	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1313.00	MM BTU/HR	SO2	7.00E-01	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1247.00	MM BTU/HR	VOC	5.00E+00	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0055	DUKE POWER CO. LINCOLN COMBUSTION TURBINE STATI	NORTH CAROLINA DIV OF ENV MGMT	(919) 733-3340	TURBINE, COMBUSTION	1313.00	MM BTU/HR	VOC	2.00E+00	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.80	MMBTU/HR	CO, GAS	8.00E+01	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.80	MMBTU/HR	CO, OIL	8.10E+01	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.80	MMBTU/HR	H2SO4	1.80E+01	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.80	MMBTU/HR	NOX, GAS	1.58E+02	LB/HR	WATER INJECTION	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.80	MMBTU/HR	NOX, OIL	8.12E+02	LB/HR	WATER INJECTION; FUEL SPEC: 0.04% N FUEL OIL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.80	MMBTU/HR	PM/PM10, GAS	9.00E+00	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.60	MMBTU/HR	PM/PM10, OIL	1.70E+01	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.60	MMBTU/HR	SO2, GAS	1.00E+00	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.60	MMBTU/HR	SO2, OIL	3.09E+02	LB/HR	FUEL SPEC: 0.15% S FUEL OIL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.60	MMBTU/HR	VOC, GAS	2.80E+00	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NC-0059	CAROLINA POWER & LIGHT	NORTH CAROLINA DIV OF ENV MGMT	(919) 715-6283	COMBUSTION TURBINE, 4 EACH	1907.60	MMBTU/HR	VOC, OIL	7.00E+00	LB/HR	COMBUSTION CONTROL	0.000	BACT-PSD
NJ-0009	NEWARK BAY COGENERATION PARTNERSHIP	NEW JERSEY DEPT OF ENV PROTECTION	(609) 904-0491	TURBINE, NATURAL GAS FIRED	585.00	MMBTU/HR	CO	5.50E-03	LB/MMBTU	CATALYTIC OXIDATION	90.000	BACT-PSD
NJ-0009	NEWARK BAY COGENERATION PARTNERSHIP	NEW JERSEY DEPT OF ENV PROTECTION	(609) 904-0491	TURBINE, KEROSENE FIRED	585.00	MMBTU/HR	CO	6.30E-02	LB/MMBTU	CATALYTIC OXIDATION	83.000	BACT-PSD
NJ-0009	NEWARK BAY COGENERATION PARTNERSHIP	NEW JERSEY DEPT OF ENV PROTECTION	(609) 904-0491	TURBINE, NATURAL GAS FIRED	585.00	MMBTU/HR	NOX	3.30E-02	LB/MMBTU	STEAM INJECTION AND SCR	94.000	BACT-PSD
NJ-0009	NEWARK BAY COGENERATION PARTNERSHIP	NEW JERSEY DEPT OF ENV PROTECTION	(609) 904-0491	TURBINE, KEROSENE FIRED	585.00	MMBTU/HR	NOX	6.30E-02	LB/MMBTU	STEAM INJECTION AND SCR	94.000	BACT-PSD
NJ-0010	PEDRICKTOWN COGENERATION LIMITED PARTNERSHIP	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-0491	TURBINE, NATURAL GAS FIRED	1000.00	MMBTU/HR	NOX	4.40E-02	LB/MMBTU	STEAM INJECTION AND SCR	93.000	BACT-PSD
NJ-0011	LINDEN COGENERATION TECHNOLOGY	NEW JERSEY DEPT OF ENV PROTECTION	(609) 633-8210	TURBINE, NATURAL GAS FIRED	50.00	X E12 BTU/YR	NO2	3.38E+01	LB/HR	STEAM INJECTION AND SCR	94.500	BACT-PSD
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (NATURAL GAS) (2)	1190.00	MMBTU/HR	CO	2.80E-02	LB/MMBTU	TURBINE DESIGN	0.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (#2 FUEL OIL) (2)	1190.00	MMBTU/HR	CO	6.00E-02	LB/MMBTU	TURBINE DESIGN	0.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (NATURAL GAS) (2)	1190.00	MMBTU/HR	NOX	3.30E-02	LB/MMBTU	SCR, DRY LOW NOX BURNER	64.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (#2 FUEL OIL) (2)	1190.00	MMBTU/HR	NOX	9.20E-02	LB/MMBTU	SCR AND WATER INJECTION	0.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (NATURAL GAS) (2)	1190.00	MMBTU/HR	PM	2.30E-03	LB/MMBTU	TURBINE DESIGN	0.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (#2 FUEL OIL) (2)	1190.00	MMBTU/HR	PM	2.60E-02	LB/MMBTU	TURBINE DESIGN	0.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (NATURAL GAS) (2)	1190.00	MMBTU/HR	SO2	6.90E-03	LB/MMBTU	FUEL SPEC: NAT GAS/LOW SULFUR NO.2 OIL	0.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (#2 FUEL OIL) (2)	1190.00	MMBTU/HR	SO2	2.10E-01	LB/MMBTU	FUEL SPEC: USE OF LOW SULFUR NO.2 OIL	0.000	BACT-OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (NATURAL GAS) (2)	1190.00	MMBTU/HR	VOC	4.60E-03	LB/MMBTU	TURBINE DESIGN	0.000	OTHER
NJ-0013	LAKEWOOD COGENERATION, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES (#2 FUEL OIL) (2)	1190.00	MMBTU/HR	VOC	7.30E-03	LB/MMBTU	TURBINE DESIGN	0.000	OTHER
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, NATURAL GAS-FIRED (7)	617.00	MMBTU/HR	CO	1.80E+00	PPMDV	OXIDATION CATALYST	0.000	OTHER
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, KEROSENE-FIRED (7)	640.00	MMBTU/HR	CO	2.60E+00	PPMDV	OXIDATION CATALYST	0.000	OTHER
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, NATURAL GAS-FIRED (7)	617.00	MMBTU/HR	NOX	8.30E+00	PPMDV	SCR	0.000	BACT-PSD
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, KEROSENE-FIRED (7)	640.00	MMBTU/HR	NOX	1.80E+01	PPMDV	SCR	0.000	BACT-PSD
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, NATURAL GAS-FIRED (7)	617.00	MMBTU/HR	PM10	6.00E-03	LB/MMBTU	TURBINE DESIGN	0.000	BACT-PSD
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, KEROSENE-FIRED (7)	640.00	MMBTU/HR	PM10	2.30E-02	LB/MMBTU	TURBINE DESIGN	0.000	BACT-PSD
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, NATURAL GAS-FIRED (7)	617.00	MMBTU/HR	SO2	2.80E-03	LB/MMBTU	FUEL SPEC: USE OF NATURAL GAS	0.000	BACT-PSD
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, KEROSENE-FIRED (7)	640.00	MMBTU/HR	SO2	4.00E-02	LB/MMBTU	FUEL SPEC: USE OF LOW SULFUR OIL	0.000	BACT-PSD
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, NATURAL GAS-FIRED (7)	617.00	MMBTU/HR	TSP	6.00E-03	LB/MMBTU	TURBINE DESIGN	0.000	OTHER
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, KEROSENE-FIRED (7)	640.00	MMBTU/HR	TSP	3.10E-02	LB/MMBTU	TURBINE DESIGN	0.000	OTHER
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, NATURAL GAS-FIRED (7)	617.00	MMBTU/HR	VOC	4.00E+00	PPMDV	TURBINE DESIGN	0.000	BACT-PSD
NJ-0017	NEWARK BAY COGENERATION PARTNERSHIP, L.P.	NEW JERSEY DEPT OF ENV PROTECTION	(609) 984-3022	TURBINES, COMBUSTION, KEROSENE-FIRED (7)	640.00	MMBTU/HR	VOC	6.10E+00	PPMDV	TURBINE DESIGN	0.000	OTHER
NM-002	WILLIAMS FIELD SERVICES CO. - EL CEDRO COMPRESSO	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-2412	TURBINE, GAS-FIRED	11257.00	HP	CO	5.00E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
NM-002	WILLIAMS FIELD SERVICES CO. - EL CEDRO COMPRESSO	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-2412	TURBINE, GAS-FIRED	11257.00	HP	NOX	4.20E+01	PPM @ 15% O2	SOLONOX COMBUSTOR, DRY LOW NOX TECHNOLOGY	88.000	BACT-PSD
NM-002	WILLIAMS FIELD SERVICES CO. - EL CEDRO COMPRESSO	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-2412	TURBINE, GAS-FIRED	11257.00	HP	VOC	2.50E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
NM-002	MARATHON OIL CO. - INDIAN BASIN N.G. PLAN	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-0068	TURBINES, NATURAL GAS (2)	5500.00	HP	CO	1.32E+01	LBS/HR	LEAN-PREMIXED COMBUSTION TECHNOLOGY.	88.000	BACT-PSD
NM-002	MARATHON OIL CO. - INDIAN BASIN N.G. PLAN	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-0068	TURBINES, NATURAL GAS (2)	5500.00	HP	NOX	7.40E+00	LBS/HR	LEAN-PREMIXED COMBUSTION TECHNOLOGY. DRY/LOW NOX	86.000	BACT-PSD
NM-002	MILAGRO, WILLIAMS FIELD SERVICE	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-2411	TURBINE/COGEN, NATURAL GAS (2)	900.00	MMCF/DAY	CO	2.76E+01	PPM @ 15% O2		0.000	BACT-PSD
NM-002	MILAGRO, WILLIAMS FIELD SERVICE	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-2411	TURBINE/COGEN, NATURAL GAS (2)	900.00	MMCF/DAY	NO2	9.00E+00	PPM @ 15% O2	DRY LOW NOX (GENERAL ELECTRIC MODEL PG6541B)	94.000	BACT-PSD
NM-002	MILAGRO, WILLIAMS FIELD SERVICE	NEW MEXICO ENVIRONMENT DEPT/APC BURE	(505) 827-2411	TURBINE/COGEN, NATURAL GAS (2)	900.00	MMCF/DAY	PM10	0.00E+00	SEE P2 DESC.	COMBUSTION AIR FILTERS; GOOD COMBUSTION PRACTICE AND MAINTENANCE	0.000	BACT-PSD
NV-0015	SAGUARO POWER COMPANY	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE GENERATOR	34.50	MW	CO	9.00E+00	PPH	CONVERTER (CATALYTIC)	90.000	BACT-PSD
NV-0015	SAGUARO POWER COMPANY	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE GENERATOR	34.50	MW	NOX	1.69E+01	PPH (WINTER)	SELECTIVE CATALYTIC REDUCTION (SCR)	80.000	BACT-PSD
NV-0015	SAGUARO POWER COMPANY	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE GENERATOR	34.50	MW	PM	2.50E+00	PPH	COMBUSTION SYSTEM	0.000	LAER
NV-0015	SAGUARO POWER COMPANY	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE GENERATOR	34.50	MW	VOC	8.00E-01	PPH	COMBUSTION SYSTEM	0.000	LAER
NV-0017	NEVADA POWER COMPANY, HARRY ALLEN PEAKING PLAN	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE ELECTRIC POWER GENERATION	75.00	MW	CO	1.53E+02	TPY (EACH TURBINE)	PRECISION CONTROL FOR THE LOW NOX COMBUSTOR	0.000	BACT-PSD
NV-0017	NEVADA POWER COMPANY, HARRY ALLEN PEAKING PLAN	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE ELECTRIC POWER GENERATION	75.00	MW	NO2	8.86E+01	TPY (EACH TURBINE)	LOW NOX COMBUSTOR	0.000	BACT-PSD
NV-0017	NEVADA POWER COMPANY, HARRY ALLEN PEAKING PLAN	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE ELECTRIC POWER GENERATION	75.00	MW	PM10	3.06E+01	TPY (EACH TURBINE)	PRECISION CONTROL FOR THE COMBUSTOR	0.000	BACT-PSD
NV-0017	NEVADA POWER COMPANY, HARRY ALLEN PEAKING PLAN	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE ELECTRIC POWER GENERATION	75.00	MW	SO2	2.71E+01	TPY (EACH TURBINE)	FUEL SPEC: S IN #2 DISTILLATE LIMITED TO 0.05%	0.000	BACT-PSD
NV-0018	NEVADA COGENERATION ASSOCIATES #2	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	CO	4.00E+01	LBS/HR	CATALYTIC CONVERTER	0.000	BACT-PSD
NV-0018	NEVADA COGENERATION ASSOCIATES #2	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	NMHC	8.00E+00	LBS/HR	FUEL SPEC: BURN NATURAL GAS	0.000	BACT-PSD
NV-0018	NEVADA COGENERATION ASSOCIATES #2	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	NO2	6.13E+01	LBS/HR	SELECTIVE CATALYTIC SYSTEM ON ONE UNIT	0.000	BACT-PSD
NV-0018	NEVADA COGENERATION ASSOCIATES #2	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	PM10	3.00E+00	LBS/HR	FUEL SPEC: BURN NATURAL GAS	0.000	BACT-PSD
NV-0018	NEVADA COGENERATION ASSOCIATES #2	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	SO2	2.10E+00	LB/HR	FUEL SPEC: USE OF LOW-SULFUR OIL AS STANDBY FUEL	0.000	BACT-PSD
NV-0020	NEVADA COGENERATION ASSOCIATES #1	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	CO	4.00E+01	LBS/HR	CATALYTIC CONVERTER	0.000	BACT-PSD
NV-0020	NEVADA COGENERATION ASSOCIATES #1	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	NMHC	8.00E+00	LBS/HR	FUEL SPEC: BURN NATURAL GAS	0.000	BACT-PSD
NV-0020	NEVADA COGENERATION ASSOCIATES #1	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	NO2	6.13E+01	LBS/HR	SELECTIVE CATALYTIC SYSTEM ON ONE UNIT	0.000	BACT-PSD
NV-0020	NEVADA COGENERATION ASSOCIATES #1	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	PM10	3.00E+00	LBS/HR	FUEL SPEC: BURN NATURAL GAS	0.000	BACT-PSD
NV-0020	NEVADA COGENERATION ASSOCIATES #1	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBINED-CYCLE POWER GENERATION	85.00	MW	SO2	2.10E+00	LBS/HR	FUEL SPEC: USE OF LOW SULFUR OIL AS THE STAND-BY FUEL	0.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
NV-0030	MUDDY RIVER L.P.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	CO	7.70E+01	LB/HR	FUEL SPEC: NATURAL GAS	0.000	BACT-PSD
NV-0030	MUDDY RIVER L.P.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	NOX	3.03E+02	LB/HR	LOW NOX BURNER	0.000	BACT-PSD
NV-0030	MUDDY RIVER L.P.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	PM10	1.70E+01	LB/HR	FUEL SPEC: NATURAL GAS	0.000	BACT-PSD
NV-0030	MUDDY RIVER L.P.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	SO2	8.80E+01	LB/HR	FUEL SPEC: LOW SULFUR FUEL (LESS THAN .05%S)	0.000	BACT-PSD
NV-0030	MUDDY RIVER L.P.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	VOC	1.40E+01	LB/HR	FUEL SPEC: NATURAL GAS	0.000	BACT-PSD
NV-0031	CSW NEVADA, INC.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	CO	8.30E+01	LB/HR	FUEL SPEC: NATURAL GAS	0.000	BACT-PSD
NV-0031	CSW NEVADA, INC.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	NOX	2.73E+02	LB/HR	DRY LOW NOX COMBUSTOR	0.000	BACT-PSD
NV-0031	CSW NEVADA, INC.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	PM10	1.70E+01	LB/HR	FUEL SPEC: NATURAL GAS	0.000	BACT-PSD
NV-0031	CSW NEVADA, INC.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	SO2	3.05E+01	LB/HR	FUEL SPEC: LOW SULFUR FUEL (LESS THAN 0.05%S)	0.000	BACT-PSD
NV-0031	CSW NEVADA, INC.	CLARK CO HEALTH DIST, DIV APC, NV	(702) 383-1276	COMBUSTION TURBINE, DIESEL & NATURAL GAS	140.00	MW	VOC	1.30E+01	LB/HR	FUEL SPEC: NATURAL GAS	0.000	BACT-PSD
NY-0044	BROOKLYN NAVY YARD COGENERATION PARTNERS L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, NATURAL GAS FIRED	240.00	MW	CO	4.00E+00	PPM @ 15% O2		0.000	LAER
NY-0044	BROOKLYN NAVY YARD COGENERATION PARTNERS L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, OIL FIRED	240.00	MW	CO	5.00E+00	PPM @ 15% O2		0.000	LAER
NY-0044	BROOKLYN NAVY YARD COGENERATION PARTNERS L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, NATURAL GAS FIRED	240.00	MW	NOX	3.50E+00	PPM @ 15% O2	SCR	0.000	LAER
NY-0044	BROOKLYN NAVY YARD COGENERATION PARTNERS L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, OIL FIRED	240.00	MW	NOX	1.00E+01	PPM @ 15% O2	SCR	0.000	LAER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINES (2) (252 MW)	1173.00	MMBTU/HR	CO	1.00E+01	PPM	COMBUSTION CONTROLS	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINE (79 MW)	1173.00	MMBTU/HR	CO	2.50E+01	PPM	COMBUSTION CONTROL	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINES (2) (252 MW)	1173.00	MMBTU/HR	H2SO4 MIST	2.10E-02	LB/MMBTU OIL	FUEL SPEC: LOW SULFUR OIL	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINES (2) (252 MW)	1173.00	MMBTU/HR	NOX	9.00E+00	PPM GAS	STEAM INJECTION AND SCR	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINE (79 MW)	1173.00	MMBTU/HR	NOX	2.50E+01	PPM GAS	STEAM INJECTION	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINES (2) (252 MW)	1173.00	MMBTU/HR	PM/PM10	4.00E-03	LB/MMBTU GAS (BASE)	COMBUSTION CONTROLS AND FUEL SPEC: LOW SULFUR OIL	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINE (79 MW)	1173.00	MMBTU/HR	PM/PM10	4.00E-03	LB/MMBTU, GAS	COMBUSTION CONTROLS AND FUEL SPEC: LOW SULFUR OIL	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINES (2) (252 MW)	1173.00	MMBTU/HR	SO2	2.00E-01	% SULFUR OIL	FUEL SPEC: LOW SULFUR OIL	0.000	BACT-OTHER
NY-0045	SELKIRK COGENERATION PARTNERS, L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	COMBUSTION TURBINE (79 MW)	1173.00	MMBTU/HR	SO2	2.00E-01	% SULFUR OIL	FUEL SPEC: LOW SULFUR OIL	0.000	BACT-OTHER
NY-0046	SARANAC ENERGY COMPANY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINES, COMBUSTION (2) (NATURAL GAS)	1123.00	MMBTU/HR	CO	3.00E+00	PPM	OXIDATION CATALYST	0.000	BACT-OTHER
NY-0046	SARANAC ENERGY COMPANY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINES, COMBUSTION (2) (NATURAL GAS)	1123.00	MMBTU/HR	NOX	9.00E+00	PPM	SCR	0.000	BACT-OTHER
NY-0046	SARANAC ENERGY COMPANY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINES, COMBUSTION (2) (NATURAL GAS)	1123.00	MMBTU/HR	PM/PM10	8.20E-03	LB/MMBTU	COMBUSTION CONTROLS	0.000	BACT-OTHER
NY-0046	SARANAC ENERGY COMPANY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINES, COMBUSTION (2) (NATURAL GAS)	1123.00	MMBTU/HR	VOC	4.50E-03	LB/MMBTU	OXIDATION CATALYST	0.000	BACT-OTHER
NY-0047	PASNY/HOLTSVILLE COMBINED CYCLE PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION GAS (150 MW)	1148.00	MMBTU/HR	CO	9.50E+00	PPM	COMBUSTION CONTROL	0.000	BACT-OTHER
NY-0047	PASNY/HOLTSVILLE COMBINED CYCLE PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION GAS (150 MW)	1148.00	MMBTU/HR	NOX (FROM GAS)	9.00E+00	PPM	DRY LOW NOX	0.000	BACT-OTHER
NY-0047	PASNY/HOLTSVILLE COMBINED CYCLE PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION GAS (150 MW)	1148.00	MMBTU/HR	NOX (FROM OIL)	4.20E+01	PPM	WATER INJECTOR	0.000	BACT-OTHER
NY-0047	PASNY/HOLTSVILLE COMBINED CYCLE PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION GAS (150 MW)	1148.00	MMBTU/HR	SO2	2.00E-01	% SULFUR OIL	FUEL SPEC: LOW SULFUR OIL	0.000	BACT-OTHER
NY-0048	KAMINE/BESICORP CORNING L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (79 MW)	853.00	MMBTU/HR	NOX	9.00E+00	PPM	DRY LOW NOX OR SCR	0.000	BACT-OTHER
NY-0048	KAMINE/BESICORP CORNING L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (79 MW)	853.00	MMBTU/HR	PM/PM10	8.00E-03	LB/MMBTU	COMBUSTION CONTROL	0.000	BACT-OTHER
NY-0049	KAMINE/BESICORP BEAVER FALLS COGENERATION FACILI	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (NAT. GAS & OIL FUEL) (79MW)	850.00	MMBTU/HR	CO	9.50E+00	PPM	COMBUSTION CONTROLS	0.000	BACT-OTHER
NY-0049	KAMINE/BESICORP BEAVER FALLS COGENERATION FACILI	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (NAT. GAS & OIL FUEL) (79MW)	850.00	MMBTU/HR	NOX (FROM GAS)	9.00E+00	PPM	DRY LOW NOX OR SCR	0.000	BACT-OTHER
NY-0049	KAMINE/BESICORP BEAVER FALLS COGENERATION FACILI	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (NAT. GAS & OIL FUEL) (79MW)	850.00	MMBTU/HR	NOX (FROM OIL)	5.50E+01	PPM	DRY LOW NOX OR SCR	0.000	BACT-OTHER
NY-0049	KAMINE/BESICORP BEAVER FALLS COGENERATION FACILI	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (NAT. GAS & OIL FUEL) (79MW)	850.00	MMBTU/HR	PM/PM10 (FROM GAS)	8.00E-03	LB/MMBTU	COMBUSTION CONTROLS	0.000	BACT-OTHER
NY-0049	KAMINE/BESICORP BEAVER FALLS COGENERATION FACILI	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (NAT. GAS & OIL FUEL) (79MW)	850.00	MMBTU/HR	PM/PM10 (FROM OIL)	3.00E-02	LB/MMBTU	COMBUSTION CONTROLS	0.000	BACT-OTHER
NY-0049	KAMINE/BESICORP BEAVER FALLS COGENERATION FACILI	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (NAT. GAS & OIL FUEL) (79MW)	850.00	MMBTU/HR	SO2	8.00E-02	% SULFUR OIL	FUEL SPEC: LOW SULFUR OIL	0.000	BACT-OTHER
NY-0049	KAMINE/BESICORP BEAVER FALLS COGENERATION FACILI	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINE, COMBUSTION (NAT. GAS & OIL FUEL) (79MW)	850.00	MMBTU/HR	VOC	7.00E-03	LB/MMBTU	COMBUSTION CONTROLS	0.000	BACT-OTHER
NY-0050	SITHE/INDEPENDENCE POWER PARTNERS	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINES, COMBUSTION (4) (NATURAL GAS) (1012 MW)	2133.00	MMBTU/HR	CO	1.30E+01	PPM	COMBUSTION CONTROLS	0.000	BACT-OTHER
NY-0050	SITHE/INDEPENDENCE POWER PARTNERS	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINES, COMBUSTION (4) (NATURAL GAS) (1012 MW)	2133.00	MMBTU/HR	NOX	4.50E+00	PPM	SCR AND DRY LOW NOX	0.000	BACT-OTHER
NY-0050	SITHE/INDEPENDENCE POWER PARTNERS	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	TURBINES, COMBUSTION (4) (NATURAL GAS) (1012 MW)	2133.00	MMBTU/HR	SO2	0.00E+00		FUEL SPEC: USE OF NATURAL GAS	0.000	BACT-OTHER
NY-0057	MEGAN-RACINE ASSOCIATES, INC	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000-N COMBINED CYCLE GAS TURBINE	401.00	MMBTU/HR	CO	2.80E-02	LB/MMBTU, 11 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0057	MEGAN-RACINE ASSOCIATES, INC	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000-N COMBINED CYCLE GAS TURBINE	401.00	MMBTU/HR	NOX	4.20E+01	PPMDV @ 15% O2	WATER INJECTION	80.000	BACT
NY-0057	MEGAN-RACINE ASSOCIATES, INC	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000-N COMBINED CYCLE GAS TURBINE	401.00	MMBTU/HR	PM,PM10	2.80E-02	LB/MMBTU, 12 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0057	MEGAN-RACINE ASSOCIATES, INC	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000-N COMBINED CYCLE GAS TURBINE	401.00	MMBTU/HR	VOC	2.00E-02	LB/MMBTU, 8.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0061	ANITEC COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 COMBINED CYCLE GAS TURBINE EP #00001	451.00	MMBTU/HR	CO	3.60E+01	PPM, 33 LB/HR	BAFFLE CHAMBER	80.000	SEE NOTE #4
NY-0061	ANITEC COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 COMBINED CYCLE GAS TURBINE EP #00001	451.00	MMBTU/HR	NOX	2.50E+01	PPM, 41 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0061	ANITEC COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 COMBINED CYCLE GAS TURBINE EP #00001	451.00	MMBTU/HR	PM,PM10	5.00E-03	LB/MMBTU, 2.0 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.1% BY WEIGHT	0.000	BACT-OTHER
NY-0061	ANITEC COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 COMBINED CYCLE GAS TURBINE EP #00001	451.00	MMBTU/HR	VOC	8.00E-03	LB/MMBTU, 3.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0062	FULTON COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 GAS TURBINE	500.00	MMBTU/HR	CO	1.07E+02	PPM, 120 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0062	FULTON COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 GAS TURBINE	500.00	MMBTU/HR	NOX	3.60E+01	PPM, 85 LB/HR	WATER INJECTION	58.500	BACT
NY-0062	FULTON COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 GAS TURBINE	500.00	MMBTU/HR	PM,PM10	2.40E-02	LB/MMBTU, 12.0 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.3% BY WEIGHT	0.000	BACT-OTHER
NY-0062	FULTON COGEN PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM5000 GAS TURBINE	500.00	MMBTU/HR	VOC	4.00E-03	LB/MMBTU, 2.0 LB/HR	NO CONTROLS	0.000	SEE NOTE #6
NY-0063	TBG COGEN COGENERATION PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM2500 GAS TURBINE	214.90	MMBTU/HR	CO	1.81E-01	LB/MMBTU	CATALYTIC OXIDIZER	80.000	BACT
NY-0063	TBG COGEN COGENERATION PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM2500 GAS TURBINE	214.90	MMBTU/HR	NOX	7.50E+01	PPM + FBN CORRECTI	WATER INJECTION	80.000	BACT
NY-0063	TBG COGEN COGENERATION PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM2500 GAS TURBINE	214.90	MMBTU/HR	PM,PM10	2.40E-02	LB/MMBTU, 5.0 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.037% BY WEIGHT	0.000	BACT-OTHER
NY-0063	TBG COGEN COGENERATION PLANT	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM2500 GAS TURBINE	214.90	MMBTU/HR	VOC	8.00E-03	LB/MMBTU, 2.9 LB/HR	NO CONTROLS	0.000	BACT-OTHER

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCTNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
NY-0084	INDECK-OSWEGO ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	533.00	MMBTU/HR	CO	1.00E+01	PPM, 10.00 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0084	INDECK-OSWEGO ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	533.00	MMBTU/HR	NOX	4.20E+01	PPM, 75.00 LB/HR	STEAM INJECTION	53.000	BACT
NY-0084	INDECK-OSWEGO ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	533.00	MMBTU/HR	PM,PM10	8.00E-03	LB/MMBTU, 5.00 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.27% BY WEIGHT	0.000	BACT-OTHER
NY-0084	INDECK-OSWEGO ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	533.00	MMBTU/HR	VOC	1.00E-02	LB/MMBTU, 5.00 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0085	KAMINE/BESICORP CARTHAGE L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	491.00	MMBTU/HR	CO	1.00E+01	PPM, 11.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0085	KAMINE/BESICORP CARTHAGE L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	491.00	MMBTU/HR	NOX	4.20E+01	PPM, 78.6 LB/HR	STEAM INJECTION	83.000	BACT
NY-0085	KAMINE/BESICORP CARTHAGE L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	491.00	MMBTU/HR	PM,PM10	5.00E-03	LB/MMBTU, 3.0 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.20% BY WEIGHT	0.000	BACT-OTHER
NY-0085	KAMINE/BESICORP CARTHAGE L.P.	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	491.00	MMBTU/HR	VOC	9.00E-03	LB/MMBTU, 5.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0086	INDECK ENERGY COMPANY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE EP #00001	491.00	MMBTU/HR	CO	4.00E+01	PPM	NO CONTROLS	0.000	BACT-OTHER
NY-0086	INDECK ENERGY COMPANY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE EP #00001	491.00	MMBTU/HR	NOX	3.20E+01	PPM	STEAM INJECTION	58.200	BACT
NY-0086	INDECK ENERGY COMPANY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE EP #00001	491.00	MMBTU/HR	PM,PM10	6.00E-03	LB/MMBTU, 2.5 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0068	KAMINE/BESICORP NATURAL DAM LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	500.00	MMBTU/HR	CO	2.00E-02	LB/MMBTU, 10 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0068	KAMINE/BESICORP NATURAL DAM LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	500.00	MMBTU/HR	NOX	4.20E+01	PPM, 80.1 LB/HR	STEAM INJECTION	35.000	BACT
NY-0068	KAMINE/BESICORP NATURAL DAM LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	500.00	MMBTU/HR	PM,PM10	0.00E+00	SEE NOTE #1	FUEL SPECIFICATION	0.000	BACT-OTHER
NY-0068	KAMINE/BESICORP NATURAL DAM LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	500.00	MMBTU/HR	VOC	8.00E-03	LB/MMBTU, 4 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0071	KAMINE SOUTH GLENS FALLS COGEN CO	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	498.00	MMBTU/HR	CO	9.00E+00	PPM, 11.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0071	KAMINE SOUTH GLENS FALLS COGEN CO	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	498.00	MMBTU/HR	NOX	4.20E+01	PPM, 76.8 LB/HR	WATER INJECTION	50.000	BACT
NY-0071	KAMINE SOUTH GLENS FALLS COGEN CO	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	498.00	MMBTU/HR	PM,PM10	5.00E-03	LB/MMBTU, 3.0 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.20% BY WEIGHT	0.000	BACT-OTHER
NY-0071	KAMINE SOUTH GLENS FALLS COGEN CO	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	498.00	MMBTU/HR	VOC	8.00E-03	LB/MMBTU, 5.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0072	KAMINE/BESICORP SYRACUSE LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	SIEMENS V84.3 GAS TURBINE (EP #00001)	850.00	MMBTU/HR	CO	9.50E+00	PPM	NO CONTROLS	0.000	BACT-OTHER
NY-0072	KAMINE/BESICORP SYRACUSE LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	SIEMENS V84.3 GAS TURBINE (EP #00001)	850.00	MMBTU/HR	NOX	2.50E+01	PPM	WATER INJECTION	70.000	BACT
NY-0072	KAMINE/BESICORP SYRACUSE LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	SIEMENS V84.3 GAS TURBINE (EP #00001)	850.00	MMBTU/HR	PM,PM10	8.00E-03	LB/MMBTU, 5.8 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.15% BY WEIGHT	0.000	BACT-OTHER
NY-0072	KAMINE/BESICORP SYRACUSE LP	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	SIEMENS V84.3 GAS TURBINE (EP #00001)	850.00	MMBTU/HR	VOC	7.00E-03	LB/MMBTU, 4.8 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0073	LOCKPORT COGEN FACILITY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(6) GE FRAME 6 TURBINES (EP #S 00001-00006)	423.80	MMBTU/HR	CO	1.00E+01	PPM	NO CONTROLS	0.000	BACT-OTHER
NY-0073	LOCKPORT COGEN FACILITY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(6) GE FRAME 6 TURBINES (EP #S 00001-00006)	423.80	MMBTU/HR	NOX	4.20E+01	PPM	STEAM INJECTION	78.000	BACT
NY-0073	LOCKPORT COGEN FACILITY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(6) GE FRAME 6 TURBINES (EP #S 00001-00006)	423.80	MMBTU/HR	PM,PM10	6.00E-03	LB/MMBTU, 2.5 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.20% BY WEIGHT	0.000	BACT-OTHER
NY-0073	LOCKPORT COGEN FACILITY	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(6) GE FRAME 6 TURBINES (EP #S 00001-00006)	423.80	MMBTU/HR	VOC	1.20E-02	LB/MMBTU, 5.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0075	PILGRIM ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) WESTINGHOUSE W501D5 TURBINES (EP #S 00001&7)	1400.00	MMBTU/HR	CO	1.00E+01	PPM, 29.0 LB/HR		0.000	BACT-OTHER
NY-0075	PILGRIM ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) WESTINGHOUSE W501D5 TURBINES (EP #S 00001&7)	1400.00	MMBTU/HR	NOX	4.50E+00	PPM, 23.6 LB/HR	STEAM INJECTION FOLLOWED BY SCR	0.000	BACT
NY-0075	PILGRIM ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) WESTINGHOUSE W501D5 TURBINES (EP #S 00001&7)	1400.00	MMBTU/HR	PM,PM10	7.00E-03	LB/MMBTU, 7.20 LB/HR	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.05% BY WEIGHT	0.000	BACT-OTHER
NY-0075	PILGRIM ENERGY CENTER	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) WESTINGHOUSE W501D5 TURBINES (EP #S 00001&7)	1400.00	MMBTU/HR	VOC	2.00E-03	LB/MMBTU, 2.53 LB/HR		0.000	BACT-OTHER
NY-0076	TRIGEN MITCHEL FIELD	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	424.70	MMBTU/HR	CO	1.00E+01	PPM, 10.0 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0076	TRIGEN MITCHEL FIELD	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	424.70	MMBTU/HR	NOX	8.00E+01	PPM, 80 LB/HR	STEAM INJECTION	20.000	BACT
NY-0076	TRIGEN MITCHEL FIELD	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	424.70	MMBTU/HR	PM,PM10	8.00E-03	LB/MMBTU, 2.9 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0076	TRIGEN MITCHEL FIELD	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE	424.70	MMBTU/HR	VOC	1.10E-02	LB/MMBTU, 4.5 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0077	INDECK-YERKES ENERGY SERVICES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE (EP #00001)	432.20	MMBTU/HR	CO	1.00E+01	PPM, 10 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0077	INDECK-YERKES ENERGY SERVICES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE (EP #00001)	432.20	MMBTU/HR	NOX	4.20E+01	PPM, 74 LB/HR	STEAM INJECTION	35.000	BACT
NY-0077	INDECK-YERKES ENERGY SERVICES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE FRAME 6 GAS TURBINE (EP #00001)	432.20	MMBTU/HR	TSP/PM10	7.00E-03	LB/MMBTU, 3.5 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0079	LEDERLE LABORATORIES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) GAS TURBINES (EP #S 00101&102)	110.00	MMBTU/HR	CO	4.80E+01	PPM, 12.6 LB/HR		0.000	BACT-OTHER
NY-0079	LEDERLE LABORATORIES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) DUCT BURNERS (EP #S 00101&102)	99.00	MMBTU/HR	CO	8.00E-02	LB/MMBTU, 5.9 LB/HR		0.000	BACT-OTHER
NY-0079	LEDERLE LABORATORIES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) GAS TURBINES (EP #S 00101&102)	110.00	MMBTU/HR	NOX	4.20E+01	PPM, 18 LB/HR	STEAM INJECTION	0.000	BACT-PSD
NY-0079	LEDERLE LABORATORIES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) DUCT BURNERS (EP #S 00101&102)	99.00	MMBTU/HR	NOX	4.00E-01	LB/MMBTU, 36.3 LB/HR		0.000	BACT-OTHER
NY-0079	LEDERLE LABORATORIES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) GAS TURBINES (EP #S 00101&102)	110.00	MMBTU/HR	PM,PM10	0.00E+00	SEE NOTE #2	FUEL SPEC: SULFUR CONTENT NOT TO EXCEED 0.30% BY WEIGHT	0.000	BACT-OTHER
NY-0079	LEDERLE LABORATORIES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(2) DUCT BURNERS (EP #S 00101&102)	99.00	MMBTU/HR	PM,PM10	0.00E+00	SEE NOTE #2	FUEL SPEC: SULFUR CONTENT NO TO EXCEED 0.30% BY WEIGHT	0.000	BACT-OTHER
NY-0080	PROJECT ORANGE ASSOCIATES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM-5000 GAS TURBINE	550.00	MMBTU/HR	CO	9.20E+01	LB/HR TEMP > 20F	NO CONTROLS	0.000	BACT-OTHER
NY-0080	PROJECT ORANGE ASSOCIATES	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	GE LM-5000 GAS TURBINE	550.00	MMBTU/HR	NOX	2.50E+01	PPM, 47 LB/HR	STEAM INJECTION, FUEL SPEC; NATURAL GAS ONLY	80.000	BACT
NY-0081	LILCO SHOREHAM	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(3) GE FRAME 7 TURBINES (EP #S 00007-9)	850.00	MMBTU/HR	CO	1.00E+01	PPM, 19.7 LB/HR	NO CONTROLS	0.000	BACT-OTHER
NY-0081	LILCO SHOREHAM	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(3) GE FRAME 7 TURBINES (EP #S 00007-9)	850.00	MMBTU/HR	NOX	5.50E+01	PPM +FSH & HEAT RAT	WATER INJECTION	30.000	BACT
NY-0081	LILCO SHOREHAM	NEW YORK DEC, DIV OF AIR RESOURCES	(518) 457-7688	(3) GE FRAME 7 TURBINES (EP #S 00007-9)	850.00	MMBTU/HR	PM10	1.20E-02	LB/MMBTU, 10.2 LB/HR	NO CONTROLS	0.000	BACT-OTHER
OH-021	CNG TRANSMISSION	OHIO ENVIRONMENTAL PROTECTION AGENCY	(614) 644-2270	TURBINE (NATURAL GAS) (3)	5500.00	HP (EACH)	CO	1.50E-02	GAHP-HR	FUEL SPEC: USE OF NATURAL GAS	0.000	OTHER
OH-021	CNG TRANSMISSION	OHIO ENVIRONMENTAL PROTECTION AGENCY	(614) 644-2270	TURBINE (NATURAL GAS) (3)	5500.00	HP (EACH)	NOX	1.60E+00	GAHP-HR*	LOW NOX COMBUSTION	0.000	BACT-OTHER
OH-021	CNG TRANSMISSION	OHIO ENVIRONMENTAL PROTECTION AGENCY	(614) 644-2270	TURBINE (NATURAL GAS) (3)	5500.00	HP (EACH)	PM	3.50E-02	LB/MMBTU	FUEL SPEC: USE OF NATURAL GAS	0.000	OTHER
OH-021	CNG TRANSMISSION	OHIO ENVIRONMENTAL PROTECTION AGENCY	(614) 644-2270	TURBINE (NATURAL GAS) (3)	5500.00	HP (EACH)	VOC	1.00E-01	GAHP-HR	FUEL SPEC: USE OF NATURAL GAS	0.000	OTHER
OK-0027	OKLAHOMA MUNICIPAL POWER AUTHORITY	OKLAHOMA AIR QUALITY SERVICE	(405) 271-5220	TURBINE, COMBUSTION	58.00	MW	H2SO4	1.30E-02	LB/MM BTU	FUEL SPEC: USE OF DISTILLATE FUEL	90.000	BACT-OTHER
OK-0027	OKLAHOMA MUNICIPAL POWER AUTHORITY	OKLAHOMA AIR QUALITY SERVICE	(405) 271-5220	TURBINE, COMBUSTION	58.00	MW	NOX (FROM GAS FUEL)	2.50E+01	PPM @ 15% O2	COMBUSTION CONTROLS	83.000	BACT-OTHER
OK-0027	OKLAHOMA MUNICIPAL POWER AUTHORITY	OKLAHOMA AIR QUALITY SERVICE	(405) 271-5220	TURBINE, COMBUSTION	58.00	MW	NOX (FROM OIL FUEL)	6.50E+01	PPM @ 15% O2	COMBUSTION CONTROLS	83.000	BACT-OTHER
OK-0027	OKLAHOMA MUNICIPAL POWER AUTHORITY	OKLAHOMA AIR QUALITY SERVICE	(405) 271-5220	TURBINE, COMBUSTION	58.00	MW	PM	1.25E-02	LB/MMBTU	FUEL SPEC: USE OF DISTILLATE FUEL	90.000	BACT-OTHER
OK-0027	OKLAHOMA MUNICIPAL POWER AUTHORITY	OKLAHOMA AIR QUALITY SERVICE	(405) 271-5220	TURBINE, COMBUSTION	58.00	MW	SO2	4.30E-01	LB/MMBTU	FUEL SPEC: USE OF DISTILLATE FUEL	50.000	BACT-OTHER
OR-000	PACIFIC GAS TRANSMITTION	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503)-229-5968	TURBINE, NAT. GAS	14800.00	HP	NOX	4.20E+01	PPM @ 15% O2	LOW NOX BURNERS	75.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
OR-000	PACIFIC GAS TRANSMISSION COMPANY	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503) 229-5968	TURBINE GAS, COMPRESSOR STATION	110.00	MMBTU/HR	NO2	1.99E+02	PPM @ 15% O2	LOW NOX BURNER DESIGN	30.000	NSPS
OR-001	PORTLAND GENERAL ELECTRIC CO.	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503) 229-5584	TURBINES, NATURAL GAS (2)	1720.00	MMBTU/HR	CO	1.50E+01	PPM @ 15% O2	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
OR-001	PORTLAND GENERAL ELECTRIC CO.	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503) 229-5584	BOILERS, AUXILIARY, NATURAL GAS (2)	361.00	MMBTU/HR	CO	5.80E+01	PPM @ 15% O2	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
OR-001	PORTLAND GENERAL ELECTRIC CO.	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503) 229-5584	TURBINES, NATURAL GAS (2)	1720.00	MMBTU/HR	NOX	4.50E+00	PPM @ 15% O2	SCR	82.000	BACT-PSD
OR-001	PORTLAND GENERAL ELECTRIC CO.	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503) 229-5584	BOILERS, AUXILIARY, NATURAL GAS (2)	361.00	MMBTU/HR	NOX	1.00E-01	LB/MMBTU	LOW NOX BURNER AND FLUE GAS RECIRCULATION	0.000	BACT-PSD
OR-001	HERMISTON GENERATING CO.	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503) 229-5584	TURBINES, NATURAL GAS (2)	1696.00	MMBTU/HR	CO	1.50E+01	PPM @ 15% O2	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
OR-001	HERMISTON GENERATING CO.	OREGON DEPT OF ENVIRONMENTAL QUALITY	(503) 229-5584	TURBINES, NATURAL GAS (2)	1696.00	MMBTU/HR	NOX	4.50E+00	PPM @ 15% O2	SCR	82.000	BACT-PSD
PA-0083	NORTHERN CONSOLIDATED POWER	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(814)-332-6940	TURBINES, GAS, 2	34.80	MMBTU/HR	CO	1.10E+02	T/YR	OXIDATION CATALYST	90.000	OTHER
PA-0083	NORTHERN CONSOLIDATED POWER	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(814)-332-6940	TURBINES, GAS, 2	34.80	MMBTU/HR	NOX	2.50E+01	PPM @ 15% O2	STEAM INJECTION/+SCR IN 1997	85.000	OTHER
PA-0083	NORTHERN CONSOLIDATED POWER	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(814)-332-6940	TURBINES, GAS, 2	34.80	MMBTU/HR	VOC	1.05E+02	PPM @ 15% O2	OXIDATION CATALYST	50.000	OTHER
PA-0098	GRAYS FERRY CO. GENERATION PARTNERSHIP	PHILADELPHIA DOPH, AIR MGMT SERV, PA	(215) 823-7572	TURBINE (NATURAL GAS & OIL)	1150.00	MMBTU/HR	CO	5.50E-03	LB/MMBTU (GAS)*	COMBUSTION	0.000	BACT-OTHER
PA-0098	GRAYS FERRY CO. GENERATION PARTNERSHIP	PHILADELPHIA DOPH, AIR MGMT SERV, PA	(215) 823-7572	TURBINE (NATURAL GAS & OIL)	1150.00	MMBTU/HR	NOX	9.00E+00	PPMVD (NAT. GAS)*	DRY LOW NOX BURNER, COMBUSTION CONTROL	0.000	BACT-OTHER
PA-0098	GRAYS FERRY CO. GENERATION PARTNERSHIP	PHILADELPHIA DOPH, AIR MGMT SERV, PA	(215) 823-7572	TURBINE (NATURAL GAS & OIL)	1150.00	MMBTU/HR	PM	1.00E-01	LB/MMBTU*	DRY LOW NOX BURNER, COMBUSTION CONTROL	0.000	BACT-OTHER
PA-0098	GRAYS FERRY CO. GENERATION PARTNERSHIP	PHILADELPHIA DOPH, AIR MGMT SERV, PA	(215) 823-7572	TURBINE (NATURAL GAS & OIL)	1150.00	MMBTU/HR	VOC	3.30E-03	LB/MMBTU*	COMBUSTION	0.000	BACT-OTHER
PA-0099	FLEETWOOD COGENERATION ASSOCIATES	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(215) 468-4175	NG TURBINE (GE LM6000) WITH WASTE HEAT BOILER	360.00	MMBTU/HR	NOX	2.10E+01	LB/HR	SCR WITH LOW NOX COMBUSTORS	47.000	BACT-OTHER
PA-0099	FLEETWOOD COGENERATION ASSOCIATES	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(215) 468-4175	NG TURBINE (GE LM6000) WITH WASTE HEAT BOILER	360.00	MMBTU/HR	PM	8.00E+00	LB/HR		0.000	BACT-OTHER
PA-0099	FLEETWOOD COGENERATION ASSOCIATES	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(215) 468-4175	NG TURBINE (GE LM6000) WITH WASTE HEAT BOILER	360.00	MMBTU/HR	SO2	1.13E+01	LB/HR	FUEL SPEC: 0.1 % SULFUR IN FUEL	0.000	BACT-OTHER
PA-0099	FLEETWOOD COGENERATION ASSOCIATES	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(215) 468-4175	NG TURBINE (GE LM6000) WITH WASTE HEAT BOILER	360.00	MMBTU/HR	VOC	4.40E+00	LB/HR	GOOD COMBUSTION PRACTICES	0.000	BACT-OTHER
PA-0130	PROCTOR AND GAMBLE PAPER PRODUCTS CO (CHARMIN	PENNSYLVANIA DER, BUR OF AIR QUAL CTRL	(717) 826-2531	TURBINE, NATURAL GAS	580.00	MMBTU/HR	NOX	5.50E+01	PPM @ 15% O2	STEAM INJECTION	75.000	RACT
RI-0010	NARRAGANSETT ELECTRIC/NEW ENGLAND POWER CO.	RHODE ISLAND DIV OF AIR & HAZ MAT	(401)-277-2808	TURBINE, GAS AND DUCT BURNER	1360.00	MMBTU/HR	CO	1.10E+01	PPM @ 15% O2, GAS		0.000	BACT-PSD
RI-0010	NARRAGANSETT ELECTRIC/NEW ENGLAND POWER CO.	RHODE ISLAND DIV OF AIR & HAZ MAT	(401)-277-2808	TURBINE, GAS AND DUCT BURNER	1360.00	MMBTU/HR	NOX	9.00E+00	PPM @ 15% O2, GAS	SCR	0.000	BACT-PSD
RI-0010	NARRAGANSETT ELECTRIC/NEW ENGLAND POWER CO.	RHODE ISLAND DIV OF AIR & HAZ MAT	(401)-277-2808	TURBINE, GAS AND DUCT BURNER	1360.00	MMBTU/HR	PM	9.00E-03	LB/MMBTU, GAS		0.000	BACT-PSD
RI-0010	NARRAGANSETT ELECTRIC/NEW ENGLAND POWER CO.	RHODE ISLAND DIV OF AIR & HAZ MAT	(401)-277-2808	TURBINE, GAS AND DUCT BURNER	1360.00	MMBTU/HR	VOC	9.00E+00	PPM @ 15% O2		0.000	BACT-PSD
RI-0012	ALGONQUIN GAS TRANSMISSION CO.	RHODE ISLAND DIV OF AIR & HAZ MAT	(401)-277-2808	TURBINE, GAS, 2	49.00	MMBTU/HR	CO	1.14E-01	LB/MMBTU	GOOD COMBUSTION PRACTICES	0.000	BACT-OTHER
RI-0012	ALGONQUIN GAS TRANSMISSION CO.	RHODE ISLAND DIV OF AIR & HAZ MAT	(401)-277-2808	TURBINE, GAS, 2	49.00	MMBTU/HR	NOX	1.00E+02	PPM @ 15% O2	LOW NOX COMBUSTION	0.000	BACT-OTHER
RI-0012	ALGONQUIN GAS TRANSMISSION CO.	RHODE ISLAND DIV OF AIR & HAZ MAT	(401)-277-2808	TURBINE, GAS, 2	49.00	MMBTU/HR	VOC	1.60E-02	LB/MMBTU	GOOD COMBUSTION PRACTICES	0.000	BACT-OTHER
SC-0021	CAROLINA POWER AND LIGHT CO.	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4857	TURBINE, I.C.	80.00	MW	CO	6.00E+01	LB/H		0.000	BACT-PSD
SC-0021	CAROLINA POWER AND LIGHT CO.	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4857	TURBINE, I.C.	80.00	MW	H2SO4	3.00E+00	LB/H		0.000	BACT-PSD
SC-0021	CAROLINA POWER AND LIGHT CO.	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4857	TURBINE, I.C.	80.00	MW	NOX	2.82E+02	LB/H	WATER INJECTION	50.000	BACT-PSD
SC-0021	CAROLINA POWER AND LIGHT CO.	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4857	TURBINE, I.C.	80.00	MW	PM	1.50E+01	LB/H		0.000	BACT-PSD
SC-0021	CAROLINA POWER AND LIGHT CO.	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4857	TURBINE, I.C.	80.00	MW	SO2	2.28E+02	LB/H	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
SC-0021	CAROLINA POWER AND LIGHT CO.	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4857	TURBINE, I.C.	80.00	MW	VOC	1.00E+01	LB/H		0.000	BACT-PSD
SC-0029	SC ELECTRIC AND GAS COMPANY - HAGOOD STATION	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	INTERNAL COMBUSTION TURBINE	110.00	MW	CO	2.30E+01	LBS/HR	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
SC-0029	SC ELECTRIC AND GAS COMPANY - HAGOOD STATION	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	INTERNAL COMBUSTION TURBINE	110.00	MW	NOX	3.08E+02	LBS/HR	WATER INJECTION	0.000	BACT-PSD
SC-0029	SC ELECTRIC AND GAS COMPANY - HAGOOD STATION	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	INTERNAL COMBUSTION TURBINE	110.00	MW	PM	4.50E+01	LBS/HR	FUEL SPEC: LOW ASH CONTENT FUELS	0.000	BACT-PSD
SC-0029	SC ELECTRIC AND GAS COMPANY - HAGOOD STATION	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	INTERNAL COMBUSTION TURBINE	110.00	MW	SO2	6.30E+02	LBS/HR	FUEL SPEC: LOW SULFUR CONTENT FUELS	0.000	BACT-PSD
SC-0029	SC ELECTRIC AND GAS COMPANY - HAGOOD STATION	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	INTERNAL COMBUSTION TURBINE	110.00	MW	VOC	1.00E+01	LBS/HR	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
SC-0031	BMW MANUFACTURING CORPORATION	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	TURBINE, NAT.GAS FIRED (3 -1 SPARE) AND 2 BOILERS	54.50	MMBTU/HR	PM10	3.79E+00	TPY	EACH OF THE 2 BOILER-TURBINE USE A COMMON STACK	0.000	BACT-PSD
SC-0031	BMW MANUFACTURING CORPORATION	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	TURBINE, NAT.GAS FIRED (3 -1 SPARE) AND 2 BOILERS	54.50	MMBTU/HR	VOC	7.79E+01	LBS/DAY	EACH OF THE 2 BOILER-TURBINE USE A COMMON STACK	0.000	LAER
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	CO (NG)	7.02E+02	LB/H	PROPER OPERATION TO ACHIEVE GOOD COMBUSTION	0.000	BACT-PSD
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	CO (OIL)	4.14E+02	LB/H	PROPER OPERATION TO ACHIEVE GOOD COMBUSTION	0.000	BACT-PSD
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	NOX (NG)	2.50E+01	PPMDV @ 15% O2	WATER INJECTION	30.000	BACT-PSD
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	NOX (OIL)	8.20E+01	PPMDV @ 15% O2	WATER INJECTION	30.000	BACT-PSD
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	PM (NG)	5.80E+00	LB/H	PROPER OPERATION TO ACHIEVE GOOD COMBUSTION	0.000	BACT-PSD
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	PM (OIL)	2.20E+01	LB/H	PROPER OPERATION TO ACHIEVE GOOD COMBUSTION	0.000	BACT-PSD
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	SO2 (NG)	1.50E+01	PPMDV @ 15% O2		0.000	BACT-PSD
SC-0036	CAROLINA POWER AND LIGHT	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	STATIONARY GAS TURBINE	1520.00	MMBTU/HR	SO2 (OIL)	1.50E+01	PPMDV @ 15% O2	FUEL SPEC: LOW SULFUR OIL, 0.2% MAX SULFUR CONTENT	0.000	BACT-PSD
SC-0038	GENERAL ELECTRIC GAS TURBINES	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	I.C. TURBINE	2700.00	MMBTU/HR	CO	2.72E+04	LB/HR	GOOD COMBUSTION PRACTICES TO MINIMIZE EMISSIONS	0.000	BACT-PSD
SC-0038	GENERAL ELECTRIC GAS TURBINES	SOUTH CAROLINA DEPT OF HEALTH & ENV CT	(803) 734-4750	I.C. TURBINE	2700.00	MMBTU/HR	NOX	8.85E+02	LB/HR	GOOD COMBUSTION PRACTICES TO MINIMIZE EMISSIONS	0.000	BACT-PSD
SD-0001	NORTHERN STATES POWER COMPANY	EPA REGION VIII	(303) 293-1755	TURBINE, SIMPLE CYCLE, 4 EACH	129.00	MW	CO	5.00E+01	PPM FOR GAS	GOOD COMBUSTION TECHNIQUES	0.000	BACT-PSD
SD-0001	NORTHERN STATES POWER COMPANY	EPA REGION VIII	(303) 293-1755	TURBINE, SIMPLE CYCLE, 4 EACH	129.00	MW	NO2	2.40E+01	PPM @ 15% O2 GAS	WATER INJECTION FOR GAS & DISTILLATION	0.000	BACT-PSD
SD-0001	NORTHERN STATES POWER COMPANY	EPA REGION VIII	(303) 293-1755	TURBINE, SIMPLE CYCLE, 4 EACH	129.00	MW	PM	1.20E+01	LB/H FOR GAS	FUEL SPEC: NATURAL GAS AS PRIMARY FUEL	0.000	BACT-PSD
SD-0001	NORTHERN STATES POWER COMPANY	EPA REGION VIII	(303) 293-1755	TURBINE, SIMPLE CYCLE, 4 EACH	129.00	MW	SO2	1.40E+01	PPM @ 15% O2 GAS	FUEL SPEC; NATURAL GAS AND 0.37% SULFUR IN OIL	0.000	BACT-PSD
SD-0001	NORTHERN STATES POWER COMPANY	EPA REGION VIII	(303) 293-1755	TURBINE, SIMPLE CYCLE, 4 EACH	129.00	MW	VOC	6.00E+00	PPM FOR GAS	GOOD COMBUSTION TECHNIQUES	0.000	BACT-PSD
TX-0231	WEST CAMPUS COGENERATION COMPANY	TEXAS AIR CONTROL BOARD	(512) 239-1000	GAS TURBINES	75.30	MW	CO	3.00E+02	TPY	INTERNAL COMBUSTION CONTROLS	0.000	BACT
TX-0231	WEST CAMPUS COGENERATION COMPANY	TEXAS AIR CONTROL BOARD	(512) 239-1000	GAS TURBINES	75.30	MW	NOX	2.00E+02	TPY	INTERNAL COMBUSTION CONTROLS	0.000	BACT-PSD
TX-0231	WEST CAMPUS COGENERATION COMPANY	TEXAS AIR CONTROL BOARD	(512) 239-1000	GAS TURBINES	75.30	MW	PM10	5.20E+01	TPY	INTERNAL COMBUSTION CONTROLS	0.000	BACT
TX-0231	WEST CAMPUS COGENERATION COMPANY	TEXAS AIR CONTROL BOARD	(512) 239-1000	GAS TURBINES	75.30	MW	SO2	2.80E+00	TPY	INTERNAL COMBUSTION CONTROLS	0.000	BACT
TX-0231	WEST CAMPUS COGENERATION COMPANY	TEXAS AIR CONTROL BOARD	(512) 239-1000	GAS TURBINES	75.30	MW	VOC	3.80E+01	TPY	INTERNAL COMBUSTION CONTROLS	0.000	BACT

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION/BURNER, DUCT	0.00	NO. 2 FUEL OIL	CD	1.00E-02	LB/H		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1175.00	MMBTU/HR	CO	6.20E+01	LB/H/UNIT	FURNACE DESIGN	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1117.00	MMBTU/HR	CO	6.20E+01	LB/H/UNIT	FURNACE DESIGN	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION, 2	0.00		CO	2.29E+02	T/YR/UNIT		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION/BURNER, DUCT	0.00	NATURAL GAS	HG	2.00E-02	LB/H		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION/BURNER, DUCT	0.00	NO. 2 FUEL OIL	HG	3.00E-03	LB/H		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION/BURNER, DUCT	0.00	NO. 2 FUEL OIL	MN	2.00E-02	LB/H		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1175.00	MMBTU/HR	NOX	9.00E+00	PPM @ 15% O2	SCR, STEAM INJECTION	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1117.00	MMBTU/HR	NOX	1.50E+01	PPM @ 15% O2	SCR, STEAM INJ.	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION, 2	0.00		NOX	1.91E+02	T/YR/UNIT		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1175.00	MMBTU/HR	PM	5.00E+00	E-3 LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1117.00	MMBTU/HR	PM	3.50E+00	E-2 LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION, 2	0.00		PM	8.22E+01	T/YR/UNIT		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1175.00	MMBTU/HR	PM10	5.00E+00	E-3 LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1117.00	MMBTU/HR	PM10	3.50E+00	E-2 LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION, 2	0.00		PM10	8.22E+01	T/YR/UNIT		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1175.00	MMBTU/HR	SO2	9.00E+00	E-4 LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1117.00	MMBTU/HR	SO2	8.80E+00	E-2 LB/MMBTU	FUEL SPEC: LOW SULFUR OIL	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION, 2	0.00		SO2	1.39E+02	T/YR/UNIT		0.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1175.00	MMBTU/HR	VOC	2.30E+00	LB/H/UNIT	FURNACE DESIGN	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION	1117.00	MMBTU/HR	VOC	5.80E+00	LB/H/UNIT	FURNACE DESIGN	91.000	BACT-PSD
VA-0184	BERMUDA HUNDRED ENERGY LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804)-323-2409	TURBINE, COMBUSTION, 2	0.00		VOC	1.49E+01	T/YR/UNIT		0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	1331.13	X10(7) SCF/Y NAT GAS	CO	2.50E+02	TOTAL TPY	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	7.44	X10(7) GPY FUEL OIL	CO	2.50E+02	TOTAL TPY	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.51	X10(9) BTU/HR N GAS	CO	5.70E+01	LBS/HR/UNIT	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.36	X10(9) BTU/H #2 OIL	CO	8.80E+01	LBS/HR/UNIT	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	1331.13	X10(7) SCF/Y NAT GAS	NOX	2.45E+02	TOTAL TPY	SELECTIVE CATALYTIC REDUCTION (SCR) W/ WATER INJEC	80.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	7.44	X10(7) GPY FUEL OIL	NOX	2.45E+02	TOTAL TPY	SELECTIVE CATALYTIC REDUCTION (SCR)	80.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.51	X10(9) BTU/HR N GAS	NOX	9.00E+00	PPMDV/UNIT @ 15% 02	SCR WITH WATER INJECTION	80.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.36	X10(9) BTU/H #2 OIL	NOX	8.80E+01	LBS/HR/UNIT	WATER INJECTION AND SCR	80.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	1331.13	X10(7) SCF/Y NAT GAS	SO2	2.50E+02	TOTAL TPY	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	7.44	X10(7) GPY FUEL OIL	SO2	2.50E+02	TOTAL TPY	FUEL SPEC: 0.2 WT LOW SULFUR FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.51	X10(9) BTU/HR N GAS	SO2	5.00E-01	LB/HR/UNIT	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.36	X10(9) BTU/H #2 OIL	SO2	8.80E+01	LBS/HR/UNIT	FUEL SPEC: 0.2 WT LOW SULFUR FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	1331.13	X10(7) SCF/Y NAT GAS	TSP/PM10	5.06E+01	TOTAL TPY	FUEL SPEC: CLEAN BURNING FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	7.44	X10(7) GPY FUEL OIL	TSP/PM10	5.06E+01	TOTAL TPY	FUEL SPEC: CLEAN BURNING FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.51	X10(9) BTU/HR N GAS	TSP/PM10	8.00E+00	LBS/HR/UNIT	FUEL SPEC: CLEAN BURNING FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.36	X10(9) BTU/H #2 OIL	TSP/PM10	1.30E+01	LBS/HR/UNIT	FUEL SPEC: CLEAN BURNING FUEL	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	1331.13	X10(7) SCF/Y NAT GAS	VOC	9.71E+01	TOTAL TPY	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINE FACILITY, GAS	7.44	X10(7) GPY FUEL OIL	VOC	9.71E+01	TOTAL TPY	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.51	X10(9) BTU/HR N GAS	VOC	2.20E+01	LBS/HR/UNIT	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0189	GORDONSVILLE ENERGY L.P.	FAIRFAX COUNTY AIR POLLUTION CONTROL	(703) 899-4600	TURBINES (2) [EACH WITH A SF]	1.36	X10(9) BTU/H #2 OIL	VOC	2.10E+01	LBS/HR/UNIT	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	474.00	X10(6) BTU/HR N. GAS	CO	1.10E+01	LBS/HR	GOOD COMBUSTION	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	468.00	X10(6) BTU/HR #2 OIL	CO	1.10E+01	LBS/HR	GOOD COMBUSTION	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS (TOTAL)	0.00		CO	4.82E+01	TPY	GOOD COMBUSTION	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	474.00	X10(6) BTU/HR N. GAS	NOX	9.00E+00	PPM	SELECTIVE CATALYTIC REDUCTION (SCR)	74.500	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	468.00	X10(6) BTU/HR #2 OIL	NOX	1.50E+01	PPM	SCR	80.800	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS (TOTAL)	0.00		NOX	8.87E+01	TPY	SCR	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	474.00	X10(6) BTU/HR N. GAS	PM10	5.30E-03	LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	468.00	X10(6) BTU/HR #2 OIL	PM10	3.80E-02	LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS (TOTAL)	0.00		PM10	7.46E+01	TPY	FUEL SPEC: CLEAN BURN FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	474.00	X10(6) BTU/HR N. GAS	SO2	3.20E-03	LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	468.00	X10(6) BTU/HR #2 OIL	SO2	2.10E-01	LB/MMBTU	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS (TOTAL)	0.00		SO2	4.39E+02	TPY	FUEL SPEC: LOW SULFUR FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	474.00	X10(6) BTU/HR N. GAS	TSP	5.30E-03	LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	468.00	X10(6) BTU/HR #2 OIL	TSP	3.80E-02	LB/MMBTU	FUEL SPEC: CLEAN BURN FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS (TOTAL)	0.00		TSP	7.46E+01	TPY	FUEL SPEC: CLEAN BURN FUEL	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	474.00	X10(6) BTU/HR N. GAS	VOC	5.00E+00	LBS/HR	GOOD COMBUSTION	0.000	BACT-PSD
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-6849	TURBINE, COMBUSTION GAS	468.00	X10(6) BTU/HR #2 OIL	VOC	5.00E+00	LBS/HR	GOOD COMBUSTION	0.000	BACT-PSD

CITY OF TALLAHASSEE
PURDOM UNIT 8 - COMBINED CYCLE GAS TURBINE
BACT EVALUATION
U. S. ENVIRONMENTAL PROTECTION AGENCY'S RACT/BACT/LAER CLEARINGHOUSE

RBLCID	FACILITY	AGCYNAME	PHONE	PROCESS	THRUPUT	THRUPUTUNT	POLLUTANT	EMISSION	UNITS	CTRLDESC	% EFF	BASIS
VA-0190	BEAR ISLAND PAPER COMPANY, L.P.	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION GAS (TOTAL)	0.00		VOC	2.19E+01	TPY	GOOD COMBUSTION	0.000	BACT-PSD
VA-0208	PATOWMACK POWER PARTNERS, LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION, SIEMENS MODEL V84.2, 3	10.20	X109 SCF/YR NAT GAS	CD	1.40E-02	LB/HR	FUEL SPEC: CLEAN FUELS	0.000	BACT-PSD
VA-0208	PATOWMACK POWER PARTNERS, LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION, SIEMENS MODEL V84.2, 3	10.20	X109 SCF/YR NAT GAS	CO	2.80E+01	LB/HR	GOOD COMBUSTION OPERATING PRACTICES	0.000	BACT-PSD
VA-0208	PATOWMACK POWER PARTNERS, LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION, SIEMENS MODEL V84.2, 3	10.20	X109 SCF/YR NAT GAS	HG	5.00E-03	LB/HR	FUEL SPEC: CLEAN FUELS	0.000	BACT-PSD
VA-0208	PATOWMACK POWER PARTNERS, LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION, SIEMENS MODEL V84.2, 3	10.20	X109 SCF/YR NAT GAS	NOX	1.31E+02	LB/HR(GAS); 339 OIL	DRY LOW NOX COMBUSTOR; DESIGN, WATER INJECTION	0.000	BACT-PSD
VA-0208	PATOWMACK POWER PARTNERS, LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION, SIEMENS MODEL V84.2, 3	10.20	X109 SCF/YR NAT GAS	SO2	2.60E+01	LB/HR(GAS); 71 (OIL)	FUEL SPEC: LOW SULFUR FUELS (NAT.GAS/OIL .05% S)	0.000	BACT-PSD
VA-0208	PATOWMACK POWER PARTNERS, LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION, SIEMENS MODEL V84.2, 3	10.20	X109 SCF/YR NAT GAS	TSP/PM10	1.00E+00	LB/HR	FUEL SPEC: CLEAN BURNING FUELS	0.000	BACT-PSD
VA-0208	PATOWMACK POWER PARTNERS, LIMITED PARTNERSHIP	VIRGINIA DEPT OF AIR POLLUTION CONTROL	(804) 786-5849	TURBINE, COMBUSTION, SIEMENS MODEL V84.2, 3	10.20	X109 SCF/YR NAT GAS	VOC	8.00E+00	LB/HR	GOOD COMBUSTION OPERATING PRACTICES	0.000	BACT-PSD
WA-002	SUMAS ENERGY INC.	NORTHWEST AIR POLLUTION AUTHORITY, WA	(206)-428-1617	TURBINE, NATURAL GAS	86.00	MW	CO	6.00E+00	PPM @ 15% O2	CO CATALYST	80.000	BACT-PSD
WA-002	SUMAS ENERGY INC.	NORTHWEST AIR POLLUTION AUTHORITY, WA	(206)-428-1617	TURBINE, NATURAL GAS	86.00	MW	NOX	6.00E+00	PPM @ 15% O2	SCR	90.000	BACT-PSD
WA-027	NORTHWEST PIPELINE COMPANY	WASHINGTON STATE DEPARTMENT OF ECOL	(206) 649-7109	TURBINE, GAS-FIRED	12100.00	HP	NO2	1.96E+02	PPM @ 15% O2	ADVANCED DRY LOW NOX COMBUSTOR (BY 07/01/95)	76.000	BACT-PSD
WA-027	TENASKA WASHINGTON PARTNERS, L.P.	WASHINGTON STATE DEPARTMENT OF ECOL	(206) 649-7106	COGENERATION PLANT, COMBINED CYCLE	1.83	MMBTU/HR	CO	2.00E+01	PPM @ 15% O2	COMBUSTION CONTROL	0.000	BACT-PSD
WA-027	TENASKA WASHINGTON PARTNERS, L.P.	WASHINGTON STATE DEPARTMENT OF ECOL	(206) 649-7106	COGENERATION PLANT, COMBINED CYCLE	1.83	MMBTU/HR	NOX	7.00E+00	PPM @ 15% O2 (GAS)	STAGED LNB, STEAM INJECTION, SCR	95.000	BACT-PSD
WA-027	TENASKA WASHINGTON PARTNERS, L.P.	WASHINGTON STATE DEPARTMENT OF ECOL	(206) 649-7106	COGENERATION PLANT, COMBINED CYCLE	1.83	MMBTU/HR	PM10	2.20E-03	GR/DSCF @ 15% O2	FUEL SPEC: LIMITS ON FUEL USE, CONTENT.	0.000	BACT-PSD
WA-027	TENASKA WASHINGTON PARTNERS, L.P.	WASHINGTON STATE DEPARTMENT OF ECOL	(206) 649-7106	COGENERATION PLANT, COMBINED CYCLE	1.83	MMBTU/HR	SO2	4.00E+00	PPM @ 15% O2 (GAS)	FUEL SPEC: LIMITS ON FUEL USE, CONTENT.	0.000	BACT-PSD
WI-0087	WEPCU, PARIS SITE	WISCONSIN DEPT OF NATURAL RESOURCES	(608) 267-2015	TURBINES, COMBUSTION (4)	0.00		CO	2.50E+01	LBS/HR (SEE NOTES)		0.000	BACT-PSD
WI-0087	WEPCU, PARIS SITE	WISCONSIN DEPT OF NATURAL RESOURCES	(608) 267-2015	TURBINES, COMBUSTION (4)	0.00		NOX (FROM NAT. GAS)	2.50E+01	PPM @ 15% O2	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
WI-0087	WEPCU, PARIS SITE	WISCONSIN DEPT OF NATURAL RESOURCES	(608) 267-2015	TURBINES, COMBUSTION (4)	0.00		NOX (FROM OIL)	8.50E+01	PPM @ 15% O2	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD
WI-0087	WEPCU, PARIS SITE	WISCONSIN DEPT OF NATURAL RESOURCES	(608) 267-2015	TURBINES, COMBUSTION (4)	0.00		PM	1.20E+01	LBS/HR	GOOD COMBUSTION	0.000	BACT-PSD
WI-0087	WEPCU, PARIS SITE	WISCONSIN DEPT OF NATURAL RESOURCES	(608) 267-2015	TURBINES, COMBUSTION (4)	0.00		SO2	5.25E-02	LB/MM BTU		0.000	BACT-PSD
WI-0087	WEPCU, PARIS SITE	WISCONSIN DEPT OF NATURAL RESOURCES	(608) 267-2015	TURBINES, COMBUSTION (4)	0.00		VE	1.00E+01	% OPACITY		0.000	
WI-0087	WEPCU, PARIS SITE	WISCONSIN DEPT OF NATURAL RESOURCES	(608) 267-2015	TURBINES, COMBUSTION (4)	0.00		VOC	9.00E+00	LBS/HR (SEE NOTES)	GOOD COMBUSTION PRACTICES	0.000	BACT-PSD

APPENDIX E

BACT EMISSION ESTIMATES

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Graziani, P.E.
Date: 12/23/96

Ck'd By: A. Chapman
Date: 1/31/97

Rev'd By: D. Graziani, P.E
Date: 2/28/97

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 1 of 5
Calc. No.: 961223DJG01

Description:

This calculation documents the emission estimates associated with the BACT determination. Emission estimates for CO and NOx are provided based on the specific operating scenario identified for the pollutant.

References:
No. 1 - GE Performance Data Sheets
No. 2 - Vendor Quotes

Operating Scenarios

For the BACT evaluation of carbon monoxide and the additional evaluation of volatile organic compounds, Unit 8 was assumed to operate continuously (8,760 hr/yr), firing natural gas for 8,260 hr/yr and Number 2 diesel fuel oil for 500 hr/yr. The load was split between full load and 50 percent load to account for the increased emissions at the lower levels. The reduced load estimate of 19 percent of the year was provided by the City. The reduced load operation was assumed to be evenly split between natural gas and low sulfur distillate oil firing. The average annual temperature of 59 degrees was selected as the representative point.

For the additional evaluation of nitrogen oxides, Unit 8 was assumed to operate continuously (8,760 hr/yr), firing natural gas for 8,260 hr/yr and low sulfur distillate oil for 500 hr/yr at full load. The average annual temperature of 59 degrees was selected as the representative point.

The selected scenarios are within the requested facility-wide emission caps for SO2 and NOx.

Calculations

Carbon Monoxide Emissions :

Natural Gas Firing

$$NGHOP := 8260 \cdot \frac{hr}{yr}$$

Full Load Firing

$$NG100HOP := NGHOP \cdot (1 - .19)$$

$$NG100HOP = 6690.6 \cdot \frac{hr}{yr}$$

50% Load Firing

$$NG50HOP := NGHOP \cdot (.19)$$

$$NG50HOP = 1569.4 \cdot \frac{hr}{yr}$$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Graziani, P.E.
Date: 12/23/96

Ck'd By: A. Chapman
Date: 1/31/97

Rev'd By: D. Graziani, P.E
Date: 2/28/97

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 2 of 5
Calc. No.: 961223DJG01

Calculations (Cont.)

Distillate Oil Firing $DOHOP := 500 \cdot \frac{hr}{yr}$

Full Load Firing $DO100HOP := DOHOP \cdot (1 - .19)$

$DO100HOP = 405 \cdot \frac{hr}{yr}$

50% Load Firing $DO50HOP := DOHOP \cdot (.19)$

$DO50HOP = 95 \cdot \frac{hr}{yr}$

Base Case

Natural Gas Firing (100 & 50 % loads) $NGHCO100 := 29 \cdot \frac{lb}{hr}$ $NGHCO50 := 53 \cdot \frac{lb}{hr}$

Distillatle Oil Firing (1000 & 50% loads) $DOHCO100 := 96 \cdot \frac{lb}{hr}$ $DOHCO50 := 189 \cdot \frac{lb}{hr}$

$$ABCCO := \frac{(NGHCO100 \cdot NG100HOP + NGHCO50 \cdot NG50HOP + DOHCO100 \cdot DO100HOP + DOHCO50 \cdot DO50HOP)}{2000 \cdot \frac{lb}{ton}}$$

$$ABCCO = 167 \cdot \frac{ton}{yr}$$

Option 1 (90% Control) $AOP1CO := ABCCO \cdot (1 - 0.9)$

$$AOP1CO = 16.7 \cdot \frac{ton}{yr}$$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Graziani, P.E.
Date: 12/23/96

Ck'd By: A. Chapman
Date: 1/31/97

Rev'd By: D. Graziani, P.E
Date: 2/28/97

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 3 of 5
Calc. No.: 961223DJG01

Calculations (Cont.)

Volatile Organic Compound Emissions :

Natural Gas Firing $NGHOP := 8260 \cdot \frac{hr}{yr}$

Full Load Firing $NG100HOP := NGHOP \cdot (1 - .19)$

$NG100HOP = 6690.6 \cdot \frac{hr}{yr}$

50% Load Firing $NG50HOP := NGHOP \cdot (.19)$

$NG50HOP = 1569.4 \cdot \frac{hr}{yr}$

Base Case

Natural Gas Firing (100 & 50 % loads) $NGHVOC100 := 2.8 \cdot \frac{lb}{hr}$ $NGHVOC50 := 2.6 \cdot \frac{lb}{hr}$

Distillatle Oil Firing (1000 & 50% loads) $DOHVOC100 := 17.5 \cdot \frac{lb}{hr}$ $DOHVOC50 := 16 \cdot \frac{lb}{hr}$

$$ABCVOC := \frac{(NGHVOC100 \cdot NG100HOP + NGHVOC50 \cdot NG50HOP + DOHVOC100 \cdot DO100HOP + DOHVOC50 \cdot DO50HOP)}{2000 \cdot \frac{lb}{ton}}$$

$$ABCVOC = 16 \cdot \frac{ton}{yr}$$

Option 1 (30% Control) $AOP1VOC := ABCVOC \cdot (1 - 0.3)$

$AOP1VOC = 11 \cdot \frac{ton}{yr}$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Graziani, P.E.
Date: 12/23/96

Ck'd By: A. Chapman
Date: 1/31/97

Rev'd By: D. Graziani, P.E
Date: 2/28/97

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 4 of 5
Calc. No.: 961223DJG01

Nitrogen Oxide Emissions:

Natural Gas Firing	$NGHNOX := 58 \cdot \frac{lb}{hr}$	$NGBCNOX := 9$	Ref. No. 1
Distillate Oil Firing	$DOHNOX := 322 \cdot \frac{lb}{hr}$	$DOBCNOX := 42$	Ref. No. 1

Nitrogen Oxide Emissions (Cont.):

Natural Gas Firing	$NGHOP := 8260 \cdot \frac{hr}{yr}$
Distillate Oil Firing	$DOHOP := 500 \cdot \frac{hr}{yr}$

Base Case

$$ABCNOX := \frac{(NGHNOX \cdot NGHOP + DOHNOX \cdot DOHOP)}{2000 \cdot \frac{lb}{ton}}$$

$$ABCNOX = 320 \cdot \frac{ton}{yr}$$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Graziani, P.E.
Date: 12/23/96

Ck'd By: A. Chapman
Date: 1/31/97

Rev'd By: D. Graziani, P.E
Date: 2/28/97

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 5 of 5
Calc. No.: 961223DJG01

Option No. 1 (3.5 ppmvd Gas and 10 ppmvd Number 2 Diesel Fuel Oil)

NGOP1NOX := 3.5 Ref. No. 2

DOOP1NOX := 10 Ref. No. 2

$$ABCNOX := \frac{\left(NGHNOX \cdot NGHOP \cdot \frac{NGOP1NOX}{NGBCNOX} + DOHNOX \cdot DOHOP \cdot \frac{DOOP1NOX}{DOBCNOX}\right)}{2000 \cdot \frac{lb}{ton}}$$

$$ABCNOX = 112 \cdot \frac{ton}{yr}$$

APPENDIX F

VENDOR QUOTE
CO OXIDATION CATALYST

CO OXIDATION CATALYST SYSTEM

QUOTATION SUMMARY

Customer:	Foster Wheeler
Project Name:	Unknown
Customer Contact:	Darrel Graziani
Customer Fax:	561-781-3411
Engelhard Reference:	EP-6000
Date:	December 23, 1996
Prepared By:	Stan Mack Telephone: (908) 205-6174 Telefax: (908) 205-6146

1.0 TECHNICAL

1.1 *Customer Design Parameters*

Emission Source:	GE-MS7001FA
Fuel:	Natural Gas - Primary #2 Fuel Oil - Secondary (<500 hrs/yr)
Exhaust Flow, maximum (lbs/hr):	3,950,000
Exhaust Temperature, Range (^{o}F):	None Specified (600-700 ^{o}F assumed)
HRSG Duct Dimension, W x H (ft):	None Specified
Pressure Loss, maximum (inch H_2O):	None Specified
CO Conversion, required (%):	90% minimum on oil firing

(a) For details reference customer fax dated 12/20/96

ENGELHARD

1.2 *CO Catalyst System Design*

Catalyst Name:	CatCO™ 610 ST (This catalyst is sulfur tolerant for use with oil firing)
Catalyst Type:	Precious Metal
Substrate Type:	Ceramic Honeycomb
Substrate Cell Density (cpsi):	400
CO Catalyt Housing, W x H, Inside Liner (ft):	65 x 34
CO Catalyst Housing Length (ft):	1.5
Weights, approximate (lbs) CO Catalyst and Housing:	55,000

1.3 *CO Catalyst System Performance*

CO Conversion, warranted (%): Case 7/oil:	90
Pressure Loss, (inches H_2O): Case 7/oil:	1.3

Performance based upon:

(a) Flow at catalyst face not to exceed ± 15% average flow velocity.

(b) Temperature at catalyst face not to exceed ± 20° F temperature variation.

1.4 *Scope of Supply*

CO Oxidation System:

- ENGELHARD **CatCO**™ oxidation catalyst in modules.
- Internal support structure for catalyst modules (frame). Includes all hardware and gaskets for catalyst module installation.
- CO catalyst housing with internal thermal expansion joint to prevent gas bypass around the catalyst. Internally insulated with SS liner.
- Five (5) day (max. 10 hrs/day) field supervision/operator training for catalyst/framework installation and start-up.

Drawings and Documents

- Foundation loads
- General arrangement drawings
- Equipment drawings
- Equipment and parts list
- Catalyst and frame installation/instruction manuals
- Operating manuals

Excluded from Scope of Supply:

- Installation of equipment supplied by Engelhard
- Any interconnecting field wiring or piping
- Electrical grounding equipment
- Utilities
- Foundations
- Monitors to measure pressure loss and inlet/outlet temperatures across the catalyst bed
- All other items not specifically listed in Scope of Supply

NOTE:

All structural steel equipment is inspected and certified by a local professional structural engineer in accordance with customer supplied applicable specifications.

2.0 COMMERCIAL

2.1 *Price*

Type of Quotation:	Budget
FOB Point:	Union, NJ
Number of Systems:	One
Price for one system (U.S. Dollars):	
CO Oxidation Catalyst System*	$830,000

* This price is based on the current Engelhard Industrial value of Platinum (Pt). Should the price of Pt increase by the time of purchase, the price of our catalyst will reflect the following precious metal price adder per system:

(Pt - 400) x 229.71 for 1 system

where Pt is the "Engelhard Industrial price" as stated in the *Wall Street Journal* on the day the purchase order is provided.

2.2 ***Payment Terms*** (net 30 days):

- 10% with order
- 20% with release to fabricate
- 35% with frame delivery
- 35% with catalyst delivery

2.3 ***Equipment Shipment***:

12 - 16 weeks after drawing approval

NOTE: Drawings submitted to approval 2-4 weeks after receipt of order.

2.4 ***Warranty***:

CO Oxidation Catalyst Warranty

- Period: Two years of operation* or 2.5 years after catalyst delivery, whichever occurs first.
- Conditions: Engelhard CO Oxidation catalyst warranty statement enclosed.

Equipment Warranty

- Period, Typical: One year of operation* or 1.5 years after catalyst delivery, whichever occurs first.
- Coverage: Equipment supplied to Engelhard and installed in quipment sold by Engelhard, the warranty is limited to the warranty of the original manufacturer.

**Operation is considered to start when exhaust gas is first passed through the catalyst.*

2.5 ***Quote Validity:***

This quote is valid for a period of sixty (60) days

2.6 ***Terms and Conditions***:

This proposal is made subject to the attached Engelhard standard Terms and Conditions (EC-6626, Rev. 7/92).

3.0 ***COMMENTS***

3.1 **Comments to Specification**

3.2 Other Comments

- A minimum access clearance of three (3) feet upstream of the CO catalyst housing is required to facilitate installation, inspection, and servicing of the catalyst modules. Alternative designs are available which provide less access space.

- All structural steel equipment is inspected and certified by a local professional structural engineer in accordance to customer supplied applicable specifications.

TERMS AND CONDITIONS

1. ACCEPTANCE

The terms and conditions set forth herein contain the sole, entire and exclusive agreement between the Seller and the Buyer in this transaction superseding all prior discussions, proposals, negotiations, representations, and agreements. Any additional or conflicting terms, whether or not material, shall not, in any manner, by implication, by waiver, or otherwise, govern the relationship between Seller and Buyer. Any waiver, modification or amendment of these terms and conditions shall only be effective as against Seller if such waiver, modification or amendment is contained in a written instrument duly executed by or on behalf of Seller. Specification changes are subject to acceptance by Seller, to price revisions and to any adjustments necessary to cover material procured and processed and labor expended prior to receipt by Seller of revised specifications. Acceptance of this agreement by Seller is specifically conditioned upon the terms and conditions set forth herein.

2. SHIPMENTS

A) Shipment dates are based upon Seller's best judgment, are subject to production limitations and factory schedules, and hence are not guaranteed.

B) All sales, unless otherwise specified herein, are f.o.b. Seller's plant. Buyer is solely responsible for notifying the carrier as to any damage to or loss in transit of materials.

C) Claims for shortages shall not be accepted by Seller unless such claims are received by Seller in writing within forty-eight (48) hours after delivery of materials to Buyer and are accompanied by a reference to Seller's shipping slip number. Seller shall be given a reasonable opportunity to inspect any shipment claimed by Buyer to contain a shortage. Use of materials by Buyer prior to such inspection by Seller shall constitute acceptance of the materials and a waiver of all claims by Buyer.

D) All metal accounts established or maintained by Seller shall be subject to Seller's Mutal Account Terms and Conditions, the current form of which appears on each metal account statement.

3. PRICE

A) Unless other pricing arrangements are set forth on the face hereof, all orders shall be priced in accordance with Seller's prices in effect on the date of shipment, including, in the case of precious metals prices, the metal market prices published by Seller on the day metal is shipped or credited to Buyer's metal account (or in the case of fabricated gold or silver products, such revision may be made in accordance with metal market prices published by Seller on the next day a price is published by Seller following the date of shipment.) Seller reserves the right to revise any price previously quoted without notice to Buyer at any time prior to acceptance by Buyer.

B) Except as set forth on the face hereof, Seller's price does not include any tax or other charge now or hereafter imposed by law or regulation, domestic or foreign, upon any material herein sold or on the production, manufacture, sale, transportation, disposal or delivery thereof. Accordingly, in addition to the price specified herein, the amount of any such tax or other charge applicable to this transaction herein shall be paid by Buyer, or, in lieu thereof, Buyer shall provide Seller with appropriate evidence of exemption thereof from the proper governmental authority. At its option, Seller may initially pay any such tax or other charges for Buyer's account and thereafter invoice Buyer for same.

4. PAYMENT

A) Payment for all shipments hereunder shall be made by Buyer against Seller's invoice within thirty (30) days from date of invoice, terms net cash, unless 1) otherwise indicated on the face hereof and 2) for precious metals, cash in advance unless otherwise specifically agreed in writing by Seller.

B) If at any time, in Seller's opinion, the financial responsibility of Buyer becomes impaired or unsatisfactory to Seller, or, inadequate to meet the obligations hereunder, the terms of payment may, at Seller's option, be revised or withdrawn, and Seller may require cash or other satisfactory security before making further shipments to Buyer.

C) In addition to any other legal remedy, if Buyer fails to fulfill the terms of payment, Seller may, at its option, defer further delivery of goods hereunder or cancel all further delivery of goods to Buyer.

D) Seller shall have the right at any time without notice to set off any liability (whether to pay money or to credit, deliver, or transfer metal or otherwise) of Seller to Buyer against any liability of Buyer to Seller and in furtherance thereof, to convert metal to money or money to metal at market value at the date of such set-off.

E) In the event Seller is required to commence collection action to recover unpaid invoices for goods sold and delivered, Seller shall be entitled to interest on the unpaid balance at the highest legal rate permitted from the due date of invoice, attorney's fees of 15% of the amount due, and costs of suit.

5. FORCE MAJEURE

A) Any delays in or any failure of performance or delivery by Seller shall not constitute default or give rise to any claims for damages if and to the extent caused, directly or indirectly, by acts of God, acts of the Buyer, acts, rules or regulations of governmental authority (civil or military, executive, legislative, judicial or otherwise), strikes or other concerted acts of workers, lockout, labor difficulties, fires, floods, storm, accident, earthquakes, tidal waves, or other natural disasters, epidemics, war, riots, rebellion, sabotage, insurrection, difficulties or delays in public transportation or in public or postal delivery services, car shortages, fuel shortages, inability to obtain from Seller's usual sources of supply, inability to obtain suitable or sufficient energy, labor, machinery, facilities, supplies or materials, as and when required, failure of any third party to honor its contractual commitments, or by any other circumstances beyond Seller's control whether of a similar or dissimilar nature.

B) When any such circumstance or circumstances exist as set forth in 5(A), Seller shall have the right, in its sole discretion, to allocate its available production, deliveries, services, raw materials or other resources among any or all purchasers, as well as among divisions, departments, subsidiaries and affiliates of Seller, upon any such basis as Seller may determine, without any liability whatsoever for any failure to perform which may result therefrom.

In any event, Seller may determine not to allocate any of its available production, deliveries, services, raw materials or other resources to Buyer, without any liability whatsoever for any failure to perform which may result therefrom.

6. PATENT INFRINGEMENT

Seller agrees to defend Buyer in any suit alleging infringement by Buyer of any U.S. patent based on the manufacture and sale of the materials purchased by Buyer (except materials manufactured or sold by Seller in accordance with Buyer's specifications, requirements or designs) under this agreement and to indemnify Buyer against liability for any such infringement claim, provided that Buyer notify Seller within ten (10) days after receipt by it of any notice of commencement of any suit based upon such alleged infringement and provided further that Seller shall control and remain in control of any and all proceedings taken in defending such suit, including without limitation, utilization solely of counsel of Seller's own selection to defend such suit. The use of materials purchased hereunder in combination with other materials or in the operation of any process is beyond the control of Seller, and Seller shall have no obligation or liability whatsoever in connection with any suit claiming infringement by means of the use of such materials.

7. WARRANTIES - REPRESENTATIONS

A) Seller warrants that the materials delivered hereunder shall be free from defects in workmanship or material and shall conform to the specifications set forth herein.

B) Seller's liability for breach of warranty for materials delivered hereunder that are proven by Buyer to be defective or proven by Buyer to be at variance with applicable specifications shall be limited, at Seller's option, to:

1. replacing or repairing such materials, or
2. refunding the sales price received by Seller for such materials.

All claims for defects hereunder must be presented to Seller in writing within ten (10) days after delivery to Buyer. Failure of Buyer to give such notice shall constitute a waiver by Buyer of all claims in respect thereto. Seller shall have an opportunity of verifying any such defect before materials are used by Buyer. Where the defective or nonconforming materials are replaced by Seller or where Seller refunds the sales price received from Buyer for such materials, if requested by Seller, Buyer shall return the defective or nonconforming materials to Seller strictly in accordance with Seller's written instructions concerning shipping, handling, insurance and other matters as to which Seller issues instructions. Failure to comply with these provisions shall invalidate any claim by Buyer for defects in materials by Buyer.

C) In no event shall Seller be liable for: 1) Materials damaged in shipment or otherwise without fault of Seller. 2) Defects in materials due to negligence (other than that of Seller), accident, abuse, improper care or storage, abnormal condition of temperature or moisture. 3) Damage to materials which have been tampered with or altered in any way other than by Seller. 4) Expenses incurred by Buyer in attempting to correct any defects in materials.

D) Seller warrants that it complies with all applicable requirements of Sections 6, 7 and 12 of the Fair Labor Standards Act, as amended, and of the regulations and orders of the United States Department of Labor issued under Section 14 thereof.

E) Recommendations by Seller, if any, covering the use, utilization, properties or qualities of materials delivered hereunder are believed reliable, but Seller makes no warranty whatsoever with respect thereto. Use or application of materials sold by Seller to Buyer hereunder is at the discretion of the Buyer without any liability or obligation on the part of Seller except as expressly warranted by Seller in writing.

THESE WARRANTIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY LAW OR CUSTOM, INCLUDING BUT NOT BY WAY OF LIMITATION, THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

8. LIMITATION OF DAMAGES

A) In no event shall Seller be liable for incidental, consequential or special damages arising out of or relating to the transactions herein.

B) In no event shall the aggregate liabilities of Seller to Buyer arising out of or relating to the transactions herein exceed the purchase price paid by Buyer to Seller hereunder of the materials in respect of which such claim is made.

9. INDEMNIFICATION

Buyer assumes all risk and liability for loss, damages or injury to persons or to the property of the Buyer or others arising out of the use or presence of the materials purchased hereunder. Buyer agrees to indemnify and hold harmless Seller against any liability, damages, losses, costs, and expenses in connection with any suit or claim, including but not limited to, any loss of use, loss of profits, damage or injuries to person or property arising out of or relating to any use of materials purchased by Buyer herein, whether such claim is made by Buyer, Buyer's customers, or other third parties.

10. CANCELLATION

Seller may cancel this Agreement as well as any or all other outstanding transactions between Seller and Buyer at any time in the event that Buyer shall fail to perform or observe any term or condition hereof by giving Buyer ten (10) days written notice of cancellation. Cancellation hereunder shall not prevent Seller from pursuing any other remedy available to Seller by law or from seeking all such damages to which Seller may be entitled.

11. GENERAL

A) Buyer shall not assign or transfer this Agreement or the benefits thereof without the prior written consent of Seller.

B) This Agreement shall be governed by and construed according to the laws of the State of Seller's facility shown on the face of this form.

APPENDIX G

ECONOMICS CALCULATIONS

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: D. Graziani, P.E
Date: 12/30.96
Ckd. By: D. Ghayal, P.E.
Date: 1/10/97
Rev. By: D. Graziani, P.E. DJG 3/4/97
Date: 2/10/97

OFS No.: 1523.0005.0008
File: COTBACT.XLS
Sheet:: CO-BACT

Description: Incremental and total cost analysis for the CO Oxidation Catalyst. Cost factors and references listed. Capital costs estimate for the Oxidation Catalyst was supplied by a vendor.

BACT ANALYSIS

CAPITAL COSTS FOR OXIDATION CATALYST (90% CONTROL)

COST ITEM	COST FACTOR	REFERENCE	COST ($1997)
DIRECT COSTS (DC)			
PURCHASED EQUIPMENT COSTS (PEC)			
OX CAT. & AUXILIARY EQUIPMENT	AS ESTIMATED, A	VENDOR QUOTE	$830,000.00
INSTRUMENTATION	0.05 X A	(EPA, 1990d)	$41,500.00
STATE SALES TAXES	0.06 X A	State Sales Tax	$49,800.00
FREIGHT	0.05 X A	(EPA, 1990d)	$41,500.00
PEC SUBTOTAL	1.16 X A = B		$962,800.00
DIRECT INSTALLATION COSTS (DIC)			
FOUNDATIONS & SUPPORTS	0.08 X B	(ULRICH, 1984)	$77,024.00
LABOR	0.14 X B	(EPA, 1990d)	$134,792.00
ELECTRICAL	0.04 X B	(EPA, 1990d)	$38,512.00
PIPING	N/A		-
INSULATION	N/A		-
PAINTING	0.01 X B	(EPA, 1990d)	$9,628.00
DIC SUBTOTAL	0.27 X B	(EPA, 1990d)	$259,956.00
SITE PREPARATION	N/A	-	-
BUILDINGS	N/A	-	-
TOTAL DC	1.27 X B	-	$1,222,756.00
INDIRECT COSTS (IDC)			
ENGINEERING	0.10 X B	(EPA,1990d)	$96,280.00
CONSTRUCTION OVERHEAD	0.05 X B	(EPA,1990d)	$48,140.00
CONTRACTOR FEES	0.10 X B	(EPA,1990d)	$96,280.00
CONTINGENCIES	0.03 X B	(EPA,1990d)	$28,884.00
START-UP	0.02 X B	(EPA,1990d)	$19,256.00
PERFORMANCE TESTING	0.01 X B	(EPA,1990d)	$9,628.00
TOTAL IDC	0.53 X B	-	$298,468.00
TOTAL CAPITAL INVESTMENT (TCI)	1.84 X B		$1,521,224.00

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: D. Graziani, P.E
Date: 12/30.96
Ckd. By: D. Ghayal, P.E.
Date: 1/10/97
Rev. By: D. Graziani, P.E. DJG 3/4/97
Date: 2/10/97

OFS No.: 1523.0005.0008
File: COTBACT.XLS
Sheet:: CO-BACT

OPERATING COST FACTORS FOR OXIDATION CATALYST

COST DATA

CHEMICAL ENGINEERING PLANT COST INDEX

1990	357.6
1993	359.2
Sept. '96	383.9

CAPITAL RECOVERY FACTOR (CRF) @i=7.25%,n=20: 0.0962

0.0725
20

	FACTOR	REFERENCE	1997 COSTS, $/YR
DIRECT ANNUAL COSTS, $/YR			
OPERATING LABOR	$27.82/HR @ .5HR/12HR-SHIFT	(COT & EPA 1990d)	$10,154.30
SUPERVISORY LABOR	15 % OF OPERATING LABOR	(EPA,1990d)	$1,523.15
MAINTENANCE LABOR AND MATERIALS	2 x $27.82/HR @ 0.5HR/12HR-SHIFT	(EPA,1990d)	$20,308.60
CATALYST REPLACEMENT (CR)	9 X 0.75 X A X CFR	Vendor Quote	$539,155.69
CATALYST DISPOSAL	$15/CF	(EPA,1993b)	$172,308.62
ELECTRICITY	N/A	(EPA,1990d)	-
PERFORMANCE LOSS	0.50%	(EPA,1993b)	$272,461.58
			$1,015,911.94
INDIRECT ANNUAL COSTS, $/YR			
OVERHEAD	60% OF ALL LABOR MAIN. COSTS	(EPA,1990d)	$19,192
INSURANCE & ADMINISTRATION	2.5%OF TCI	(EPA,1990d)	$38,031
CAPITAL RECOVERY	CRF X (TCI - CR)	N/A	$86,489
			$143,710.79
TOTAL ANNUAL COSTS, $/YR			$1,159,622.73
TOTAL NET REDUCTIONS (TPY)			
Carbon Monoxide	90 % Reduction		150.32
INCREMENTAL COST EFFECTIVENESS, $/TON			$7,714

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: D. Graziani, P.E
Date: 12/30.96
Ckd. By: D. Ghayal, P.E.
Date: 1/10/97
Rev. By: D. Graziani, P.E. DJG 3/4/97
Date: 2/10/97

OFS No.: 1523.0005.0008
File: COTBACT.XLS
Sheet:: VOC-BACT

Description: Incremental and total cost analysis for the Oxidation Catalyst. Cost factors and references listed. Capital cost estimate for the Oxidation Catalyst was supplied by a vendor for the CO BACT Evaluation. The potential reductions of VOC emissions (30%) were added to the CO reductions as additional reductions.

BACT ANALYSIS

CAPITAL COSTS FOR OXIDATION CATALYST (30% CONTROL)

COST ITEM	COST FACTOR	REFERENCE	COST ($1997)
DIRECT COSTS (DC)			
PURCHASED EQUIPMENT COSTS (PEC)			
OX CAT. & AUXILIARY EQUIPMENT	AS ESTIMATED, A	VENDOR QUOTE	$830,000.00
INSTRUMENTATION	0.05 X A	(EPA, 1990d)	$41,500.00
STATE SALES TAXES	0.06 X A	State Sales Tax	$49,800.00
FREIGHT	0.05 X A	(EPA, 1990d)	$41,500.00
PEC SUBTOTAL	1.16 X A = B		$962,800.00
DIRECT INSTALLATION COSTS (DIC)			
FOUNDATIONS & SUPPORTS	0.08 X B	(ULRICH, 1984)	$77,024.00
LABOR	0.14 X B	(EPA, 1990d)	$134,792.00
ELECTRICAL	0.04 X B	(EPA, 1990d)	$38,512.00
PIPING	N/A		-
INSULATION	N/A		-
PAINTING	0.01 X B	(EPA, 1990d)	$9,628.00
DIC SUBTOTAL	0.27 X B	(EPA, 1990d)	$259,956.00
SITE PREPARATION	N/A	-	-
BUILDINGS	N/A	-	-
TOTAL DC	1.27 X B	-	$1,222,756.00
INDIRECT COSTS (IDC)			
ENGINEERING	0.10 X B	(EPA,1990d)	$96,280.00
CONSTRUCTION OVERHEAD	0.05 X B	(EPA,1990d)	$48,140.00
CONTRACTOR FEES	0.10 X B	(EPA,1990d)	$96,280.00
CONTINGENCIES	0.03 X B	(EPA,1990d)	$28,884.00
START-UP	0.02 X B	(EPA,1990d)	$19,256.00
PERFORMANCE TESTING	0.01 X B	(EPA,1990d)	$9,628.00
TOTAL IDC	0.53 X B	-	$298,468.00
TOTAL CAPITAL INVESTMENT (TCI)	1.84 X B		$1,521,224.00

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: D. Graziani, P.E
Date: 12/30.96
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Date: 1/10/97
Rev. By: D. Graziani, P.E. DJG 3/4/97
Date: 2/10/97

OFS No.: 1523.0005.0008
File: COTBACT.XLS
Sheet:: VOC-BACT

OPERATING COST FACTORS FOR OXIDATION CATALYST

COST DATA

CHEMICAL ENGINEERING PLANT COST INDEX

1990	357.6
1993	359.2
Sept. '96	383.9

CAPITAL RECOVERY FACTOR (CRF) @i=7.25%,n=20: 0.0962

0.0725
20

			1997
DIRECT ANNUAL COSTS, $/YR	**FACTOR**	**REFERENCE**	**COSTS, $/YR**
OPERATING LABOR	$27.82/HR @ .5HR/12HR-SHIFT	(COT & EPA 1990d)	$10,154.30
SUPERVISORY LABOR	15 % OF OPERATING LABOR	(EPA,1990d)	$1,523.15
MAINTENANCE LABOR AND MATERIALS	2 x $27.82/HR @ 0.5HR/12HR-SHIFT	(EPA,1990d)	$20,308.60
CATALYST REPLACEMENT (CR)	9 X 0.75 X A X CFR	Vendor Quote	$539,155.69
CATALYST DISPOSAL	$15/CF	(EPA,1993b)	$172,308.62
ELECTRICITY	N/A	(EPA,1990d)	-
PERFORMANCE LOSS	0.50%	(EPA,1993b)	$272,461.58
			$1,015,911.94
INDIRECT ANNUAL COSTS, $/YR			
OVERHEAD	60% OF ALL LABOR MAIN. COSTS	(EPA,1990d)	$19,192
INSURANCE & ADMINISTRATION	2.5%OF TCI	(EPA,1990d)	$38,031
CAPITAL RECOVERY	CRF X (TCI - CR)	N/A	$86,489
			$143,710.79
TOTAL ANNUAL COSTS, $/YR			$1,159,622.73
TOTAL NET REDUCTIONS (TPY)			
Carbon Monoxide	90 % Reduction		150.32
Volatile Organic Compounds	30% Reduction		4.11
Total			154.42
INCREMENTAL COST EFFECTIVENESS, $/TON			$7,509

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: D. Graziani, P.E
Date: 12/30.96
Ckd. By: D. Ghayal, P.E.
Date: 1/10/97
Rev. By: D. Graziani, P.E. DJG 3/4/97
Date: 2/10/97

OFS No.: 1523.0005.0008
File: COTBACT.XLS
Sheet:: SCR-BACT

Description: Incremental and total cost analysis for the SCR System. Cost factors and references listed. Capital costs estimate for theSCR was supplied by a vendor.

BACT ANALYSIS

CAPITAL COST FACTORS FOR SELECT CATALYTIC REDUCTION

OPTION 1 (3.5 ppmvd @ 15% O2 - Gas & 10 ppmvd @ 15% O2 - Oil Firing)

COST ITEM	COST FACTOR	REFERENCE	COST ($1996)
DIRECT COSTS (DC)			
PURCHASED EQUIPMENT COSTS (PEC)			
SCR & AUXILIARY EQUIPMENT	AS ESTIMATED, A	VENDOR QUOTE	$1,676,000.00
INSTRUMENTATION	0.05 X A	(EPA, 1990d)	$83,800.00
STATE SALES TAXES	0.06 X A	State Sales Tax	$100,560.00
FREIGHT	0.05 X A	(EPA, 1990d)	$83,800.00
PEC SUBTOTAL	1.16 X A = B		$1,944,160.00
DIRECT INSTALLATION COSTS (DIC)			
FOUNDATIONS & SUPPORTS	0.08 X B	(ULRICH, 1984)	$155,532.80
LABOR	0.14 X B	(EPA, 1990d)	$272,182.40
ELECTRICAL	0.04 X B	(EPA, 1990d)	$77,766.40
PIPING	N/A	VENDOR QUOTE	-
INSULATION	N/A	VENDOR QUOTE	-
PAINTING	0.01 X B	(EPA, 1990d)	$19,441.60
DIC SUBTOTAL	0.27 X B	(EPA, 1990d)	$524,923.20
SITE PREPARATION	N/A	-	-
BUILDINGS	N/A	-	-
TOTAL DC	1.27 X B	-	$2,469,083.20
INDIRECT COSTS (IDC)			
ENGINEERING	0.10 X B	(EPA,1990d)	$194,416.00
CONSTRUCTION OVERHEAD	0.05 X B	(EPA,1990d)	$97,208.00
CONTRACTOR FEES	0.10 X B	(EPA,1990d)	$194,416.00
CONTINGENCIES	0.03 X B	(EPA,1990d)	$58,324.80
START-UP	0.02 X B	(EPA,1990d)	$38,883.20
PERFORMANCE TESTING	0.01 X B	(EPA,1990d)	$19,441.60
TOTAL IDC	0.53 X B	-	$602,689.60
TOTAL CAPITAL INVESTMENT (TCI)	1.84 X B		$3,071,772.80

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: D. Graziani, P.E
Date: 12/30.96
Ckd. By: D. Ghayal, P.E.
Date: 1/10/97
Rev. By: D. Graziani, P.E. DJG 3/4/97
Date: 2/10/97

OFS No.: 1523.0005.0008
File: COTBACT.XLS
Sheet:: SCR-BACT

OPERATING COST FACTORS FOR SELECT CATALYTIC REDUCTION

COST DATA

CHEMICAL ENGINEERING PLANT COST INDEX

1990	357.6
1993	359.2
Sept. '96	383.9

CAPITAL RECOVERY FACTOR (CRF) @i=7.25%,n=20: 0.0962

0.0725
20

	FACTOR	REFERENCE	1997 COSTS, $/YR
DIRECT ANNUAL COSTS, $/YR			
OPERATING LABOR	$27.82/HR @ 1HR/12HR-SHIFT	(COT & EPA 1993b)	$20,309
SUPERVISORY LABOR	15 % OF OPERATING LABOR	(EPA,1993b)	$3,046
MAINTENANCE LABOR AND MATERIALS	1,250 (MW) + 25,800	(EPA,1993b)	$241,327
CATALYST REPLACEMENT (CR)	N/A	Vendor Estimate	$350,000
CATALYST DISPOSAL	$15/CF	(EPA,1993b)	$68,923
AQUEOUS AMMONIA	$360/TON	(EPA,1993b)	$43,338
DILUTION SYSTEM	N/A	(EPA,1993b)	-
ELECTRICITY	N/A	(EPA,1993b)	-
PERFORMANCE LOSS	0.50%	(EPA,1993b)	$312,613
BLOWER	N/A	(EPA,1993b)	-
PRODUCTION LOSS	N/A	(EPA,1993b)	-
			$1,039,556
INDIRECT ANNUAL COSTS, $/YR			
OVERHEAD	60% OF ALL LABOR MAIN. COSTS	(EPA,1990d)	$158,809
INSURANCE & ADMINISTRATION	2.5%OF TCI	(EPA,1990d)	$76,794
CAPITAL RECOVERY	CRF X (TCI - CR)	N/A	$225,612
			$461,215
TOTAL ANNUAL COSTS, $/YR			$1,500,771
TOTAL NET NOx REDUCTIONS (TPY)			
Oil Firing			61
Gas Firing			146
Total			208
INCREMENTAL COST EFFECTIVENESS, $/TON			$7,225

APPENDIX H

VENDOR QUOTE - SCR

Foster Wheeler Energy Corporation
Perryville Corporate Park
Clinton, NJ 08809-4000

TELECOPY NO. 908-713-3210
TELEPHONE NO. 908-713-2432

TELECOPY FORM

December 23, 1996

TO: **Mr. Darrel Graziani: FWEnC** **561/781-3411**
561/781-3934

FROM: Howard N. Franklin

SUBJECT: : SCR Estimate: FWEC Ref.: P738

This telefax contains **10 pages**, including this cover sheet.

Dear Mr. Darrel Graziani

Attached is the budgetary estimate you requested. I believe it is somewhat conservative.

Good luck

Howard

C

FOSTER WHEELER ENERGY CORPORATION

PERRYVILLE CORPORATE PARK • CLINTON, NEW JERSEY 08809-4000 • PHONE 908-730-4000

December 23, 1996
P738-01/FWEC

Mr. Darrel Graziani
Foster Wheeler Environmental Corporation
759 south Federal Highway
Stuart, FL 34994

Subject: **Budgetary SCR for FWEnC**
FWEC SCR # P-738

Reference: Information data from D. Graziani received 12/20/96

Dear Mr Graziani:

Foster Wheeler Energy Corporation is pleased to have this opportunity to provide budgetary pricing for the subject SCR system based upon the reference.

COMMERCIAL:

The budgetary price (excluding all taxes) for the design and supply of one aqueous ammonia SCR system, F.O.B. U. S. job site, is:

TWO MILLION TWO HUNDRED FORTY THOUSAND U.S. DOLLARS .. $ 2,240,000

This cost can be reduced by getting an allowable higher outlet NOX for oil firing. It is our experience that oil is possibly fired during the winter when the natural gas supply may be curtailed for residential use. Winter is not the worst NOX season and we have often seen the NOX outlet raised from 3.5 to 9 ppmvd @ 15% O_2.

The budgetary price (excluding all taxes) for the design and supply of one aqueous ammonia SCR system, F.O.B. U. S. job site, is:

ONE MILLION SIX HUNDRED SEVENTY-SIX THOUSAND U.S. DOLLARS ..... $ 1,676,000

for this reduced case. The natural gas fired case remains unchanged.

These estimates are based upon scantly SCR duty requirements and vague project

information. Taken as an aggregate they are deemed to be reasonable.

Scheduled fabrication completion of the SCR system is based upon full release no later than eight months prior to the scheduled fabrication completion date. Earlier deliveries may be possible if required by the schedule.

DISCUSSION

The maximum ammonia flow rate, which is for the oil fired case, as given in Table 1, based upon a 27% aqueous solution. No reactor cross section was given so the flow cross-sectional area is also given in Table 1. Without HRSG and SCR Reactor sizes any required flue transitions could not be estimated and are not included - see General and Ammonia Scope of Supply.

In addition, FWEC has not broken out the catalyst price as requested. The bulk of the cost is the catalyst and without it the error band of this estimate wold be too high to make the estimated costs realistic. With regard to the supply of the catalyst FWEC would be willing to discuss this at a later date when the SCR duty requirements are solidified.

COMMENTS AND EXCEPTIONS

Our quotation is based on the reference data. Comments and exceptions include:

1. The foregoing quotation is based on FWC acceptable Terms and Conditions.

2. Performance of the catalyst is dependent on reasonably uniform flue gas distribution at the Ammonia Injection Grid (AIG) and catalyst as well as sufficient mixing time between the AIG and catalyst. The flue gas distribution at the ammonia injection grid should satisfy an RMS deviation less than 10% of the mean and catalyst inlet should satisfy an RMS deviation less than 15% of the mean. A one-half second or greater residence time should be used between the AIG and SCR catalyst. The catalyst should not be blocked in such a way as to disrupt the flow distribution into the catalyst. The temperature distribution should be less than or equal to ±20 °F at the catalyst.

3. The maximum allowable exhaust gas temperature at the catalyst is 750 °F. For such a small SO_3 concentration the lower temperature catalyst limit is about 500 °F based upon performance rather than ammonium salt formation.

4. The allowed start-up and shut-down temperature gradient for the catalyst is 20 °F/min below and 110 °F/min above the flue gas dew point.

5. The SCR does not fit within the 12 M X 20 M dimensions, it is slightly larger to meet pressure drop.

6. The catalyst reactor outer casing and inner structure are included. They include 4" of internal insulation and catalyst loading doors at the top. Also included is the catalyst loading monorail with hoist. Access doors, etc. are supplied by others in the flue or, if required, in the flue transitions. The Ammonia Injection Grid is included and it fits into the HGSR flue upstream of the reactor. Please refer to the Scope of Supply.

7. An aqueous ammonia tank was included with an estimated 2 week 27% solution supply for the oil fired cases. The requirements for these cases are given in Table 1. For comparison the corresponding flow rate for the gas fired cases is 110 #.hr.

8. Also guestimated is the piping from the tank and ammonia skids through to the injection grid. Without the location of the individual piece locations this estimate is simply an educated guess based upon past experience.

9. The pressure drop indicated in Table 1 includes the ammonia injection grid, the reactor inlet/outlet and the catalyst, i.e., all components FWEC would supply.

TECHNICAL:

The SCR system design is based on the steady-state operating conditions given in the reference. Table 1 includes performance data for two oil cases: outlet NOx = 3.5 and 9 ppmvd @ 15% O_2, respectively. Both easily satisfy the natural gas fired cases.

Also attached are the following:

General SCR Scope of Supply
Aqueous Ammonia Scope of Supply
Electric Heater Aqueous Ammonia P&ID - Typical

If you have any questions or require additional information please contact me at (908)713-2432. The fax number is (908)713-3210.

Very truly yours,

Howard N. Franklin

cc: M. A. Broadhurst

TABLE 1: SCR DESIGN CONDITIONS

Case	7	7
Fuel - Gas Turbine	Oil	Oil
Exhaust, lb/hr	3,950,000	3,950,000
Exhaust Composition, % Vol.		
O2	10.90	10.90
N2	71.24	71.24
CO2	5.35	5.35
H2O	11.44	11.44
Ar	0.85	0.85
SO2	0.0013	0.0013
Particulate, mg/Nm3	45 (est.)	45 (est.)
SCR Inlet Temp, °F	700	700
Inlet NOX, ppmvd @ 15% O2	42	42
Outlet NOX, ppmvd @ 15% O2*	**3.5**	**9**
Guarantee NH3 slip, ppmvd @ 15% O2*	10	10
Pressure drop, in wc*	≤ 2.0	≤ 2.0
NH3 Consumption, #/hr 27% Aqua Basis	570	530
Reactor Cross Section Required, Ft.2	2,975	2,257
Catalyst Life*	3 years	

* Conditions to be Guaranteed based upon Given Inlet Conditions

FOSTER WHEELER ENERGY CORPORATION
SCR SYSTEM
SCOPE OF SUPPLY - GENERAL Page 1 of 2

ITEM	DESCRIPTION	FWEC SCOPE	OPTION	NOT Included
1	SCR CATALYST IN BASKETS	X		
2	AQUEOUS AMMONIA INJECTION SYSTEM	X		
3	ANHYDROUS AMMONIA INJECTION SYSTEM			X
	CATALYST REACTOR HOUSING:			
4	CATALYST HOUSING WITH INTERNAL INSULATION AND LINER	X		
5	CATALYST MODULE SUPPORT STRUCTURE	X		
6	SPACE IN REACTOR FOR ADDITION OF CATALYST AT A LATER DATE			X
7	ADDITIONAL CATALYST SUPPORT STRUCTURE FOR ADDITION OF CATALYST IN THE FUTURE			X
	CATALYST HANDLING/MAINTENANCE FACILITIES:			
8	CATALYST LOADING DOORS	X		
9	ACCESS DOORS - IN TRANSITIONS			X
10	MONORAIL AND HOIST	X		
11	PLATFORMS, LADDERS AND STAIRWAYS			X
	HRSG TRANSITIONS:			
12	INLET AND OUTLET TRANSITION DUCTS WITH INTERNAL INSULATION AND LINER			X
	ACCESSORIES:			
13	HOUSING SAMPLING PORTS - IN TRANSITIONS			X
14	CATALYST FOR SAMPLING CELLS	X		
15	FOUNDATIONS			X
16	SELF-SUPPORTING OF ITEMS WITHIN THIS SCOPE OF SUPPLY	X		
17	SURFACE PREPARATION PER THE SPECIFICATION			X
18	SHIPMENT OF ALL EQUIPMENT TO SITE	X		

FOSTER WHEELER ENERGY CORPORATION
SCR SYSTEM
SCOPE OF SUPPLY - GENERAL Page 2 of 2

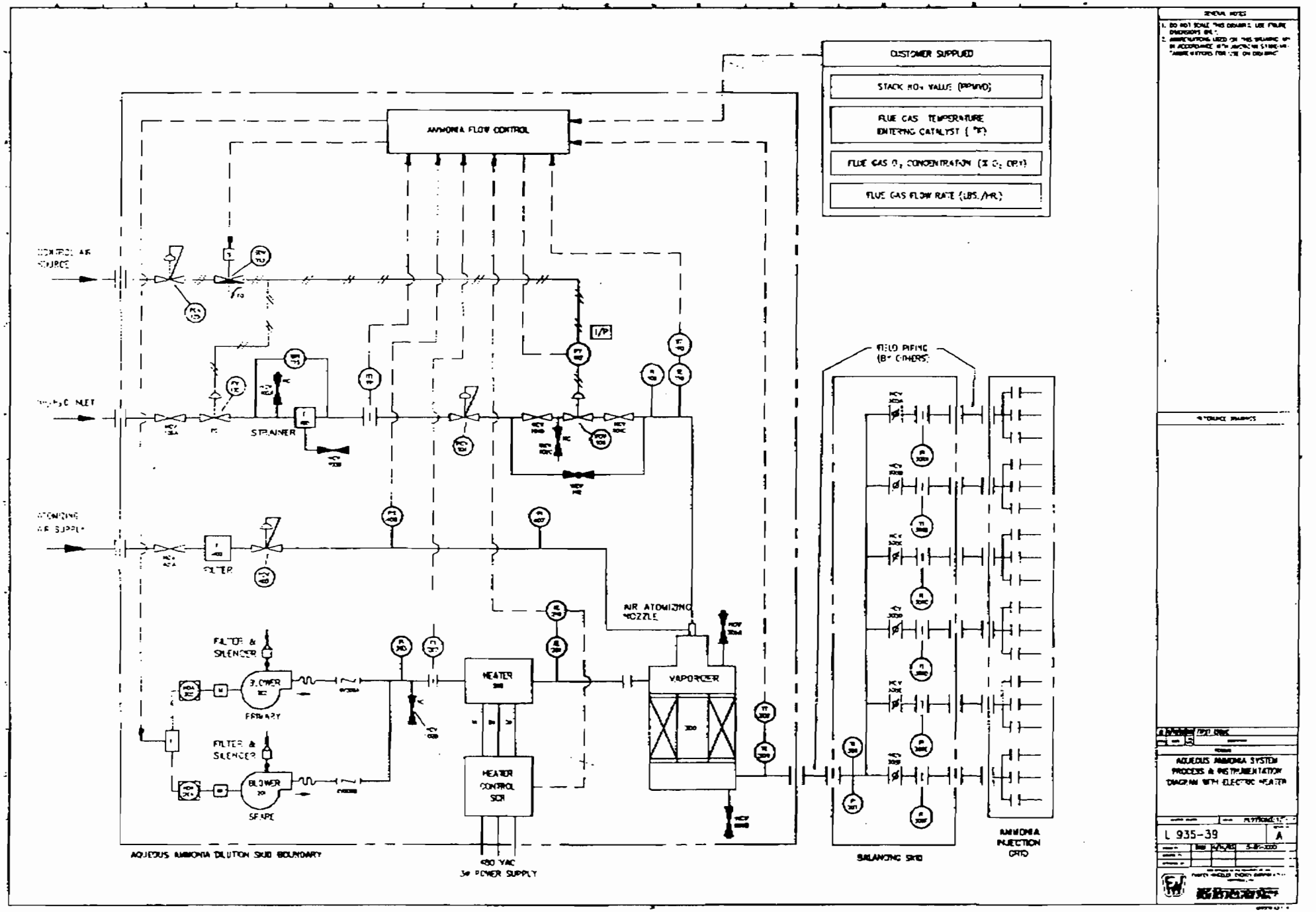
19	ERECTION OF CATALYST HOUSING			X
20	INSTALLATION OF AMMONIA INJECTION SKIDS			X
21	ALL CONSTRUCTION, STARTUP AND COMMISSION SPARES			X
	TECHNICAL FIELD ASSISTANCE:			
22	TECHNICAL FIELD ASSISTANCE FOR ERECTION AND INSTALLATION			X
23	TECHNICAL FIELD ASSISTANCE FOR START-UP OF CATALYST			X
24	TECHNICAL FIELD ASSISTANCE FOR PERFORMANCE TESTS			X

FOSTER WHEELER ENERGY CORPORATION
SCR SYSTEM SCOPE OF SUPPLY
AQUEOUS AMMONIA INJECTION SYSTEM

ITEM	DESCRIPTION	FWEC SCOPE	OPTION	NOT Included
1	AMMONIA INJECTION GRID WITH NOZZLES OR ORIFICES	X		
2	INJECTION GRID HOUSING AND SUPPORT			X
	AMMONIA INJECTION HEADER ASSEMBLY (MOUNTED AT GRADE):			
3	AMMONIA INJECTION HEADER	X		
4	MANUAL TRIM VALVES	X		
5	FLOW INDICATORS	X		
6	MANUAL SHUT-OFF VALVES	X		
7	SUPPORT OF INJECTION HEADER	X		
	AQUEOUS AMMONIA EVAPORATION & FLOW CONTROL SKID:			
8	DILUTION AIR FANS WITH MOTOR (QTY. 2)	X		
9	ELECTRIC AIR HEATER (2)	X		
10	AMMONIA VAPORIZER/MIXER WITH INJECTION NOZZLE	X		
11	ALL AMMONIA/AIR PIPING AND VALVES ON SKID	X		
12	ALL CONTROL INSTRUMENTATION	X		
13	TUBING AND WIRING ON SKID	X		
14	INSULATION ON SKID	X		
15	PROVISIONS FOR NITROGEN PURGE OF AMMONIA INJECTION SYSTEM		X	
	AQUEOUS AMMONIA STORAGE AND FORWARDING EQUIPMENT:			
16	AQUEOUS AMMONIA STORAGE TANK	X		
17	AQUEOUS AMMONIA TRUCK OFF-LOADING STA.	X		
18	AQUEOUS AMMONIA FORWARDING PUMPS	X		
19	AQUEOUS AMMONIA STRAINER	X		
	EXTERNAL PIPING:			
20	PIPING FROM FORWARDING SYSTEM TO AMMONIA INJECTION SKID	X		
21	PIPING FROM AMMONIA INJECTION SKID TO AMMONIA INJECTION HEADER	X		

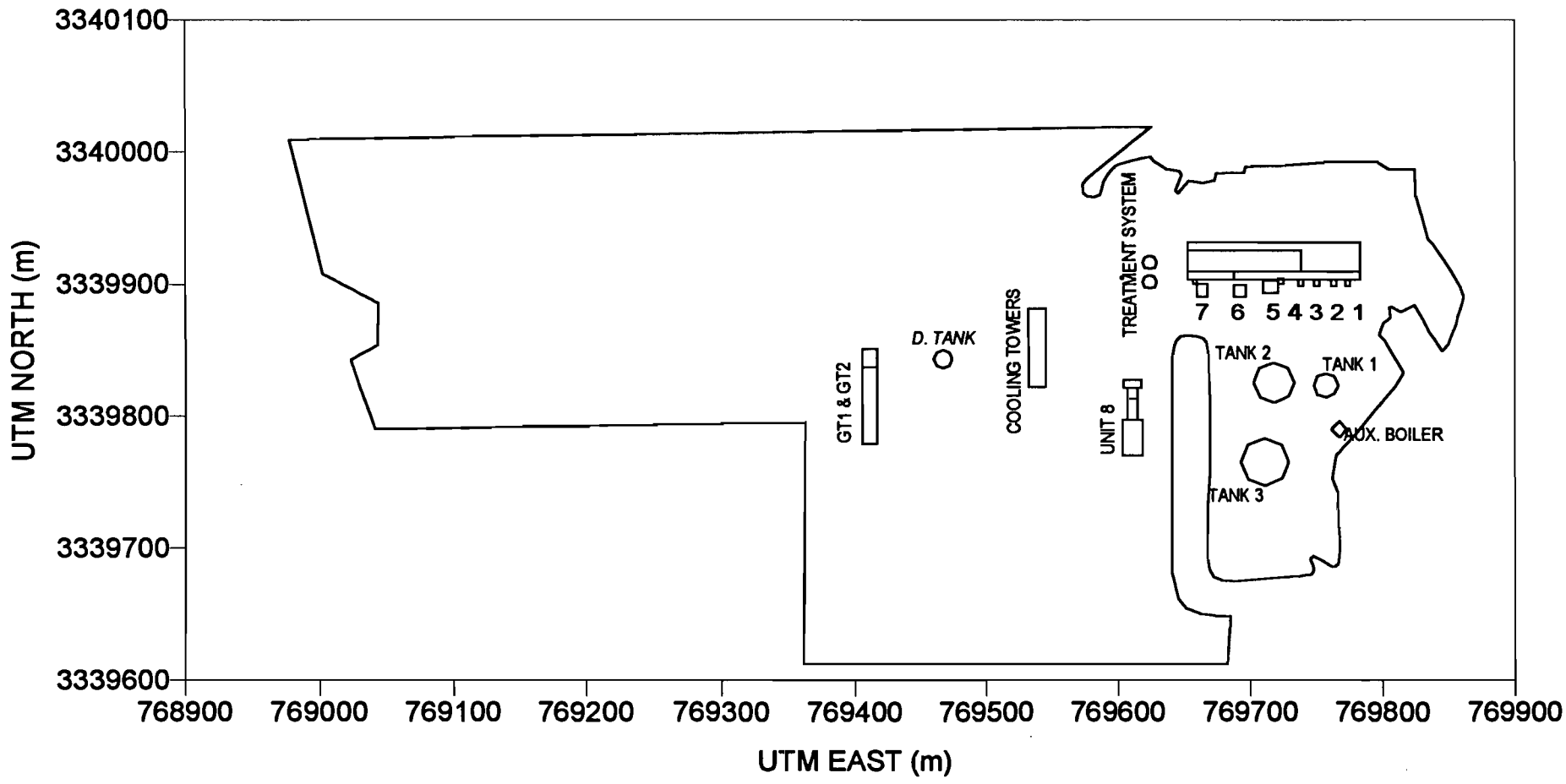
FOSTER WHEELER ENERGY CORPORATION
SCR SYSTEM SCOPE OF SUPPLY
AQUEOUS AMMONIA INJECTION SYSTEM

22	PIPING FROM AMMONIA INJECTION HEADER TO HRSG DUCT (INJECTION GRID)	X		
23	AMMONIA FLOW CONTROL VALVE	X		
24	AMMONIA SHUT-OFF VALVE (SOLENOID OPERATED)	X		
25	AMMONIA FLOW TRANSMITTER	X		
26	DILUTION/VAPORIZING AIR FLOW TRANSMITTER	X		
27	ALL MANUAL BYPASS AND ISOLATION VALVES ON SKID	X		
28	PRESSURE/TEMPERATURE TRANSMITTERS FOR CONTROL	X		
29	LOCAL PRESSURE/TEMPERATURE INDICATORS	X		
30	ALL INSTRUMENTATION AND VALVES FOR CONTROL OF EQUIPMENT ON INJECTION SKID	X		
31	FLUE GAS INLET TEMPERATURE TRANSMITTER			X
32	CATALYST PRESSURE DROP TRANSMITTER (1 FOR EACH CATALYST BED) (WITH HEAD INDICATOR)			X
33	LOCAL CATALYST PRESSURE DROP INDICATOR (1 FOR EACH CATALYST BED)			X
34	CONTROL LOGIC	X		
35	CONTROL SYSTEM HARDWARE			X
36	MOTOR CONTROL CENTER			X
37	POWER SUPPLY OF ELECTRICAL EQUIPMENT			X
	FLUE GAS ANALYZERS:			
38	SCR INLET NOX/O2 ANALYZER WITH PROBE AND SAMPLING LINE			X
39	SCR OUTLET NOX/O2 ANALYZER WITH PROBE AND SAMPLING LINE			X
40	SCR OUTLET NH3 ANALYZER WITH PROBE AND SAMPLING LINE			X
	GAS SAMPLING PORTS:			
41	INLET NOX/O2 PORT			X
42	STACK SAMPLING PORTS			X



APPENDIX I

BPIP PROGRAM - INPUT/OUTPUT



SOURCE: FOSTER WHEELER ENVIRONMENTAL CORPORATION

CITY OF TALLAHASSEE

PURDOM 8 BUILDING / STRUCTURE LOCATIONS USED IN BUILDING DOWNWASH ANALYSIS

PURDOM UNIT 8 PROJECT - ST MARKS, FLORIDA

D:\BPIP\P8BLDG.SRF (DISK1)
02/27/97 13:04:30

```
'CITY OF TALLAHASSEE UNIT 8 (CT1/2 REMOVED - PROGRAM LIMIT)(p8bpip11.inp)'
'ST'
'METERS' 1.0
'UTMY' 360
12
'TANK 1' 1 0.00
8   12.8
 769766.2       3339823
 769763.4       3339830
 769756.8       3339832
 769750.4       3339830
 769747.8       3339823
 769750.6       3339816
 769757.2       3339814
 769763.6       3339817
'TANK 2' 1 0.00
8   12.2
 769733.3       3339825
 769728.6       3339836
 769717.8       3339840
 769707         3339836
 769702.7       3339825
 769707.4       3339814
 769718.3       3339810
 769729         3339815
'TANK 3' 1 0.00
8   12.2
 769729         3339765
 769723.5       3339778
 769710.7       3339783
 769698.1       3339778
 769693         3339765
 769698.5       3339752
 769711.4       3339747
 769724         3339753
'MAIN'   4    0.00
4   6
769653             3339931
769783             3339931
769783             3339903
769653             3339903
4    18.6
769653             3339925
769738             3339925
769738             3339909
769653             3339909
4      11.7
769653             3339909
769688             3339909
769688             3339903
769653             3339903
4      15.2
769688             3339909
769783             3339909
769783             3339903
769688             3339903
'UNIT 5'   2   0.00
8      26.2
769710             3339902
769721             3339902
```

```
769721              3339904
769725              3339904
769725              3339900
769721              3339900
769721              3339893
769710              3339893
4       32.3
769721              3339904
769725              3339904
769725              3339900
769721              3339900
'UNIT 6'     1      0.00
4         25.9
769688              3339899
769697              3339899
769697              3339890
769688              3339890
'UNIT 7'     2     0.00
8    29.6
769657              3339903
769660              3339903
769660              3339900
769668              3339900
769668              3339890
769660              3339890
769660              3339900
769657              3339900
4   35.0
769657              3339903
769660              3339903
769660              3339900
769657              3339900
'D-TANK'   1      0.00
8      12.2
769474       3339843
769472       3339848
769467       3339850
769462       3339848
769460       3339843
769462       3339838
769467       3339836
769472       3339838
'AUXBOIL'   1      0.00
4    6.1
769761       3339790
769767       3339784
769773       3339790
769767       3339796
'HSRG'   1     0.00
4       24.0
769603.5     3339769.5
769603.5     3339796.5
769618.5     3339796.5
769618.5     3339769.5
'UNIT8'    3      0.00
8      7.2
769607.1          3339796.5
769607.1          3339820.9
769604.2          3339820.9
769604.2          3339826.8
```

```
769617.8          3339826.8
769617.8          3339820.9
769614.9          3339820.9
769614.9          3339796.5
4         13.6
769607.1          3339813
769607.1          3339820.9
769614.9          3339820.9
769614.9          3339813
4        18.7
769604.2          3339820.9
769604.2          3339826.8
769617.8          3339826.8
769617.8          3339820.9
'cooltwr' 1   0.00
4        13.4
769532          3339822
769532          3339881
769545          3339881
769545          3339822
3
'AUXBOIL'     0.0    9.2  769767    3339784
'UNIT5'       0.0   38.2  769706    3339889
'UNIT6'       0.0   38.2  769706    3339889
```

==========
BPIP PROCESSING INFORMATION:
==========

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in METERS will be converted to meters using a conversion factor of 1.0000. Output will be in meters.

The UTMP variable is set to UTMY. The input is assumed to be in UTM coordinates. BPIP will move the UTM origin to the first pair of UTM coordinates read. The UTM coordinates of the new origin will be subtracted from all the other UTM coordinates entered to form this new local coordinate system.

Plant north is set to 360.00 degrees with respect to True North.

CITY OF TALLAHASSEE UNIT 8 (CT1/2 REMOVED - PROGRAM LIMIT)(p8bpip11.inp)

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
AUXBOIL	9.20	.00	64.75	65.00
UNIT5	38.20	.00	64.75	65.00
UNIT6	38.20	.00	64.75	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.

** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

CITY OF TALLAHASSEE UNIT 8 (CT1/2 REMOVED - PROGRAM LIMIT)(p8bpip11.inp)

BPIP output is in meters

SO	BUILDHGT	AUXBOIL	6.10	6.10	6.10	6.10	12.20	12.20
SO	BUILDHGT	AUXBOIL	12.20	12.20	12.20	6.10	6.10	12.20
SO	BUILDHGT	AUXBOIL	12.20	25.90	25.90	25.90	12.80	12.80
SO	BUILDHGT	AUXBOIL	6.10	6.10	6.10	6.10	6.10	6.10
SO	BUILDHGT	AUXBOIL	6.10	6.10	6.10	6.10	6.10	6.10
SO	BUILDHGT	AUXBOIL	6.10	6.10	6.10	6.10	6.10	6.10
SO	BUILDWID	AUXBOIL	11.82	11.28	10.39	9.19	35.80	34.60
SO	BUILDWID	AUXBOIL	34.07	35.57	36.00	11.82	11.28	29.65
SO	BUILDWID	AUXBOIL	30.48	37.34	39.04	39.56	18.12	18.40
SO	BUILDWID	AUXBOIL	11.82	11.28	10.39	9.19	9.19	10.39
SO	BUILDWID	AUXBOIL	11.28	11.82	12.00	11.82	11.28	10.39
SO	BUILDWID	AUXBOIL	9.19	9.19	10.39	11.28	11.82	12.00
SO	BUILDHGT	UNIT5	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDHGT	UNIT5	18.60	18.60	29.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT5	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDHGT	UNIT5	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDHGT	UNIT5	18.60	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT5	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDWID	UNIT5	36.26	34.43	31.58	29.14	25.81	21.70
SO	BUILDWID	UNIT5	44.11	37.07	13.00	20.21	25.81	30.62
SO	BUILDWID	UNIT5	34.51	37.34	39.04	39.56	38.87	37.00
SO	BUILDWID	UNIT5	36.26	34.43	31.58	29.14	25.81	21.70
SO	BUILDWID	UNIT5	44.11	37.07	32.00	20.21	25.81	30.62
SO	BUILDWID	UNIT5	34.51	37.34	39.04	39.56	38.87	37.00
SO	BUILDHGT	UNIT6	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDHGT	UNIT6	18.60	18.60	29.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT6	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDHGT	UNIT6	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDHGT	UNIT6	18.60	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT6	25.90	25.90	25.90	25.90	25.90	25.90
SO	BUILDWID	UNIT6	36.26	34.43	31.58	29.14	25.81	21.70
SO	BUILDWID	UNIT6	44.11	37.07	13.00	20.21	25.81	30.62
SO	BUILDWID	UNIT6	34.51	37.34	39.04	39.56	38.87	37.00
SO	BUILDWID	UNIT6	36.26	34.43	31.58	29.14	25.81	21.70
SO	BUILDWID	UNIT6	44.11	37.07	32.00	20.21	25.81	30.62
SO	BUILDWID	UNIT6	34.51	37.34	39.04	39.56	38.87	37.00

```
'CITY OF TALLAHASSEE UNIT 8 (aux boil removed  prog.limits ) (p8bpip13.inp)'
'ST'
'METERS' 1.0
'UTMY' 360
12
'TANK 1' 1 0.00
8   12.8
 769766.2       3339823
 769763.4       3339830
 769756.8       3339832
 769750.4       3339830
 769747.8       3339823
 769750.6       3339816
 769757.2       3339814
 769763.6       3339817
'TANK 2' 1 0.00
8   12.2
 769733.3       3339825
 769728.6       3339836
 769717.8       3339840
 769707         3339836
 769702.7       3339825
 769707.4       3339814
 769718.3       3339810
 769729         3339815
'TANK 3' 1 0.00
8   12.2
 769729         3339765
 769723.5       3339778
 769710.7       3339783
 769698.1       3339778
 769693         3339765
 769698.5       3339752
 769711.4       3339747
 769724         3339753
'MAIN'   4    0.00
4   6
769653             3339931
769783             3339931
769783             3339903
769653             3339903
4    18.6
769653             3339925
769738             3339925
769738             3339909
769653             3339909
4       17.7
769653             3339909
769688             3339909
769688             3339903
769653             3339903
4       15.2
769688             3339909
769783             3339909
769783             3339903
769688             3339903
'UNIT 5'   2   0.00
8       26.2
769710             3339902
769721             3339902
```

```
769721              3339904
769725              3339904
769725              3339900
769721              3339900
769721              3339893
769710              3339893
4       32.3
769721              3339904
769725              3339904
769725              3339900
769721              3339900
'UNIT 6'     1      0.00
4        25.9
769688              3339899
769697              3339899
769697              3339890
769688              3339890
'UNIT 7'     2     0.00
8    29.6
769657              3339903
769660              3339903
769660              3339900
769668              3339900
769668              3339890
769660              3339890
769660              3339900
769657              3339900
4   35.0
769657              3339903
769660              3339903
769660              3339900
769657              3339900
'D-TANK'  1      0.00
8      12.2
769474       3339843
769472       3339848
769467       3339850
769462       3339848
769460       3339843
769462       3339838
769467       3339836
769472       3339838
'CTs'  2      0.00
4    9.1
769406       3339851
769417       3339851
769417       3339779
769406       3339779
4    4.0
769406       3339851
769417       3339851
769417       3339837
769406       3339837
'HSRG'  1     0.00
4       24.0
769603.5     3339769.5
769603.5     3339796.5
769618.5     3339796.5
769618.5     3339769.5
'UNIT8'    3      0.00
```

```
8      7.2
769607.1          3339796.5
769607.1          3339820.9
769604.2          3339820.9
769604.2          3339826.8
769617.8          3339826.8
769617.8          3339820.9
769614.9          3339820.9
769614.9          3339796.5
4         13.6
769607.1          3339813
769607.1          3339820.9
769614.9          3339820.9
769614.9          3339813
4        18.7
769604.2          3339820.9
769604.2          3339826.8
769617.8          3339826.8
769617.8          3339820.9
'cooltwr' 1   0.00
4        13.4
769532          3339822
769532          3339881
769545          3339881
769545          3339822
3
'CT1'          0.0    11.7 769421    3339825
'CT2'          0.0    11.7 769421    3339813
'UNIT8'        0.0    60.0 769611.5 3339767
```

==========
BPIP PROCESSING INFORMATION:
==========

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in METERS will be converted to meters using a conversion factor of 1.0000. Output will be in meters.

The UTMP variable is set to UTMY. The input is assumed to be in UTM coordinates. BPIP will move the UTM origin to the first pair of UTM coordinates read. The UTM coordinates of the new origin will be subtracted from all the other UTM coordinates entered to form this new local coordinate system.

Plant north is set to 360.00 degrees with respect to True North.

CITY OF TALLAHASSEE UNIT 8 (aux boil removed prog.limits) (p8bpip13.inp)

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
CT1	11.70	.00	30.50	65.00
CT2	11.70	.00	30.50	65.00
UNIT8	60.00	.00	60.00	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.

** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

CITY OF TALLAHASSEE UNIT 8 (aux boil removed prog.limits) (p8bpip13.inp)

BPIP output is in meters

SO	BUILDHGT	CT1	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT1	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT1	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT1	9.10	9.10	9.10	9.10	9.10	12.20
SO	BUILDHGT	CT1	12.20	12.20	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT1	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDWID	CT1	23.34	34.96	45.53	54.71	62.23	67.85
SO	BUILDWID	CT1	71.42	72.82	72.00	72.82	71.42	67.85
SO	BUILDWID	CT1	62.23	54.71	45.53	34.96	23.34	11.00
SO	BUILDWID	CT1	23.34	34.96	45.53	54.71	62.23	13.66
SO	BUILDWID	CT1	13.16	13.79	72.00	72.82	71.42	67.85
SO	BUILDWID	CT1	62.23	54.71	45.53	34.96	23.34	11.00

SO	BUILDHGT	CT2	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT2	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT2	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT2	9.10	9.10	9.10	9.10	12.20	12.20
SO	BUILDHGT	CT2	12.20	9.10	9.10	9.10	9.10	9.10
SO	BUILDHGT	CT2	9.10	9.10	9.10	9.10	9.10	9.10
SO	BUILDWID	CT2	23.34	34.96	45.53	54.71	62.23	67.85
SO	BUILDWID	CT2	71.42	72.82	72.00	72.82	71.42	67.85
SO	BUILDWID	CT2	62.23	54.71	45.53	34.96	23.34	11.00
SO	BUILDWID	CT2	23.34	34.96	45.53	54.71	14.09	13.66
SO	BUILDWID	CT2	13.16	72.82	72.00	72.82	71.42	67.85
SO	BUILDWID	CT2	62.23	54.71	45.53	34.96	23.34	11.00

SO	BUILDHGT	UNIT8	24.00	24.00	24.00	24.00	24.00	24.00
SO	BUILDHGT	UNIT8	24.00	24.00	24.00	24.00	24.00	24.00
SO	BUILDHGT	UNIT8	24.00	24.00	24.00	24.00	24.00	24.00
SO	BUILDHGT	UNIT8	24.00	24.00	24.00	24.00	24.00	24.00
SO	BUILDHGT	UNIT8	24.00	24.00	24.00	24.00	24.00	24.00
SO	BUILDHGT	UNIT8	24.00	24.00	24.00	24.00	24.00	24.00
SO	BUILDWID	UNIT8	19.46	23.33	26.49	28.85	30.33	30.88
SO	BUILDWID	UNIT8	30.50	29.19	27.00	29.19	30.50	30.88
SO	BUILDWID	UNIT8	30.33	28.85	26.49	23.33	19.46	15.00
SO	BUILDWID	UNIT8	19.46	23.33	26.49	28.85	30.33	30.88
SO	BUILDWID	UNIT8	30.50	29.19	27.00	29.19	30.50	30.88
SO	BUILDWID	UNIT8	30.33	28.85	26.49	23.33	19.46	15.00

```
'COT UNIT 8 (aux boil/CT/D-TANK/cool-twr removed  prog.limits )(p8bpip14.inp)'
'ST'
'METERS' 1.0
'UTMY' 360
12
'TANK 1' 1 0.00
8   12.8
 769766.2       3339823
 769763.4       3339830
 769756.8       3339832
 769750.4       3339830
 769747.8       3339823
 769750.6       3339816
 769757.2       3339814
 769763.6       3339817
'TANK 2' 1 0.00
8   12.2
 769733.3       3339825
 769728.6       3339836
 769717.8       3339840
 769707         3339836
 769702.7       3339825
 769707.4       3339814
 769718.3       3339810
 769729         3339815
'TANK 3' 1 0.00
8   12.2
 769729         3339765
 769723.5       3339778
 769710.7       3339783
 769698.1       3339778
 769693         3339765
 769698.5       3339752
 769711.4       3339747
 769724         3339753
'MAIN'   4    0.00
4   6
769653             3339931
769783             3339931
769783             3339903
769653             3339903
4    18.6
769653             3339925
769738             3339925
769738             3339909
769653             3339909
4       17.7
769653             3339909
769688             3339909
769688             3339903
769653             3339903
4       15.2
769688             3339909
769783             3339909
769783             3339903
769688             3339903
'UNIT 5'   2   0.00
8       26.2
769710             3339902
769721             3339902
```

```
769721              3339904
769725              3339904
769725              3339900
769721              3339900
769721              3339893
769710              3339893
4       32.3
769721              3339904
769725              3339904
769725              3339900
769721              3339900
'UNIT 6'     1      0.00
4        25.9
769688              3339899
769697              3339899
769697              3339890
769688              3339890
'UNIT 7'     2     0.00
8    29.6
769657              3339903
769660              3339903
769660              3339900
769668              3339900
769668              3339890
769660              3339890
769660              3339900
769657              3339900
4   35.0
769657              3339903
769660              3339903
769660              3339900
769657              3339900
'HSRG'  1     0.00
4       24.0
769603.5     3339769.5
769603.5     3339796.5
769618.5     3339796.5
769618.5     3339769.5
'UNIT8'    3      0.00
8      7.2
769607.1          3339796.5
769607.1          3339820.9
769604.2          3339820.9
769604.2          3339826.8
769617.8          3339826.8
769617.8          3339820.9
769614.9          3339820.9
769614.9          3339796.5
4        13.6
769607.1          3339813
769607.1          3339820.9
769614.9          3339820.9
769614.9          3339813
4       18.7
769604.2          3339820.9
769604.2          3339826.8
769617.8          3339826.8
769617.8          3339820.9
'CONDTANK'    1  0.00
8        8.5
```

```
 769629.3       3339916
 769627.7       3339920
 769623.9       3339921
 769620.2       3339920
 769618.7       3339916
 769620.3       3339912
 769624.1       3339911
 769627.8       3339912
 'DISTTANK'   1   0.00
8        5.3
 769629.3       3339901
 769627.7       3339905
 769623.9       3339906
 769620.2       3339905
 769618.7       3339901
 769620.3       3339897
 769624.1       3339896
 769627.8       3339897
 'EVAPORAT'    1     0.00
8  10.0
 769603.8       3339904
 769603.5       3339905
 769603         3339905
 769602.4       3339905
 769602.3       3339904
 769602.5       3339904
 769603         3339903
 769603.6       3339904
1
'UNIT7'       0.0    54.9 769653    3339883
```

==========
BPIP PROCESSING INFORMATION:
==========

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in METERS will be converted to meters using a conversion factor of 1.0000. Output will be in meters.

The UTMP variable is set to UTMY. The input is assumed to be in UTM coordinates. BPIP will move the UTM origin to the first pair of UTM coordinates read. The UTM coordinates of the new origin will be subtracted from all the other UTM coordinates entered to form this new local coordinate system.

Plant north is set to 360.00 degrees with respect to True North.

COT UNIT 8 (aux boil/CT/D-TANK/cool-twr removed prog.limits)(p8bpip14.inp)

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
UNIT7	54.90	.00	60.00	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.

** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

BPIP (Dated: 95086)
DATE : 11/14/96
TIME : 11:51:20

COT UNIT 8 (aux boil/CT/D-TANK/cool-twr removed prog.limits)(p8bpip14.inp)

BPIP output is in meters

SO	BUILDHGT	UNIT7	29.60	24.00	24.00	29.60	29.60	29.60
SO	BUILDHGT	UNIT7	29.60	29.60	18.60	18.60	18.60	.00
SO	BUILDHGT	UNIT7	8.50	8.50	8.50	18.60	18.60	18.60
SO	BUILDHGT	UNIT7	29.60	29.60	29.60	29.60	29.60	29.60
SO	BUILDHGT	UNIT7	29.60	29.60	18.60	18.60	18.60	.00
SO	BUILDHGT	UNIT7	.00	.00	.00	18.60	18.60	18.60
SO	BUILDWID	UNIT7	13.09	23.33	26.49	16.78	17.03	16.76
SO	BUILDWID	UNIT7	15.98	14.71	35.00	48.01	59.57	.00
SO	BUILDWID	UNIT7	10.88	10.81	10.41	85.35	86.49	85.00
SO	BUILDWID	UNIT7	13.09	14.78	16.03	16.78	17.03	16.76
SO	BUILDWID	UNIT7	15.98	14.71	35.00	48.01	59.57	.00
SO	BUILDWID	UNIT7	.00	.00	.00	85.35	86.49	85.00

```
'COT UNIT 8 (aux/ P8/CT/D-TANK/cool-twr removed  prog.limits )(p8bpip15.inp)'
'ST'
'METERS' 1.0
'UTMY' 360
11
'TANK 1' 1 0.00
8   12.8
 769766.2       3339823
 769763.4       3339830
 769756.8       3339832
 769750.4       3339830
 769747.8       3339823
 769750.6       3339816
 769757.2       3339814
 769763.6       3339817
'TANK 2' 1 0.00
8   12.2
 769733.3       3339825
 769728.6       3339836
 769717.8       3339840
 769707         3339836
 769702.7       3339825
 769707.4       3339814
 769718.3       3339810
 769729         3339815
'TANK 3' 1 0.00
8   12.2
 769729         3339765
 769723.5       3339778
 769710.7       3339783
 769698.1       3339778
 769693         3339765
 769698.5       3339752
 769711.4       3339747
 769724         3339753
'MAIN'   4    0.00
4   6
769653             3339931
769783             3339931
769783             3339903
769653             3339903
4    18.6
769653             3339925
769738             3339925
769738             3339909
769653             3339909
4       17.7
769653             3339909
769688             3339909
769688             3339903
769653             3339903
4       15.2
769688             3339909
769783             3339909
769783             3339903
769688             3339903
'UNIT 5'   2   0.00
8       26.2
769710             3339902
769721             3339902
```

```
769721              3339904
769725              3339904
769725              3339900
769721              3339900
769721              3339893
769710              3339893
4       32.3
769721              3339904
769725              3339904
769725              3339900
769721              3339900
'UNIT 6'     1      0.00
4        25.9
769688              3339899
769697              3339899
769697              3339890
769688              3339890
'UNIT 7'     2     0.00
8    29.6
769657              3339903
769660              3339903
769660              3339900
769668              3339900
769668              3339890
769660              3339890
769660              3339900
769657              3339900
4   35.0
769657              3339903
769660              3339903
769660              3339900
769657              3339900
'UNIT1'  1     0.00
4        21.9
769736              3339903
769740              3339903
769740              3339898
769736              3339898
'UNIT2'  1     0.00
4        21.9
769748              3339903
769752              3339903
769752              3339898
769748              3339898
'UNIT3'  1     0.00
4        21.9
769761              3339903
769765              3339903
769765              3339898
769761              3339898
'UNIT4'  1     0.00
4        21.9
769772              3339903
769776              3339903
769776              3339898
769772              3339898
4
'UNIT1'      0.0    26 769738     3339891
'UNIT2'      0.0    26 769750     3339891
'UNIT3'      0.0    26 769763     3339891
```

'UNIT4' 0.0 26 769774 3339891

==========
BPIP PROCESSING INFORMATION:
==========

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in METERS will be converted to meters using a conversion factor of 1.0000. Output will be in meters.

The UTMP variable is set to UTMY. The input is assumed to be in UTM coordinates. BPIP will move the UTM origin to the first pair of UTM coordinates read. The UTM coordinates of the new origin will be subtracted from all the other UTM coordinates entered to form this new local coordinate system.

Plant north is set to 360.00 degrees with respect to True North.

COT UNIT 8 (aux/ P8/CT/D-TANK/cool-twr removed prog.limits)(p8bpip15.inp)

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
UNIT1	26.00	.00	64.75	65.00
UNIT2	26.00	.00	64.75	65.00
UNIT3	26.00	.00	63.63	65.00
UNIT4	26.00	.00	60.34	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.

** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

COT UNIT 8 (aux/ P8/CT/D-TANK/cool-twr removed prog.limits)(p8bpip15.inp)

BPIP output is in meters

SO	BUILDHGT	UNIT1	21.90	21.90	21.90	21.90	25.90	25.90
SO	BUILDHGT	UNIT1	18.60	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT1	25.90	25.90	25.90	25.90	25.90	21.90
SO	BUILDHGT	UNIT1	21.90	21.90	21.90	21.90	25.90	25.90
SO	BUILDHGT	UNIT1	18.60	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT1	25.90	25.90	25.90	25.90	25.90	21.90
SO	BUILDWID	UNIT1	30.24	29.56	27.98	25.55	25.81	21.70
SO	BUILDWID	UNIT1	55.13	41.70	25.00	20.21	25.81	30.62
SO	BUILDWID	UNIT1	34.51	37.34	39.04	39.56	38.87	30.00
SO	BUILDWID	UNIT1	30.24	29.56	27.98	25.55	25.81	21.70
SO	BUILDWID	UNIT1	55.13	41.70	25.00	20.21	25.81	30.62
SO	BUILDWID	UNIT1	34.51	37.34	39.04	39.56	38.87	30.00
SO	BUILDHGT	UNIT2	18.60	18.60	18.60	18.60	18.60	18.60
SO	BUILDHGT	UNIT2	18.60	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT2	25.90	25.90	21.90	21.90	21.90	21.90
SO	BUILDHGT	UNIT2	18.60	18.60	18.60	18.60	18.60	18.60
SO	BUILDHGT	UNIT2	18.60	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT2	25.90	25.90	21.90	21.90	21.90	21.90
SO	BUILDWID	UNIT2	102.18	102.26	99.24	93.19	84.32	72.88
SO	BUILDWID	UNIT2	59.23	41.70	25.00	20.21	25.81	30.62
SO	BUILDWID	UNIT2	34.51	37.34	30.98	31.61	31.28	30.00
SO	BUILDWID	UNIT2	102.18	102.26	99.24	93.19	84.32	72.88
SO	BUILDWID	UNIT2	59.23	41.70	25.00	20.21	25.81	30.62
SO	BUILDWID	UNIT2	34.51	37.34	30.98	31.61	31.28	30.00
SO	BUILDHGT	UNIT3	15.20	15.20	15.20	15.20	15.20	15.20
SO	BUILDHGT	UNIT3	15.20	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT3	21.90	21.90	18.60	18.60	18.60	15.20
SO	BUILDHGT	UNIT3	15.20	15.20	15.20	15.20	15.20	15.20
SO	BUILDHGT	UNIT3	15.20	18.60	18.60	25.90	25.90	25.90
SO	BUILDHGT	UNIT3	21.90	21.90	18.60	18.60	18.60	15.20
SO	BUILDWID	UNIT3	94.60	91.32	85.27	76.63	65.66	52.70
SO	BUILDWID	UNIT3	38.13	43.32	25.00	20.21	25.15	25.15
SO	BUILDWID	UNIT3	26.94	29.41	81.61	90.98	96.45	95.00
SO	BUILDWID	UNIT3	94.60	91.32	85.27	76.63	65.66	52.70
SO	BUILDWID	UNIT3	38.13	43.32	25.00	20.21	25.15	25.15
SO	BUILDWID	UNIT3	26.94	29.41	81.61	90.98	96.45	95.00
SO	BUILDHGT	UNIT4	15.20	15.20	15.20	15.20	15.20	15.20
SO	BUILDHGT	UNIT4	15.20	15.20	18.60	25.90	25.90	21.90
SO	BUILDHGT	UNIT4	18.60	18.60	15.20	15.20	15.20	15.20
SO	BUILDHGT	UNIT4	15.20	15.20	15.20	15.20	15.20	15.20
SO	BUILDHGT	UNIT4	15.20	15.20	18.60	21.90	25.90	21.90
SO	BUILDHGT	UNIT4	18.60	18.60	15.20	15.20	15.20	15.20
SO	BUILDWID	UNIT4	94.60	91.32	85.27	76.63	65.66	52.70
SO	BUILDWID	UNIT4	40.43	26.11	25.00	20.21	22.96	23.66
SO	BUILDWID	UNIT4	66.89	75.40	85.27	91.32	94.60	95.00
SO	BUILDWID	UNIT4	94.60	91.32	85.27	76.63	65.66	52.70
SO	BUILDWID	UNIT4	40.43	26.11	25.00	21.83	22.96	23.66
SO	BUILDWID	UNIT4	66.89	75.40	85.27	91.32	94.60	95.00

```
'COT UNIT 8 ( Tank#1 AND  units 1-6 removed  prog.limits )(p8bpip16.inp)'
'ST'
'METERS' 1.0
'UTMY' 360
12
'TANK 2' 1 0.00
8   12.2
 769733.3       3339825
 769728.6       3339836
 769717.8       3339840
 769707         3339836
 769702.7       3339825
 769707.4       3339814
 769718.3       3339810
 769729         3339815
'TANK 3' 1 0.00
8   12.2
 769729         3339765
 769723.5       3339778
 769710.7       3339783
 769698.1       3339778
 769693         3339765
 769698.5       3339752
 769711.4       3339747
 769724         3339753
'D-TANK'  1      0.00
8      12.2
769474       3339843
769472       3339848
769467       3339850
769462       3339848
769460       3339843
769462       3339838
769467       3339836
769472       3339838
'CTs'  2      0.00
4    9.1
769406       3339851
769417       3339851
769417       3339779
769406       3339779
4    4.0
769406       3339851
769417       3339851
769417       3339837
769406       3339837
'cooltwr' 1  0.00
4       13.4
769532         3339822
769532         3339881
769545         3339881
769545         3339822
'MAIN'    4     0.00
4   6
769653             3339931
769783             3339931
769783             3339903
769653             3339903
4    18.6
769653             3339925
```

```
769738              3339925
769738              3339909
769653              3339909
4        17.7
769653              3339909
769688              3339909
769688              3339903
769653              3339903
4        15.2
769688              3339909
769783              3339909
769783              3339903
769688              3339903
'UNIT 7'     2     0.00
8    29.6
769657              3339903
769660              3339903
769660              3339900
769668              3339900
769668              3339890
769660              3339890
769660              3339900
769657              3339900
4   35.0
769657              3339903
769660              3339903
769660              3339900
769657              3339900
'HSRG'   1     0.00
4        24.0
769603.5     3339769.5
769603.5     3339796.5
769618.5     3339796.5
769618.5     3339769.5
'UNIT8'    3      0.00
8       7.2
769607.1          3339796.5
769607.1          3339820.9
769604.2          3339820.9
769604.2          3339826.8
769617.8          3339826.8
769617.8          3339820.9
769614.9          3339820.9
769614.9          3339796.5
4         13.6
769607.1          3339813
769607.1          3339820.9
769614.9          3339820.9
769614.9          3339813
4        18.7
769604.2          3339820.9
769604.2          3339826.8
769617.8          3339826.8
769617.8          3339820.9
'CONDTANK'    1   0.00
8         8.5
 769629.3        3339916
 769627.7        3339920
 769623.9        3339921
 769620.2        3339920
```

```
 769618.7       3339916
 769620.3       3339912
 769624.1       3339911
 769627.8       3339912
 'DISTTANK'   1   0.00
8        5.3
 769629.3       3339901
 769627.7       3339905
 769623.9       3339906
 769620.2       3339905
 769618.7       3339901
 769620.3       3339897
 769624.1       3339896
 769627.8       3339897
 'EVAPORAT'    1     0.00
8  10.0
 769603.8       3339904
 769603.5       3339905
 769603         3339905
 769602.4       3339905
 769602.3       3339904
 769602.5       3339904
 769603         3339903
 769603.6       3339904
1
'COOLT'       0.0    13.4 769538.5    3339852
```

==========
BPIP PROCESSING INFORMATION:
==========

The ST flag has been set for processing for an ISCST2 run.

Inputs entered in METERS will be converted to meters using a conversion factor of 1.0000. Output will be in meters.

The UTMP variable is set to UTMY. The input is assumed to be in UTM coordinates. BPIP will move the UTM origin to the first pair of UTM coordinates read. The UTM coordinates of the new origin will be subtracted from all the other UTM coordinates entered to form this new local coordinate system.

Plant north is set to 360.00 degrees with respect to True North.

COT UNIT 8 (Tank#1 AND units 1-6 removed prog.limits)(p8bpip16.inp)

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
COOLT	13.40	.00	60.00	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.

** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

BPIP (Dated: 95086)
DATE : 12/19/96
TIME : 17: 7:10

COT UNIT 8 (Tank#1 AND units 1-6 removed prog.limits)(p8bpip16.inp)

BPIP output is in meters

SO	BUILDHGT	COOLT	13.40	13.40	13.40	13.40	13.40	13.40
SO	BUILDHGT	COOLT	13.40	13.40	13.40	13.40	13.40	13.40
SO	BUILDHGT	COOLT	13.40	13.40	13.40	13.40	13.40	13.40
SO	BUILDHGT	COOLT	13.40	13.40	13.40	13.40	13.40	13.40
SO	BUILDHGT	COOLT	13.40	13.40	13.40	13.40	13.40	24.00
SO	BUILDHGT	COOLT	24.00	24.00	13.40	13.40	13.40	13.40
SO	BUILDWID	COOLT	23.05	32.40	40.76	47.88	53.55	57.60
SO	BUILDWID	COOLT	59.89	60.36	59.00	60.36	59.89	57.60
SO	BUILDWID	COOLT	53.55	47.88	40.76	32.40	23.05	13.00
SO	BUILDWID	COOLT	23.05	32.40	40.76	47.88	53.55	57.60
SO	BUILDWID	COOLT	59.89	60.36	59.00	60.36	59.89	30.88
SO	BUILDWID	COOLT	30.33	28.85	40.76	32.40	23.05	13.00

Attachment PGS-07

In developing the initial Title V application, the City of Tallahassee's consultant, Foster Wheeler Environmental Corporation, conducted a comprehensive emissions unit inventory of the Purdom Generating Station. The attached future inventory (File: PURREI.XLS) includes the initial Title V inventory with the addition of the proposed Unit 8 combustion turbine, cooling tower, auxiliary boiler, zero discharge facility, and the removal of units which will no longer be operated. The revised inventory includes the same fifteen emissions unit areas as the initial Title V inventory. These areas included the following:

1. Steam Generator (Boiler) Operations;
2. Gas Turbine Operations;
3. Emergency Generator;
4. Fuel Farm (Waste Water Storage);
5. Fuel Dispensing Operations;
6. Space Heating;
7. Evaporative Loss Sources;
8. Cooling Towers;
9. Water Treatment;
10. Laboratory;
11. Central Vacuum System;
12. Maintenance Activities;
13. Plant Operations;
14. Fugitive Particulate; and
15. Gasoline Engines.

The future inventory has attempted to identify every remaining and new emissions unit at the facility as a result of the project. The attached inventory provides descriptions of each emissions unit and lists its regulatory classification. The regulatory classifications encompass four categories. These categories include: 1) Regulated (with or without emissions limitations); 2) Unregulated; and 3) Proposed to be exempt under criteria listed in Rule 62-213.430(6), F.A.C.. All trivial emissions units and activities have been omitted from the inventory list per FDEP guidance dated March 15, 1996.

The PSD and revised Title V application includes all regulated emissions units, and the unregulated particulate matter and VOC sources. The regulated emissions units have specific emission limitations. The unregulated particulate matter dust and VOC sources are considered unregulated emissions units with no specific emission limited pollutants. The new cooling tower has been included under the unregulated particulate matter emissions unit.

The list of emissions units also includes those which met either the specific exemption criteria of Rule 62-210.300(3) or 62-213.430(6), F.A.C. The City of Tallahassee based its exemption request for these units on the regulations and requirements of the Title V Operating Permit Program.

The list of emissions units also contains several unpermitted emissions units which have been in operation since the facility started-up. These activities were operating under the temporary exemption of Rule 62-210.300(3)(b), F.A.C. The City of Tallahassee had requested that all of the existing unpermitted activities at the Purdom Generating Station be exempted from the permit requirements of Rule 62-210.300, F.A.C. under the authority provided to the FDEP in Rule 62-4.040(1)(b), F.A.C. The emissions units included the following:

- Fugitive Dust - Exemption was requested for the heavy construction activities listed under this category. Emissions from these activities are of the Fugitive Area type generated by the operation of heavy equipment on site. This activity has also been included in the revised Title V application within Emissions Unit No. 1 (EU01). The request was based on the fugitive nature of the emissions and the low quantities associated with these activities.

- Evaporative Loss Sources - Exemption for the small parts washers was requested based on their limited use, size and potential emissions. The units are typically vendor supplied (e,g., Safety-Kleen) on an as needed basis and considered unregulated. These units have been included in the revised Title V application within Emissions Unit No. 2 (EU02). Exemption was also requested for the surface coating operations at the facility based on the fugitive nature of the emissions and low quantities of surface coating material used. Surface coating activities have been included in the Title V application within EU02.

The initial list and the above comments were part of the initial Title V application and were intended to meet the requirements of Rule 62-213.420(3)(m), F.A.C. The list and attachment served as the official request for the exemption of all the units listed as unregulated from the requirements of Rule 62-210.300, F.A.C. For purposes of the proposal project, the City is requesting the Department to exempt additional units from the construction and Title V permit requirements. These units are noted in the attached list.

CITY OF TALLAHASSEE ELECTRIC DEPARTMENT FUTURE EMISSIONS UNIT INVENTORY SOURCE - PURDOM GENERATING STATION				
Unit No.	Emissions Unit	Emissions Unit Description	Regulatory [1] [2] Classification	Emission Unit Status
1	CT #1	Combustion Turbine - 228 mmBtu/hr	Regulated - Permit # AO37-242825	Existing
1a	Oil Vapor Extractor	Oil Vapor Extractor	Exempted Under Rule 62-213.430(6)	Existing
1b	Fuel Oil Piping	Fuel Oil Piping	Exempted Under Rule 62-213.430(6)	Existing
1c	Lube Oil Tank	Organic Liquid Storage	Exempted Under Rule 62-213.430(6)	Existing
2	CT #2	Combustion Turbine - 228 mmBtu/hr	Regulated - Permit # AO37-242825	Existing
2a	Oil Vapor Extractor	Oil Vapor Extractor	Exempted Under Rule 62-213.430(6)	Existing
2b	Fuel Oil Piping	Fuel Oil Piping	Exempted Under Rule 62-213.430(6)	Existing
2c	Lube Oil Tank	Organic Liquid Storage	Exempted Under Rule 62-213.430(6)	Existing
5	Steam Generator No. 7	Steam Generator - 621 mmBtu/hr	Regulated - Permit # AO37-242831	Existing
5a	Fuel Oil Piping	Fuel Oil Piping	Exempted Under Rule 62-213.430(6)	Existing
5b	Hydrogen Gas Vents	Hydrogen Gas Vents	Exempted Under Rule 62-213.430(6)	Existing
5c	Deareator Tank Vents	Deareator Tank Vents	Exempted Under Rule 62-213.430(6)	Existing
5d	Oil Vapor Extractors	Oil Vapor Extractors	Exempted Under Rule 62-213.430(6)	Existing
5e	Lube Oil Tank (storage)	Organic Liquid Storage	Exempted Under Rule 62-213.430(6)	Existing
5f	Lube/Fuel Oil Drip Pans	Lube/Fuel Oil Drip Pans	Exempted Under Rule 62-213.430(6)	Existing
5g	Noncondensable Gas	Noncondensable Gas Extractor	Exempted Under Rule 62-213.430(6)	Existing
6	Emergency Generator	Diesel Engine <400 hrs/yr	Exempt per Rule 62-210.300(3)(a)21	Existing
6a	Diesel Driven Fire Pump	Diesel Engine <400 hrs/yr	Exempt per Rule 62-210.300(3)(a)21	New
7	Fuel Farm	Fuel Oil Tank No. 1	Exempted Under Rule 62-213.430(6)	Existing
7a	Fuel Farm	Fuel Oil Tank No.3	Exempted Under Rule 62-213.430(6)	Existing
7b	Fuel Farm	Waste Water Tank	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
7d	Fuel Farm	Waste Oil Tank	Exempted Under Rule 62-213.430(6)	Existing
8	No. 2 Fuel Oil Tank	Organic Liquid Storage	Exempted Under Rule 62-213.430(6)	Existing
8a	Diesel Tank (300 gallons)	Organic Liquid Storage	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
8b	Truck Loading/Unloading	Fuel Dispensing Operation	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
9	Gasoline Tank	Organic Liquid Storage	Exempted Under Rule 62-213.430(6)	Existing
9a	Fuel Dispensing Operation	Fuel Dispensing Operation	Exempted Under Rule 62-213.430(6)	Existing
10	Diesel Tank	Organic Liquid Storage	Exempted Under Rule 62-213.430(6)	Existing
10a	Fuel Dispensing Operation	Fuel Dispensing Operation	Exempted Under Rule 62-213.430(6)	Existing
11	Barge Unloading Station	Fuel Dispensing Operation	Exempted Under Rule 62-213.430(6)	Existing
12	Fuel Dispensing Operation	Truck Loading/Unloading Rack 1	Exempted Under Rule 62-213.430(6)	Existing
12a	Fuel Dispensing Operation	Truck Loading/Unloading Rack 2	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
13	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13a	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13b	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing

CITY OF TALLAHASSEE ELECTRIC DEPARTMENT
FUTURE EMISSIONS UNIT INVENTORY
SOURCE - PURDOM GENERATING STATION

Unit No.	Emissions Unit	Emissions Unit Description	Regulatory (1) (2) Classification	Emission Unit Status
13c	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13d	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13e	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13f	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13g	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13h	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13i	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13j	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13k	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13l	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13m	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
13n	Solvent Cleaning	Parts Washer - Nonhalogenated	Exempted Under Rule 62-213.430(6)	Existing
14	Space Heater	Space Heater	Exempt Rule 62-210.300(3)(a)12	Existing
14a	Space Heater	Space Heater	Exempt Rule 62-210.300(3)(a)12	Existing
14b	Space Heater	Space Heater	Exempt Rule 62-210.300(3)(a)12	Existing
14c	Space Heater	Space Heater	Exempt Rule 62-210.300(3)(a)12	Existing
14d	Space Heater	Space Heater	Exempt Rule 62-210.300(3)(a)12	Existing
14e	Space Heater	Space Heater	Exempt Rule 62-210.300(3)(a)12	Existing
14f	Space Heater	Space Heater	Exempt Rule 62-210.300(3)(a)12	Existing
15	Fugitive Dust	Paved Roads	Exempted Under Rule 62-213.430(6)	Existing
15a	Fugitive Dust	Unpaved Roads	Exempted Under Rule 62-213.430(6)	Existing
15b	Fugitive Dust	Heavy Construction Activities	Unregulated	Existing
15c	Fugitive Dust	Heavy Construction Activities (Unit 8)	Unregulated	Temporary (New)
15d	Fugitive Dust	Aggregate Handling & Storage	Exempted Under Rule 62-213.430(6)	Existing
17	Laboratory	Laboratory Equipment	Exempt Rule 62-210.300(3)(a)15	Existing
17a	Laboratory	Chemical Usage	Exempted Under Rule 62-213.430(6)	Existing
17b	Laboratory	Vacuum Pumps	Exempt Rule 62-210.300(3)(a)9	Existing
17c	Laboratory	Laboratory Fume Hoods	Exempted Under Rule 62-213.430(6)	Existing
18	Central Vacuum System	Central Vacuum System	Exempted Under Rule 62-213.430(6)	Existing
19	Maintenance Activities	Welding	Exempt Rule 62-210.300(3)(a)16	Existing
20	Plant Operations	Lube Oil Storage Tanks	Exempted Under Rule 62-213.430(6)	Existing
20a	Plant Operations	Surface Coating Operations	Unregulated	Existing
20b	Plant Operations	Surface Coating Operations (Unit 8)	Unregulated	Temporary (New)
20a	Plant Operations	Propane Storage Tanks	Exempted Under Rule 62-213.430(6)	Existing
21	Auxiliary Boiler	Steam Generator - 16.74 mmBtu/hr	Regulated - Permit # 1290001-002-AC	Existing
21a	Hydrogen Gas Vents	Hydrogen Gas Vents	Exempted Under Rule 62-213.430(6)	Existing
21b	Deareator Tank Vents	Deareator Tank Vents	Exempted Under Rule 62-213.430(6)	Existing

CITY OF TALLAHASSEE ELECTRIC DEPARTMENT
FUTURE EMISSIONS UNIT INVENTORY
SOURCE - PURDOM GENERATING STATION

Unit No.	Emissions Unit	Emissions Unit Description	Regulatory [1] [2] Classification	Emission Unit Status
21c	Noncondensable Gas	Noncondensable Gas Extractor	Exempted Under Rule 62-213.430(6)	Existing
22	Unit 8	Combustion Turbine	Regulated	New
22a	Unit 8	Oil Vapor Extractor	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22b	Unit 8	Fuel Oil Piping	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22c	Unit 8	Organic Liquid Storage	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22d	Unit 8	Heat Recovery Steam Generator	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22e	Unit 8	Fuel Oil Piping	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22f	Unit 8	Hydrogen Gas Vents	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22g	Unit 8	Deareator Tank Vents	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22h	Unit 8	Oil Vapor Extractors	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22i	Unit 8	Organic Liquid Storage	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22j	Unit 8	Lube/Fuel Oil Drip Pans	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
22k	Unit 8	Noncondensable Gas Extractor	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
23	Water Treatment	Zero Discharge Facility	Unregulated - Propose exemption under Rules 62-4.040 & 62-213.430(6)	New
23a	Water Treatment	Cooling Tower	Unregulated	New

[1]Note: The designation "proposed exemption under critieria in Rule 62-213.430(6)" indicates that an exemption is requested for this unit pursuant to Rule 62-213.420(3)(m), F.A.C., in accordance with the provisions of Rule 62-213.430(6), F.A.C.

[2]Note: All trivial emissions units and activities are omitted per FDEP 3/15/96 guidance memo. In addition, all mobil sources are omitted as outside the scope of Title V stationary source permitting.

Attachment PGS-08

This application package constitutes a supplemental Title V application to address the operation of the facility under the facility-wide emission caps upon completion of the compliance testing of Unit 8. These facility-wide emission caps will be federally enforceable through the PSD permit and Site Certification which will authorize construction of Unit 8. Until Unit 8 compliance testing has been completed, the City will continue to operate the facility as described in the initial Title V application.

Attachment PGS-09

The application seeks facility-wide emission caps for oxides of nitrogen (NO_x) and sulfur dioxide (SO_2) of 467 and 80 tons per year, respectively. Compliance with the emission caps will be ensured through an effective compliance strategy as addressed in PGS-10.

The facility-wide emission caps are associated with the Prevention of Significant Deterioration (PSD) application. The emission caps reflect "actual" annual emissions for the most recent two year period. The emission caps reflect an intent to hold emissions of these two pollutants at their current actual levels. By holding emissions at the current annual levels PSD review for these two pollutants has been avoided. Therefore, a federally enforceable permit condition which caps emissions of NO_x and SO_2 at these levels is requested.

Attachment PGS-10

The initial Title V Operating Permit application included a Compliance Report and Plan which noted that the facility was in compliance with the applicable regulations listed in each of the emissions unit sections. This remains true for the current operations; however, for the proposed project several new regulations and requirements will be triggered. Since the project is in the preconstruction phase, a certification of compliance with these future applicable regulations and additional requirements cannot be made at this time.

Once initial compliance testing has been completed, compliance with the annual emission caps on sulfur dioxide (SO_2)and oxides of nitrogen (NO_x) will be ensured through a program which accurately monitors and tracks fuel usage, fuel quality, and emissions. For compliance purposes, the proposed program consists of the following:

Combustion Turbine Nos. 1 & 2: Based on the power generation logs, fuel quality data, and the AP-42 emission factors, emission estimates will be developed for SO_2 and NO_x. These emission estimates will be based on a pound per megawatt factor developed for each unit. Fuel quality data will be supplied by the fuel vendors and as with Unit 8 an assumed 95 percent conversion of sulfur to SO_2 will be made.

Unit 7 Steam Generator: Continue monitoring and tracking SO_2 and NO_x emissions in accordance with the Acid Rain Program. This includes 40 CFR Part 75, Appendix D for SO_2, and a continuous emission monitoring system (CEMS) for NO_x. Fuel quality data for natural gas will be supplied by the fuel vendors.

Auxiliary Boiler: Monitor and track SO_2 and NO_x emissions based on fuel usage, AP-42 emission factors, and fuel vendor data for SO_2.

Unit 8 Combined Cycle: Monitor and track SO_2 and NO_x emissions in accordance with the Acid Rain Program. This includes 40 CFR Part 75, Appendix D (although, consistent with the GE data sheets, assume 95 percent conversion of sulfur to SO_2) for SO_2, and a CEMS for NO_x. Fuel quality data for natural gas will be supplied by the fuel vendors.

For purposes of tracking compliance with the facility-wide emission caps monitoring and emissions data will be recorded and kept for a period of 5 years. The semiannual period corresponds to the requested custom fuel monitoring program approval.

REQUEST FOR CUSTOM FUEL SAMPLING SCHEDULE

The Federal New Source Performance Standards (NSPS) for stationary combustion turbines establish emission limitations on oxides of nitrogen (NO_x) and sulfur dioxide (SO_2). For NO_x, the emission limitations provide an allowance for fuel bound nitrogen (FBN). For SO_2,

emissions are limited to either a stack gas concentration or by the firing of fuels with a maximum fuel sulfur content of 0.8 percent by weight. For Unit 8, the combustion turbine will be fired with either clean pipeline quality natural gas or Number 2 (0.05 % sulfur) diesel fuel oil. The maximum sulfur content of the natural gas is set at 10 grains per 100 cubic feet of natural gas (0.033 % by weight) by the pipeline tariff. The maximum sulfur content of the Number 2 diesel fuel oil proposed for the project is set at 0.05 percent by weight.

Under 40 CFR 60.334(b), the owner or operator is required to monitor both the sulfur content and the nitrogen content of the fuels fired. The monitoring requirements include daily samples when the fuel is supplied without intermediate bulk storage. At the Purdom Generating Station, Number 2 diesel fuel oil will be supplied by a vendor and stored on site prior to use. Natural gas will be supplied by pipeline without any bulk storage capabilities. Since there are no bulk storage capabilities at Purdom Generating Station for natural gas, daily samples must be collected and analyzed for sulfur and nitrogen contents. 40 CFR 60.334(b)(2), which requires the daily sampling allows for the development of custom schedules for reducing the sampling frequency. In a 1987 memorandum, the U.S. Environmental Protection Agency (EPA) issued guidance on the approval of custom schedules. Based on this guidance, it is requested that the Florida Department of Environmental Protection seek EPA approval of the following proposed custom fuel sampling schedule for the Purdom Generating Station Unit 8.

The request for approval and the associated semiannual sampling schedule is based on the data available from the Florida Gas Transmission (FGT) company. The proposed program includes the following:

No. 2 Fuel Oil

For all bulk shipments of Number. 2 (0.05% sulfur) diesel fuel oil received at the Purdom Generating Station an analysis which reports the sulfur content and FBN content of the fuel shall be provided by the fuel vendor. The analysis shall also specify the methods by which the analyses were conducted and shall comply with the requirements of 40 CFR 60.335(d).

Natural Gas

1. Monitoring of natural gas nitrogen content shall not be required in accordance with page 2 of the EPA guidance memorandum, attached.

2. Sulfur Monitoring

   a. Analysis for the sulfur content of the natural gas shall be conducted using one of the EPA-approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method.

   b. Two years' worth of recent sulfur monitoring data is attached. These data indicate an average sulfur content of 0.32 grains per 100 cubic feet of natural gas. (The data presented

were used to established the current actual emission levels for SO_2 and are based upon representative samples of natural gas used by the Purdom Generating Station taken by the Florida Gas Transmission Company in 1995 and 1996.) These data show little variability (Standard Deviation of 0.08 gr/100 CF) in the sulfur content and indicate consistent compliance with 40 CFR 60.333. Once the unit becomes operational, monitoring of the sulfur content of the natural gas shall be conducted semiannually.

c. Should any sulfur analysis indicate noncompliance with 40 CFR 60.333, the City will notify the Department of Environmental Protection of such excess emissions and the customized fuel monitoring schedule shall be reexamined. The sulfur content of the natural gas will be monitored weekly during the interim period while the monitoring schedule is reexamined

3. The City will notify the Department of Environmental Protection of any change in natural gas supply for reexamination of this monitoring schedule. A substantial change in natural gas quality (i.e., sulfur content variation of greater than 1 grain per 100 cubic foot of natural gas) shall be considered as a change in the natural gas supply. Sulfur content of the natural gas will be monitored weekly by the natural gas supplier during the interim period when this monitoring schedule is being reexamined

4. Records of sampling analysis and natural gas supply pertinent to this monitoring schedule shall be retained by the City for a period of three years, and shall be made available for inspection by the appropriate regulatory personnel.

5. The City will obtain the sulfur content of the natural gas from the fuel supplier (Florida Gas Transmission Company).

ATTACHMENT A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 14 1997

OFFICE OF AIR AND RADIATION

MEMORANDUM:

SUBJECT: Authority for Approval of Custom Fuel Monitoring Schedules Under NSPS Subpart GG

FROM: John B. Rasnic, Chief
Compliance Monitoring Branch

TO: Air Compliance Branch Chiefs
Regions II, III, IV, V, VI and IX

Air Programs Branch Chiefs
Regions I-X

The NSPS for Stationary Gas Turbines (Subpart GG) at 40 CFR 60.334(b)(2) allows for the development of custom fuel monitoring schedules as an alternative to daily monitoring of the sulfur and nitrogen content of fuel fired in the turbines. Regional offices have been forwarding custom fuel monitoring schedules to the Stationary Source Compliance Division (SSCD) for consideration since it was understood that authority for approval of these schedules was not delegated to the Regions. However, in consultation with the Emission Standards and Engineering Division, it has been determined that the Regional Offices do have the authority to approve subpart GG custom fuel monitoring schedules. Therefore it is no longer necessary to forward these requests to Headquarters for approval.

Over the past few years, SSCD has issued over twenty custom schedules for sources using pipeline quality natural gas. In order to maintain national consistency, we recommend that any schedules Regional Offices issue for natural gas be no less stringent than the following: sulfur monitoring should

bi monthly, followed by quarterly, then semiannual, given at least six months of data demonstrating little variability in sulfur content and compliance with §60.333 at each monitoring frequency; nitrogen monitoring can be waived for pipeline quality natural gas, since there is no fuel-bound nitrogen and since the free nitrogen does not contribute appreciably to NO_x emissions. Please see the attached sample custom schedule for details. Given the increasing trend in the use of pipeline quality natural gas, we are investigating the possibility of amending Subpart Da to allow for less frequent sulfur monitoring and a waiver of nitrogen monitoring requirements where natural gas is used.

Where sources using oil request custom fuel monitoring schedules, Regional Offices are encouraged to contact SSCD for consultation on the appropriate fuel monitoring schedule. However, Regions are not required to send the request itself to OSCD for approval.

If you have any questions, please contact Sally K. Farrell at FTS 382-2675.

Attachment

cc: John Cronshaw
George Walsh
Robert Ajax
Earl Salo

Enclosure

Conditions for Custom Fuel Sampling Schedule for Stationary Gas Turbines

1. Monitoring of fuel nitrogen content shall not be required while natural gas is the only fuel fired in the gas turbine.

2. Sulfur Monitoring

   a. Analysis for fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3031-81; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR 60.335(b)(2).

   b. Effective the date of this custom schedule, sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.

   c. If after the monitoring required in item 2(b) above, or herein, the sulfur content of the fuel shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, sample anaylsis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.

   d. Should any sulfur analysis as required in items 2(b) or 2(c) above indicate noncompliance with 40 CFR 60.333, the owner or operator shall notify the State Air Control Board) of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

3. If there is a change in fuel supply, the owner or operator must notify the State of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.

4. Records of sample analysis and fuel supply pertinent to this custom schedule shall be retained for a period of three years, and be available for inspection by personnel of federal, state, and local air pollution control agencies.

FOSTER WHEELER ENVIRONMENTAL CORPORATION
EXCEL 5.0 CALCULATION SHEET

By: D. Graziani, P.E DJG Date: 02/27/97 OFS No.: 1584.0007
Ckd. By: C. Moore Date: 02/27/97 File: FGTDATA.XLS
Rvd. By: Date: Sheet: Data Reduction

Client: City of Tallahassee
Project: Purdom Unit 8

Sulur Content			Sulur Content		
Reading	(gr/100 SCF)	(Xi-Xm)^2	Reading	(gr/100 SCF)	(Xi-Xm)^2
1/11/95	0.33	0.00013770	6/4/96	0.23	0.00840957
1/17/95	0.25	0.00466014	6/5/96	0.18	0.01911728
2/7/95	0.27	0.00232953	6/14/96	0.30	0.00033362
2/15/95	0.24	0.00612545	6/18/96	0.34	0.00046557
2/20/95	0.24	0.00612545	6/20/96	0.31	0.00006831
1/2/96	0.35	0.00077676	6/28/96	0.36	0.00174179
1/9/96	0.41	0.00824540	6/28/96	0.38	0.00352091
1/16/96	0.43	0.01203065	7/2/96	0.42	0.00942793
1/30/96	0.39	0.00517307	7/5/96	0.34	0.00047240
1/31/96	0.22	0.00965606	7/12/96	0.27	0.00232953
2/6/96	0.38	0.00352091	7/16/96	0.22	0.00960343
2/13/96	0.47	0.02173990	7/18/96	0.25	0.00466014
2/20/96	0.49	0.03045237	7/22/96	0.22	0.00960343
2/28/96	0.24	0.00612545	7/25/96	0.26	0.00339484
3/5/96	0.38	0.00352091	7/30/96	0.16	0.02589874
3/7/96	0.26	0.00339484	8/1/96	0.26	0.00339484
3/12/96	0.55	0.05255944	8/6/96	0.20	0.01366029
3/13/96	0.31	0.00006831	8/8/96	0.28	0.00146423
3/19/96	0.39	0.00490505	8/13/96	0.27	0.00227053
3/20/96	0.39	0.00514587	8/15/96	0.30	0.00033362
3/26/96	0.46	0.01992366	8/20/96	0.44	0.01495021
3/28/96	0.39	0.00514587	8/22/96	0.31	0.00006831
4/2/96	0.46	0.01992366	8/29/96	0.31	0.00006831
4/4/96	0.31	0.00006831	9/5/96	0.34	0.00047240
4/9/96	0.48	0.02561002	9/12/96	0.32	0.00000301
4/11/96	0.22	0.00965606	9/19/96	0.31	0.00006831
4/16/96	0.42	0.01068968	9/25/96	0.32	0.00000301
4/18/96	0.33	0.00013770	10/2/96	0.34	0.00047240
4/23/96	0.40	0.00611797	10/10/96	0.30	0.00033362
4/25/96	0.35	0.00100709	10/17/96	0.28	0.00171038
4/30/96	0.40	0.00611797	10/24/96	0.29	0.00082771
5/2/96	0.25	0.00466014	10/31/96	0.25	0.00442627
5/7/96	0.22	0.00960343	11/7/96	0.29	0.00082771
5/9/96	0.29	0.00079892	11/15/96	0.30	0.00050520
5/14/96	0.21	0.01222879	11/22/96	0.31	0.00009781
5/15/96	0.30	0.00033362	11/28/96	0.32	0.00000727
5/20/96	0.19	0.01676092	12/4/96	0.42	0.00942793
5/23/96	0.29	0.00079892	12/12/96	0.40	0.00611797
5/29/96	0.21	0.01222879	12/19/96	0.32	0.00000065
5/30/96	0.27	0.00232953	12/28/96	0.36	0.00163678

Number of Readings	80
Maximum	0.55
Minimum	0.16
Mean (Xm)	0.32
Sum (Xi-Xm)^2	0.51
Standard Deviation	0.08

Attachment PGS-11

COMPLIANCE CERTIFICATION

In accordance with the instructions for the Florida Department of Environmental Protection's Form No. 62-210.900(1), F.A.C., and Rule 62-213.420(3)(j), F.A.C., a compliance statement must be included in each application for an air pollution permit (i.e., Construction, Modification, State Operating or Title V Operating Permit). This Compliance Certification is intended to meet the requirements of the instructions and the regulation.

CERTIFICATION STATEMENT

"I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the PSD and Title V Source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate and complete.

Signed

3/6/97
Date

EMISSION UNIT - 01

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Unregulated PM Units and Activities**		
2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **A/C**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **This emissions unit includes the unregulated particulate matter units (Normal Heavy Construction Activities, Unit 8 Cooling Tower, and Heavy Construction Activities associated with Unit 8) and activities which emit or have a potential to emit more than five tons per year. The emissions unit does not include trivial or exempt units or activities.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **New Cooling Tower - Drift Eliminators**
2. Control Device or Method Code: **015** **Drift Eliminator**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit: Manufacturer:	Model Number:	
4. Generator Nameplate Rating:	MW	
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	
2. Emission Point Type Code: [ ] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [ ] V [ ] W	
6. Stack Height:	feet
7. Exit Diameter:	feet
8. Exit Temperature:	°F

9. Actual Volumetric Flow Rate:	acfm
10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment: **1** of **3**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Heavy Construction Activities**	
2. Source Classification Code (SCC):	
3. SCC Units: **Acre-Year**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**
6. Estimated Annual Activity Factor: **5**	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Heavy construction includes such activities as ground excavation and building construction and demolition. Annual construction activities may either fall short of or exceed the esimated annual activity factor above. However, this estimated annual activity factor is reflective of ordinary construction activity at the Purdom Plant.**	

Segment Description and Rate: Segment: **2** of **3**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Cooling Tower (Fresh Water)**	
2. Source Classification Code (SCC):	
3. SCC Units: **thousand of gallons**	
4. Maximum Hourly Rate: **3,300**	5. Maximum Annual Rate: **28,908,000**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Emissions from the cooling tower are associated with drift loses. Drift loss emission include particulate matter and are a direct result of the dissolved solids contained within the the cooling tower water. Drift eliminators have been proposed as Best Avaiable Control Technolgy (BACT) for the cooling tower .**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment: **3** of **3**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Heavy Construction Activities - Unit 8**	
2. Source Classification Code (SCC):	
3. SCC Units: **Acre-Year**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**
6. Estimated Annual Activity Factor: **16**	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Heavy construction includes such activities as ground excavation and building construction and demolition. Annual construction activities may either fall short of or exceed the esimated annual activity factor above. However, this estimated annual activity factor is reflective of anticipated construction activity on Unit 8 at the Purdom Plant. These emissions are considered temporary.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**015**		**NS**
PM	**061**		**NS**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted:	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	lb/hour tons/year
4. Synthetically Limited? [ ] Yes [ ] No	
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3	_____ to _____ tons/year
6. Emission Factor: Reference:	
7. Emissions Method Code: [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5	
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?
   If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[X] C	[ ] E	[ ] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown
4. Baseline Emissions:			
PM		lb/hour	tons/year
SO2		lb/hour	tons/year
NO2			tons/year
5. PSD Comment (limit to 200 characters):			
The cooling tower which is part of the proposed project consumes increment. Baseline, unregulated PM emissions have not been quantified.			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [ ] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Not Applicable

EMISSION UNIT - 02

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[X] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[X] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Unregulated VOC Sources**		
2. Emissions Unit Identification Number: [X] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **This emissions unit includes the unregulated volatile organic compound units and activities (Surface Coating Activities) which emit or have the potential to emit five or more tons per year. This emission unit does not include trivial or exempt activities.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **None**
2. Control Device or Method Code: **0**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit: Manufacturer:	Model Number:	
4. Generator Nameplate Rating:	MW	
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:	
2. Emission Point Type Code: [ ] 1 [ ] 2 [ ] 3 [ ] 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [ ] V [ ] W	
6. Stack Height:	feet
7. Exit Diameter:	feet
8. Exit Temperature:	°F

9. Actual Volumetric Flow Rate:	acfm
10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment: 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Surface Coating - Normal Operations**	
2. Source Classification Code (SCC):	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**
6. Estimated Annual Activity Factor: **5065**	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Annual Activity Factor is based on maximum surface area coated.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment: 2 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Surface Coating - Unit 8**	
2. Source Classification Code (SCC):	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **0**	5. Maximum Annual Rate: **0**
6. Estimated Annual Activity Factor: **2500**	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): **Activity Factor is based on estimated initial coating usage for Unit 8. After construction and the initial painting of Unit 8, emissions will return to levels associated with normal operations.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC			NS
HAPS			NS
H120			NS
H169			NS
H186			NS
H123			NS
H085			NS

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted:	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	lb/hour tons/year
4. Synthetically Limited? [ ] Yes [ ] No	
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3	_____ to _____ tons/year
6. Emission Factor: Reference:	
7. Emissions Method Code: [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5	
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):	

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hour	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[ ] E	[ ] Unknown
SO2	[ ] C	[ ] E	[ ] Unknown
NO2	[ ] C	[ ] E	[ ] Unknown
4. Baseline Emissions:			
PM		lb/hour	tons/year
SO2		lb/hour	tons/year
NO2			tons/year
5. PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [ ] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID:_____ [ ] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Not Applicable

EMISSION UNIT - 03

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Combustion Turbine No. 1**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **008**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **The maximum allowable operating rate is 228 mmBtu/hr (lower heating value) at an ambient temperature of 80 degrees fahrenheit when firing fuel oil or natural gas. The maximum hours of operation are currently limited to 6,993. Following completion of compliance testing of Unit 8, combustion turbine No. 1 will operate under the alternative method of operation and annual emissions will be limited by the proposed facility wide caps on SO_2 and NO_x emissions.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **FUEL QUALITY** **The City of Tallahassee is currently authorized to fire Number 2 fuel oil with a maximum sulfur content of 0.4 percent by weight. Following completion of compliance testing on Unit 8, only Number 2 (0.05% Sulfur) diesel fuel oil by weight) and natural gas will be fired in the combustion turbine.**
2. Control Device or Method Code: **Fuel Quality - No Code**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **Westinghouse**	Model Number **W171G**:
4. Generator Nameplate Rating: **12.3** MW	
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **228** mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **The maximum heat input rate reflects operation at an ambient temperature of 80 degrees Fahrenheit based on the lower heating value of the fuels.**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:	
hours/day	days/week
weeks/year	**8,760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Rule 62-210.700(1),(4),(6) F.A.C.	
Rule 62-296.320(4),(b) F.A.C.	
Rule 62-297.310(2)(a) F.A.C.	
Rule 62-297.310(4)(a)2 (except a-c) F.A.C.	
Rule 62-297.310(7)(a)3,4a,8,9 F.A.C.	
Rule 62-297.310(8) F.A.C.	
40 CFR 72.6(b)(1)	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU03**

2. Emission Point Type Code:
[X] 1 [ ] 2 [ ] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

This emission point, EU03, represents the exhaust for Combustion Turbine No. 1.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:
[ ] D [ ] F [ ] H [ ] P
[ ] R [X] V [ ] W

6. Stack Height: **38** feet

7. Exit Diameter: **10** feet

8. Exit Temperature: **880** °F

9. Actual Volumetric Flow Rate: **395,080** acfm

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:**16** **769.421** East (km): **3339.825** North (km):	
14. Emission Point Comment (limit to 200 characters): **Emissions Units 03 and 04 were assumed to be collocated for long-term dispersion modelling.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment **1** of **3**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural Gas**	
2. Source Classification Code (SCC): **20100201**	
3. SCC Units: **mmSCF**	
4. Maximum Hourly Rate: **0.252**	5. Maximum Annual Rate: **2207.52**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.033 ***	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **904 (LHV)**	
10. Segment Comment (limit to 200 characters): *** Clean pipeline quality natural gas (10gr/100cf).**	

Segment Description and Rate: Segment 2 of 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Number 2 (0.4% Sulfur) Fuel Oil**
2. Source Classification Code (SCC): **20100101**
3. SCC Units: **Gallons**

4. Maximum Hourly Rate: **1,727**	5. Maximum Annual Rate: **12,076,911**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.4**	8. Maximum Percent Ash:

9. Million Btu per SCC Unit: **132,000 (LHV)**
10. Segment Comment (limit to 200 characters): **Maximum Annual Rate reflects current allowables. Following completion of compliance testing on Unit 8, the combustion turbine will be limited to firing Number 2 (0.05 % Sulfur) diesel fuel oil as reported in Segment 3.**

Segment Description and Rate: Segment 3 of 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Number 2 (0.05% Sulfur) Diesel Fuel Oil**	
2. Source Classification Code (SCC): **20100101**	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **1,727**	5. Maximum Annual Rate: **10,147,075**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.05**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **132,000 (LHV)**	
10. Segment Comment (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			**NS**
NOX			**EL**
PM			**NS**
PM10			**NS**
SO2			**EL**
VOC			**NS**
H106			**NS**
H107			**NS**
H133			**NS**
HAPS			**NS**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **11.1** lb/hour, **CAP** tons/year

4. Synthetically Limited?
   [**X**] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor:
   Reference:

7. Emissions Method Code:
   [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   Fuel Oil Sulfur Content: 0.05 % (wt)
   Fuel Oil Usage Rate: 1727 gal/hr
   MW SO_2: 64, MW S: 32

   lb/hr =(1727 gal/hr) x (6.75 lb/gal) x (0.05/100) x (64/32) x (95/100) = 11.1 lb/hr

   See Attachment EU03-01

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   Potential emission rate reflects firing Number 2 (0.05% Sulfur) diesel fuel oil with 95 percent conversion of the sulfur to SO_2 following the completion of the compliance testing on Unit 8. Combustion turbine No. 1 will be part of the requested facility-wide SO_2 and NO_x caps.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of Unit 8 Compliance Testing**
3. Requested Allowable Emissions and Units: **0.05 % sulfur (wt) and 80 TPY cap for the facility.**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Compliance will be based on unit specific emission factors (lb/MW), power generation logs, and vendor fuel data.**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Annual emissions will be based on actual Sulfur content of the natural gas and Number 2 (0.05% Sulfur) diesel fuel oil.**

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Pollutant Detail Information:

1. Pollutant Emitted: **NOx**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **159.1** lb/hour, **CAP** tons/year

4. Synthetically Limited?
   [**X**] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor:
   Reference:

7. Emissions Method Code:
   [ ] 0 [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   Maximum Firing Rate: 228 mmBtu/hr
   Emission Factor: 0.698 lb/mmBtu

   lb/hr =(228 mmBtu) x (0.698 lb-NOx/mmBtu) = 159.1 lb/hr

   See Attachment EU03-01

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   Future potential annual emissions will be part of the requested facility-wide cap on NO_x emissions.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon Completion of Unit 8 Compliance Testing**
3. Requested Allowable Emissions and Units: **467 TPY Cap for the facility**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Compliance will be based on unit specific emission factors (lb/MW), power generation logs, AP-42 emission factors, and vendor fuel data.**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Annual emissions will be based on the AP-42 emission factors [0.44 lb/mmBtu - natural gas and 0.698 lb/mmBtu - No.2 diesel fuel oil].**

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE20**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **< 20 %** Exceptional Conditions: **100 %** Maximum Period of Excess Opacity Allowed: **60** min/hour
4. Method of Compliance: **EPA Method 9 in any fiscal year in which the turbine operates greater than 400 hours.**
5. Visible Emissions Comment (limit to 200 characters): **In accordance with Rule 62-210.700(1),F.A.C., excess emissions resulting from startup, shutdown, or malfunction are permitted providing that the duration of excess emissions be minimized but in no case to exceed two hours in any 24 hour period unless authorized by the Department for longer duration.**

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[**X**] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[X] E	[ ] Unknown
SO2	[ ] C	[X] E	[ ] Unknown
NO2	[ ] C	[X] E	[ ] Unknown
4. Baseline Emissions:			
PM		**7.1** lb/hour	**0.07** tons/year
SO2		**66.4*** lb/hour	**0.5** tons/year
NO2			**0.7** tons/year
5. PSD Comment (limit to 200 characters): *** Baseline hourly emissions of SO_2 are based on firing Number 2 fuel oil with 0.3 percent sulfur and 95 percent conversion to SO_2. Firing rate is based on 182 mmBtu/hr at baseload adjusted to 188 mmBtu/hr for the local elevation.**			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: **EU03-02** [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [X] Previously submitted, Date: ***January 17, 1996*** [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: **EU03-03** [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:**EU03-04** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[X] Attached, Document ID: **EU03-05** [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements
[X] Attached, Document ID: **EU03-06** [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[X] Not Applicable

Attachment EU03-01

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Client: City of Tallahassee
OFS No: 1584.0005.0008

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Sheet No.: 1 of 3
Calc. No.: 940819DH01

Rv'd: 02/26/97 By: D. Graziani, P.E.

Emission Unit Description:
The emissions unit is a Westinghouse combustion turbine designated CT 1. The unit is currently operating under a nonfederally enforceable permit (AO65-242827) issued by the FDEP pending final issuance of a Title V Operating permit for the facility. The unit is capable of firing No. 2 fuel oil and natural gas. The unit has a maximum heat input rate of 228 mmBtu/hr at an ambient temperature of 80 F and is rated for a nominal production capacity of 12.3 MW. The unit operates as a peaking or emergency unit in a simple cycle mode. The existing permit limits visible emissions (VE) and the sulfur content of the fuel oil (0.4% by weight). Following completion of compliance testing of Unit 8, the combustion turbine will fire the No. 2 (0.05% Sulfur by Weight) diesel fuel. This calculation documents hourly and annual emissions of sulfur dioxide and nitrogen oxides following the modification.

References:
No. 1 - FDEP Permit No. AO65-242827, Spec. Condition Nos. 3, 4, and 6.
No. 2 -FDEP Rule 62-296.320.(4)(b)1
No. 3 -City of Tallahassee Title V application (6-14-96)
No. 3 -City of Tallahassee (typical distillate oil analysis)
No. 4 -FGT Maximum Sulfur content allowed by Tariff

Operating Parameters

Annual Hours Of Operation (hrs/yr)	AHOP := 8760	
Maximum Heat Input Rate on fuel oil (mmBtu/hr) - Ref. 3	MHR1 := 228	(lower heating value)
Maximum Heat Input Rate on Natural Gas (mmBtu/hr) - Ref. 3	MHR2 := 228	(lower heating value)
Fuel Oil Heat Content (Btu/Gal)	FOHC := 132000	
Fuel Oil Density (lb/gal) - Ref. 4	FOD := 6.75	
Fuel Oil Sulfur Content (%wt)	FOSC := 0.05	
Natural Gas Heat Content (Btu/CF)	NGHC := 904	(lower heating value)
Natural Gas Sulfur Content (grains/CF) - Ref 5	NGSC := 0.1	

Calculated Fuel Oil Usage Rate (lb/hr)

$$FOUR1 := MHR1 \cdot \frac{10^6}{FOHC} \cdot FOD \qquad FOUR1 = 1.17 \cdot 10^4$$

Calculated Fuel Oil Usage Rate (kgal/hr)

$$FOUR2 := \frac{FOUR1}{FOD \cdot 1000} \qquad FOUR2 = 1.727$$

Calculated Natural Gas Usage Rate (cf/hr)

$$FOUR3 := MHR2 \cdot \frac{10^6}{NGHC} \qquad FOUR3 = 2.52 \cdot 10^5$$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Rv'd: 02/26/97 By: D. Graziani, P.E.

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 2 of 3
Calc. No.: 940819DH01

Emission Estimates

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimate is based on allowable emission limitations as specified by Rule or permit condition. The emissions estimates provide hourly rates (lbs/hr) denoted with an "H" and annual emission rates (tons/year) denoted with an "A".

Emission Estimates - Segment No. 1 Natural Gas Firing

Sulfur Dioxide - Mass Balance

$$NGHSO2 := FOUR3 \cdot \frac{NGSC}{7000} \cdot \frac{64}{32} \cdot \frac{95}{100}$$ NGHSO2 =6.8 Assumes 95 Percent Conversion

$$NGASO2 := NGHSO2 \cdot \frac{AHOP}{2000}$$ NGASO2 =30

Emission Estimates - Segment No. 1 Natural Gas Firing

Nitrogen Oxides - AP-42 Section 3.1 (Emission Factor = 0.44 lb/mmBtu)

$$NGHNOX := MHR2 \cdot 0.44$$ NGHNOX =100.3

$$NGANOX := NGHNOX \cdot \frac{AHOP}{2000}$$ NGANOX =439.4

Emission Estimates - Segment No. 2 Fuel Oil Firing

Sulfur Dioxide - Mass Balance

$$FOHSO2 := FOUR1 \cdot \frac{FOSC}{100} \cdot \frac{64}{32} \cdot \frac{95}{100}$$ FOHSO2 =11.1 Assumes 95 Percent Conversion

$$FOASO2 := FOHSO2 \cdot \frac{AHOP}{2000}$$ FOASO2 =48.5

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Client: City of Tallahassee
OFS No: 1584.0005.0008

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Sheet No.: 3 of 3
Calc. No.: 940819DH01

Rv'd: 02/26/97 By: D. Graziani, P.E.

Emission Estimates - Segment No. 2 Fuel Oil Firing

Nitrogen Oxides - AP-42 Section 3.1 (Emission Factor = 0.698 lb/mmBtu)

$FOHNOX := MHR1 \cdot 0.698$ $\quad FOHNOX = 159.1$

$FOANOX := FOHNOX \cdot \frac{AHOP}{2000}$ $\quad FOANOX = 697.1$

Based on the emission estimates, the combustion turbine's hours of operation at full load while firing No. 2 diesel fuel oil will be limited by the oxides of nitrogen cap.

Attachment EU03-02

The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU03, Combustion Turbine No.1. Maximum values could be higher. The fuels represented by the analyses include clean pipeline quality natural gas and No. 2 (0.05% Sulfur) diesel fuel oil.

TYPICAL NATURAL GAS ANALYSIS[1]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	64.84 - 75.25
Hydrogen	20.85 - 23.53
Oxygen	0 - 1.58
Nitrogen	0.76 - 12.90
Sulfur	0 - 0.34
Ash	0.0
Proximate Analysis	99.65 - 100.0
Volatile Matter	0.0
Fixed Carbon	0.0 - 0.00138
Moisture	0.0
Ash	0.0 - 0.034
Sulfur[2]	

(1) Heating value (HHV): 964 - 1129 Btu/ft^3

(2) Total sulfur (maximum) 10 grains/100 SCF

Source: Babcock & Wilcox, 1972 and RE&C, 1997

TYPICAL NUMBER 2 (0.05% S) DIESEL FUEL OIL ANALYSIS[1]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	86.1 - 88.2
Hydrogen	11.8 - 13.9
Oxygen	0.0
Nitrogen	0.0 - 0.1
Sulfur[2]	0.0 - 0.05
Ash	0.0 - 0.05
Proximate Analysis	
Volatile Matter	99.05 - 99.5
Fixed Carbon	0.25 - 1.0
Moisture	0.0 - 0.1
Ash	0.0 - 0.05

(1) Higher heating value: 19,170 - 19,750 Btu/lb
(2) Total sulfur (maximum) 0.05%

Source: Babcock & Wilcox, 1972 and RE&C, 1997

Attachment EU03-03

The City of Tallahassee follows best operational practices in the startup and shutdown of the gas turbines at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the gas turbines. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.

Attachment EU03-04

The City of Tallahassee has requested facility-wide caps on SO_2 and NO_X emissions as part of the proposed project. In addition, combustion turbine No. 1 will fire No. 2 diesel fuel oil with a sulfur content of 0.05 percent sulfur by weight after the completion of compliance testing on Unit 8. Until that time, combustion turbine No. 1 will continue firing No. 2 (0.4% Sulfur) fuel oil as necessary.

Attachment EU03-05

Combustion Turbine No. 1 (EU03) is used as a peaking and emergency reserve unit. It is fueled by natural gas or No. 2 fuel oil. The alternative methods of operation (AMO) associated with the combustion turbine are related to the type of fuel being fired and rate of operation. The combustion turbine has a nominal production capacity of 12.3 MW. The current AMOs include the following:

Natural Gas Firing - Maximum Rate of 228 mmBtu/hr (LHV)

No. 2 Fuel Oil Firing - Maximum Rate of 228 mmBtu/hr (LHV)

The unit can vary load between 0 and 100 percent as required.

Attachment EU03-06

As part of its initial application for the Purdom Generating Station's Title V Operating Permit, the City of Tallahassee requested a specific revision to the existing operating permit No. A037-242825 (specific condition No. 2) pertaining to compliance testing. As part of the proposed project the City of Tallahassee requests that the revised Title V Operating Permit and the PSD Permit contain an additional specific condition revision limiting the maximum sulfur content of the fuel oil fired in Combustion Turbine No. 1 to 0.05 percent by weight.

The City of Tallahassee further requests that the condition become effective upon the completion of compliance testing on Unit 8.

EMISSION UNIT - 04

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[**X**] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Combustion Turbine No. 2**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **008**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [ ] Yes [**X**] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **The maximum allowable operating rate is 228 mmBtu/hr (lower heating value) at an ambient temperature of 80 degrees fahrenheit when firing fuel oil or natural gas. The maximum hours of operation are currently limited to 6,993. Following completion of compliance testing of Unit 8, combustion turbine No. 1 will operate under the alternative method of operation and annual emissions will be limited by the proposed facility wide caps on SO_2 and NO_x emissions.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **FUEL QUALITY** **The City of Tallahassee is currently authorized to fire Number 2 fuel oil with a maximum sulfur content of 0.4 percent by weight. Following completion of compliance testing on Unit 8, only Number 2 (0.05% Sulfur) diesel fuel oil by weight) and natural gas will be fired in the combustion turbine.**
2. Control Device or Method Code: **Fuel Quality - No Code**

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **Westinghouse**	Model Number **W171G**:
4. Generator Nameplate Rating: **12.3** MW	
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **228** mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **The maximum heat input rate reflects operation at an ambient temperature of 80 degrees fahreneit based on the lower heating value of the fuels.**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:	
hours/day	days/week
weeks/year	**8,760** hours/year

D. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Rule 62-210.700(1),(4),(6) F.A.C.	
Rule 62-296.320(4),(b) F.A.C.	
Rule 62-297.310(2)(a) F.A.C.	
Rule 62-297.310(4)(a)2 (except a-c) F.A.C.	
Rule 62-297.310(7)(a)3,4a,8,9 F.A.C.	
Rule 62-297.310(8) F.A.C.	
40 CFR 72.6(b)(1)	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU04**
2. Emission Point Type Code: [**X**] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **This emission point, EU04, represents the exhaust for Combustion Turbine No. 2.**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [**X**] V [ ] W
6. Stack Height: **38** feet
7. Exit Diameter: **10** feet
8. Exit Temperature: **880** °F
9. Actual Volumetric Flow Rate: **395,080** acfm

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:**16** **769.421** East (km): **3339.813** North (km):	
14. Emission Point Comment (limit to 200 characters): **Emissions Units 03 and 04 were assumed to be collocated for long-term modelling**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 3

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural Gas**	
2. Source Classification Code (SCC): **20100201**	
3. SCC Units: **mmSCF**	
4. Maximum Hourly Rate: **0.252**	5. Maximum Annual Rate: **2207.52**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.033 ***	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **904 (LHV)**	
10. Segment Comment (limit to 200 characters): *** Clean pipeline quality natural gas (10gr/100cf).**	

Segment Description and Rate: Segment **2** of **3**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Number 2 (0.4% Sulfur) Fuel Oil**	
2. Source Classification Code (SCC): **20100101**	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **1,727**	5. Maximum Annual Rate: **12,076,911**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.4**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **132,000 (LHV)**	
10. Segment Comment (limit to 200 characters): **Maximum Annual Rate reflects current allowables. Following completion of compliance testing on Unit 8, the combustion turbine will be limited to firing Number 2 (0.05% Sulfur) diesel fuel oil as reported in Segment 3.**	

Segment Description and Rate: Segment **3** of **3**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Number 2 (0.05% Sulfur) Diesel Fuel Oil**	
2. Source Classification Code (SCC): **20100101**	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **1,727**	5. Maximum Annual Rate: **10,147,075**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.05**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **132,000 (LHV)**	
10. Segment Comment (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			NS
NOX			EL
PM			NS
PM10			NS
SO2			EL
VOC			NS
H106			NS
H107			NS
H133			NS
HAPS			NS

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information:

1. Pollutant Emitted: **SO2**

2. Total Percent Efficiency of Control: **%**

3. Potential Emissions: **11.1** lb/hour, **CAP** tons/year

4. Synthetically Limited?
   [**X**] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor:
   Reference:

7. Emissions Method Code:
   [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   Fuel Oil Sulfur Content: 0.05 % (wt)
   Fuel Oil Usage Rate: 1727 gal/hr
   MW SO_2: 64, MW S: 32

   lb/hr =(1727 gal/hr) x (6.75 lb/gal) x (0.05/100) x (64/32) x (95/100) = 11.1 lb/hr

   See Attachment EU03-01

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   Potential emission rate reflects firing Number 2 (0.05% Sulfur) diesel fuel oil with 95 percent conversion of the sulfur to SO_2 following the completion of the compliance testing on Unit 8. Combustion turbine No. 2 will be part of the requested facility-wide SO_2 and NO_x caps.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of Unit 8 Compliance Testing**
3. Requested Allowable Emissions and Units: **0.05 % sulfur (wt) and 80 TPY cap for the facility.**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Compliance will be based on unit specific emission factors (lb/MW), power generation logs, and vendor fuel data.**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Annual emissions will be based on actual Sulfur content of the natural gas and Number 2 (0.05% Sulfur) diesel fuel oil.**

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

Pollutant Detail Information:

1. Pollutant Emitted: **NOx**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **159.1** lb/hour, **CAP** tons/year

4. Synthetically Limited?
   [**X**] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor:
   Reference:

7. Emissions Method Code:
   [ ] 0 [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   Maximum Firing Rate: 228 mmBtu/hr
   Emission Factor: 0.698 lb/mmBtu

   lb/hr =(228 mmBtu) x (0.698 lb-NOx/mmBtu) = 159.1 lb/hr

   See Attachment EU03-01

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   Future potential annual emissions will be part of the requested facility-wide cap on NO_x emissions.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon Completion of Unit 8 Compliance Testing**
3. Requested Allowable Emissions and Units: **467 TPY Cap for the facility**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Compliance will be based on unit specific emission factors (lb/MW), power generation logs, AP-42 emission factors, and vendor fuel data.**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Annual emissions will be based on the AP-42 emission factors [0.44 lb/mmBtu - natural gas and 0.698 lb/mmBtu - No.2 diesel fuel oil].**

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE20**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **< 20 %** Exceptional Conditions: **100 %** Maximum Period of Excess Opacity Allowed: **60** min/hour
4. Method of Compliance: **EPA Method 9 in any fiscal year in which the turbine operates greater than 400 hours.**
5. Visible Emissions Comment (limit to 200 characters): **In accordance with Rule 62-210.700(1),F.A.C., excess emissions resulting from startup, shutdown, or malfunction are permitted providing that the duration of excess emissions be minimized but in no case to exceed two hours in any 24 hour period unless authorized by the Department for longer duration.**

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour
4. Method of Compliance:
5. Visible Emissions Comment (limit to 200 characters):

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [**X**] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[X] E	[ ] Unknown
SO2	[ ] C	[X] E	[ ] Unknown
NO2	[ ] C	[X] E	[ ] Unknown
4. Baseline Emissions:			
PM		**7.1** lb/hour	**0.07** tons/year
SO2		**66.4*** lb/hour	**0.5** tons/year
NO2			**0.7** tons/year
5. PSD Comment (limit to 200 characters): *** Baseline hourly emissions of SO_2 are based on firing Number 2 fuel oil with 0.3 percent sulfur and 95 percent conversion to SO_2. Firing rate is based on 182 mmBtu/hr at baseload adjusted to 188 mmBtu/hr for the local elevation.**			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: **EU04-02** [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [X] Previously submitted, Date: ***January 17, 1996*** [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: **EU04-03** [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:**EU04-04** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[X] Attached, Document ID: **EU04-05** [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements
[X] Attached, Document ID: **EU04-06** [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: _____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: _____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: _____

[X] Not Applicable

Attachment EU04-01

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Client: City of Tallahassee
OFS No: 1584.0005.0008

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Sheet No.: 1 of 3
Calc. No.: 940819DH02

Rv'd: 02/26/97 By: D. Graziani, P.E.

Emission Unit Description:
The emissions unit is a Westinghouse combustion turbine designated CT 2. The unit is currently operating under a nonfederally enforceable permit (AO65-242827) issued by the FDEP pending final issuance of a Title V Operating permit for the facility. The unit is capable of firing No. 2 fuel oil and natural gas. The unit has a maximum heat input rate of 228 mmBtu/hr at an ambient temperature of 80 F and is rated for a nominal production capacity of 12.3 MW. The unit operates as a peaking or emergency unit in a simple cycle mode. The existing permit limits visible emissions (VE) and the sulfur content of the fuel oil (0.4% by weight). Following completion of compliance testing of Unit 8, the combustion turbine will fire the No. 2 (0.05% Sulfur by Weight) diesel fuel oil. This calculation documents hourly and annual emissions of sulfur dioxide and nitrogen oxides following the modification.

References:
No. 1 - FDEP Permit No. AO65-242827, Spec. Condition Nos. 3, 4, and 6.
No. 2 -FDEP Rule 62-296.320.(4)(b)1
No. 3 -City of Tallahassee Title V application (6-14-96)
No. 3 -City of Tallahassee (typical distillate oil analysis)
No. 4 -FGT Maximum Sulfur content allowed by Tariff

Operating Parameters

Annual Hours Of Operation (hrs/yr)	AHOP := 8760	
Maximum Heat Input Rate on fuel oil (mmBtu/hr) - Ref. 3	MHR1 := 228	(lower heating value)
Maximum Heat Input Rate on Natural Gas (mmBtu/hr) - Ref. 3	MHR2 := 228	(lower heating value)
Fuel Oil Heat Content (Btu/Gal)	FOHC := 132000	
Fuel Oil Density (lb/gal) - Ref. 4	FOD := 6.75	
Fuel Oil Sulfur Content (%wt)	FOSC := 0.05	
Natural Gas Heat Content (Btu/CF)	NGHC := 904	
Natural Gas Sulfur Content (grains/CF) - Ref 5	NGSC := 0.1	

Calculated Fuel Oil Usage Rate (lb/hr)

$$FOUR1 := MHR1 \cdot \frac{10^6}{FOHC} \cdot FOD \qquad FOUR1 = 1.17 \cdot 10^4$$

Calculated Fuel Oil Usage Rate (kgal/hr)

$$FOUR2 := \frac{FOUR1}{FOD \cdot 1000} \qquad FOUR2 = 1.727$$

Calculated Natural Gas Usage Rate (cf/hr)

$$FOUR3 := MHR2 \cdot \frac{10^6}{NGHC} \qquad FOUR3 = 2.52 \cdot 10^5$$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Rv'd: 02/26/97 By: D. Graziani, P.E.

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 2 of 3
Calc. No.: 940819DH02

Emission Estimates

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimate is based on allowable emission limitations as specified by Rule or permit condition. The emissions estimates provide hourly rates (lbs/hr) denoted with an "H" and annual emission rates (tons/year) denoted with an "A".

Emission Estimates - Segment No. 1 Natural Gas Firing

Sulfur Dioxide - Mass Balance

$$NGHSO2 := FOUR3 \cdot \frac{NGSC}{7000} \cdot \frac{64}{32} \cdot \frac{95}{100} \qquad NGHSO2 = 6.8$$

Assumes 95 Percent Conversion

$$NGASO2 := NGHSO2 \cdot \frac{AHOP}{2000} \qquad NGASO2 = 30$$

Emission Estimates - Segment No. 1 Natural Gas Firing

Nitrogen Oxides - AP-42 Section 3.1 (Emission Factor = 0.44 lb/mmBtu)

$$NGHNOX := MHR2 \cdot 0.44 \qquad NGHNOX = 100.3$$

$$NGANOX := NGHNOX \cdot \frac{AHOP}{2000} \qquad NGANOX = 439.4$$

Emission Estimates - Segment No. 2 Fuel Oil Firing

Sulfur Dioxide - Mass Balance

$$FOHSO2 := FOUR1 \cdot \frac{FOSC}{100} \cdot \frac{64}{32} \cdot \frac{95}{100} \qquad FOHSO2 = 11.1$$

Assumes 95 Percent Conversion

$$FOASO2 := FOHSO2 \cdot \frac{AHOP}{2000} \qquad FOASO2 = 48.5$$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Client: City of Tallahassee
OFS No: 1584.0005.0008

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Sheet No.: 3 of 3
Calc. No.: 940819DH02

Rv'd: 02/26/97 By: D. Graziani, P.E.

Emission Estimates - Segment No. 2 Fuel Oil Firing

Nitrogen Oxides - AP-42 Section 3.1 (Emission Factor = 0.698 lb/mmBtu)

$FOHNOX := MHR1 \cdot 0.698$ $\quad FOHNOX = 159.1$

$FOANOX := FOHNOX \cdot \frac{AHOP}{2000}$ $\quad FOANOX = 697.1$

Based on the emission estimates, the combustion turbine's hours of operation at full load while firing No. 2 diesel fuel oil will be limited by the oxides of nitrogen cap.

Attachment EU04-02

The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU03, Combustion Turbine No. 2. Maximum values could be higher. The fuels represented by the analyses include clean pipeline quality natural gas and No. 2 (0.05% Sulfur) diesel fuel oil.

TYPICAL NATURAL GAS ANALYSIS[1]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	64.84 - 75.25
Hydrogen	20.85 - 23.53
Oxygen	0 - 1.58
Nitrogen	0.76 - 12.90
Sulfur	0 - 0.34
Ash	0.0
Proximate Analysis	99.65 - 100.0
Volatile Matter	0.0
Fixed Carbon	0.0 - 0.00138
Moisture	0.0
Ash	0.0 - 0.034
Sulfur[2]	

(1) Heating value (HHV): 964 - 1129 Btu/ft^3

(2) Total sulfur (maximum) 10 grains/100 SCF

Source: Babcock & Wilcox, 1972 and RE&C, 1997

TYPICAL NUMBER 2 (0.05% S) DIESEL FUEL OIL ANALYSIS[1]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	86.1 - 88.2
Hydrogen	11.8 - 13.9
Oxygen	0.0
Nitrogen	0.0 - 0.1
Sulfur[2]	0.0 - 0.05
Ash	0.0 - 0.05
Proximate Analysis	
Volatile Matter	99.05 - 99.5
Fixed Carbon	0.25 - 1.0
Moisture	0.0 - 0.1
Ash	0.0 - 0.05

(1) Higher heating value: 19,170 - 19,750 Btu/lb
(2) Total sulfur (maximum) 0.05%

Source: Babcock & Wilcox, 1972 and RE&C, 1997

Attachment EU04-03

The City of Tallahassee follows best operational practices in the startup and shutdown of the gas turbines at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the gas turbines. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.

Attachment EU04-04

The City of Tallahassee has requested facility-wide caps on SO_2 and NO_X emissions as part of the proposed project. In addition, combustion turbine No. 2 will fire No. 2 diesel fuel oil with a sulfur content of 0.05 percent sulfur by weight after the completion of compliance testing on Unit 8. Until that time, combustion turbine No. 2 will continue firing No. 2 (0.4% Sulfur) fuel oil as necessary.

Attachment EU04-05

Combustion Turbine No. 2 (EU04) is used as a peaking and emergency reserve unit. It is fueled by natural gas or No. 2 fuel oil. The alternative methods of operation (AMO) associated with the combustion turbine are related to the type of fuel being fired and rate of operation. The combustion turbine has a nominal production capacity of 12.3 MW. The current AMOs include the following:

Natural Gas Firing - Maximum Rate of 228 mmBtu/hr (LHV)

No. 2 Fuel Oil Firing - Maximum Rate of 228 mmBtu/hr (LHV)

The unit can vary load between 0 and 100 percent as required.

Attachment EU04-06

As part of its initial application for the Purdom Generating Station's Title V Operating Permit, the City of Tallahassee requested a specific revision to the existing operating permit No. A037-242825 (specific condition No. 2) pertaining to compliance testing. As part of the proposed project the City of Tallahassee requests that the revised Title V Operating Permit and the PSD Permit contain an additional specific condition revision limiting the maximum sulfur content of the fuel oil fired in Combustion Turbine No. 2 to 0.05 percent by weight.

The City of Tallahassee further requests that the condition become effective upon the completion of compliance testing on Unit 8.

EMISSION UNIT - 11

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Boiler No. 7**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **007**		
3. Emissions Unit Status Code: **A**	4. Acid Rain Unit? [X] Yes [ ] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **The maximum allowable heat input is 621 mmBtu/hr (higher Heating Value {HHV}). The emissions unit will be subject to the facility wide cap on SO_2 and NO_x.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **Riley Stoker Corporation**	Model Number: **Type RX-33**
4. Generator Nameplate Rating: **44** MW	
5. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:	 °F seconds °F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **621** mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **Annual operation, following completion of compliance testing of the Unit 8 combustion turbine will be limited by the facility-wide emission caps on SO_2 and NO_x.**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:	
hours/day	days/week
weeks/year	**8,760** hours/year

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Rule 62-210.700(1),(2),(3),(4),(6) F.A.C.	**40 CFR 72.23**
Rule 62-214.300 F.A.C.	**40 CFR 72.30(a),(c),(d)**
Rule 62-214.350(2),(3),(5),(6) F.A.C.	**40 CFR 72.32**
Rule 62-214.430(1) F.A.C.	**40 CFR 72.40(a)(c)(d)**
Rule 62-296.405(1)(a),(b),(c)1,h, F.A.C.	**40 CFR 72.51**
Rule 62-296.405(1)(f)1,b,(e)1,2,3;(f)1a(i)	**40 CFR 72.90**
Rule 62-297.310(1) F.A.C.	**40 CFR 73.33(c)(d)(e)**
Rule 62-297.310(2)(b) F.A.C.	**40 CFR 73.35(c)(1)**
Rule 62-297.310(3) F.A.C.	**40 CFR 75.4**
Rule 62-297.310(4) F.A.C.	**40 CFR 75.5**
Rule 62-297.310(5) F.A.C.	**40CFR 75.10(a)(1),(a)(2),(a)(3)(ii)(b)-(d),(f),(g)**
Rule 62-297.310(6)(a),(c)-(g) F.A.C.	**40 CFR 75.11(d)(2)**
Rule 62-297.310(7)(a)2,3,4,5,9,(c) F.A.C.	**40 CFR 75.12(a),(b)**
Rule 62-297.310(8) F.A.C.	**40 CFR 75.13(a),(b)**
40 CFR 72.9(a),(b),(c)(1)-(3)(iii),(d)-(g)	**40 CFR 75.14(c)**
40 CFR 72.20(a)-(c)	**40 CFR 75.20(a)(5),(b),(c),(d),(g)**
40 CFR 72.21	**40 CFR 75.21(a),(c)**
40 CFR 72.22	**62-204.800(14),(15),(16),(18), F.A.C.***

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

40 CFR 75.22	**40 CFR 75.64**
40 CFR 75.24	**40 CFR 75, Appendix A**
40 CFR 75.30(a)(3),(d)(2)	**40 CFR 75, Appendix B**
40 CFR 75.31	**40 CFR 75, Appendix C**
40 CFR 75.32	**40 CFR 75, Appendix D**
40 CFR 75.33(a),(c)	**40 CFR 75, Appendix G 2,4**
40 CFR 75.53	**40 CFR 75, Appendix H**
40 CFR 75.54 [except (f)]	**40 CFR 77.3****
40 CFR 75.55(c)	**40 CFR 77.5(b)****
40 CFR 75.56	**40 CFR 77.6****
40 CFR 75.60	**40 CFR 72.80(b),(c),(d),(f),(g)**
40 CFR 75.61	**40 CFR 72.31**
40 CFR 75.62	**40 CFR 75.36**
40 CFR 75.63	**40 CFR 72.81**** **40 CFR 72.82****
40 CFR 75.35	**40 CFR 72.83**** **40 CFR 72.84****
*** State Only Requirement** **** Potential Future Requirement**	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU11**

2. Emission Point Type Code:
   [X] 1 [ ] 2 [ ] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

   This emission point, EU11, represents the exhaust for Boiler No. 7.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:
   [ ] D [ ] F [ ] H [ ] P
   [ ] R [X] V [ ] W

6. Stack Height: **180** feet

7. Exit Diameter: **9.0** feet

8. Exit Temperature: **300** °F

9. Actual Volumetric Flow Rate: **180,798** acfm

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:**16** East (km):**769.653** North (km):**3339.883**	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural Gas**	
2. Source Classification Code (SCC): **10100601**	
3. SCC Units: **mmSCF**	
4. Maximum Hourly Rate: **0.597**	5. Maximum Annual Rate:**see field 10**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.033**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **1040 (HHV)**	
10. Segment Comment (limit to 200 characters): **Maximum Annual Rate can vary based on facility-wide SO_2 and NO_x caps and actual emissions.**	

Segment Description and Rate: Segment **2** of **4**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Fuel Oil Nos. 2 through 6**	
2. Source Classification Code (SCC): **10100401**	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **4140**	5. Maximum Annual Rate: **see field 10**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **1.8***	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **150,000 (HHV)**	
10. Segment Comment (limit to 200 characters): **Maximum Annual Rates can vary based on facility-wide SO_2 and NO_x caps and actual emissions.** ***Maximum sulfur content will vary based on the fuel's higher heating value and density.**	

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **On-Spec Used Oil**	
2. Source Classification Code (SCC): **10100401**	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **4140**	5. Maximum Annual Rate: **See Field 10**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **1.2***	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **0.15**	
10. Segment Comment (limit to 200 characters): **Maximum Annual Rate scan vary based on facility-wide SO_2 and NO_x caps and actual emissions.** *** Maximum sulfur content will vary based on the fuel's higher heating value and density.**	

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Any mixture of Fuel Oil No.6 (Residual Oil) ,On-Spec Used Oil, No. 2 Fuel Oil, or Natural Gas**	
2. Source Classification Code (SCC):	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **4140 / 0.621**	5. Max.Annual Rate **see field 10**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **1.8*/0.033**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **150,000 / 1040 (HHV)**	
10. Segment Comment (limit to 200 characters): **Maximum Annual Rates can vary based on facility-wide caps and actual emissions.. The purpose of this segment is to indicate the potential to co-fire multiple fuels. In order to provide maximum hourly rates for the co-firing of a liquid and gaseous fuel, the maximum of each fuel is provided.** ***Maximum sulfur content will vary based on the fuel's higher heating value and density.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			**NS**
NOX			**EL**
PM			**EL**
PM10			**NS**
SO2			**EL**
HAPS			**NS**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: Pollutant 1 of 3

1. Pollutant Emitted: **SO2**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **1.2 x 10^3** lb/hour, **80 (Cap)** tons/year
4. Synthetically Limited? [**X**] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year
6. Emission Factor: **1.87 lb/mmBtu** Reference: **62-296.405(1)(c), F.A.C**
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **Allowable Emission Rate: 1.87 lb/mmBtu** **Max Heat Input Rate: 621 mmBtu/hr** **lb/hr =(1.87 lb/mmBtu) x (621 mmBtu/hr) = 1.2 x 10^3 lb/hr** **See Attachment EU11-01**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **The current maximum allowable emission rate is 1.87 lb/mmBtu and the maximum heat input rate is 621 mmBtu/hr. Current allowablel SO_2 emissions are 5086 TPY.. Annual emissions will be limited based on the requested annual cap following compliance testing of the Unit 8 combustion turbine .**

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **RULE**
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **1.87 lb/mmBtu**
4. Equivalent Allowable Emissions: **1.2 x 10^3** lb/hour **80 (Cap)** tons/year
5. Method of Compliance (limit to 60 characters): **40 CFR Part 75, Appendix D**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Emissions limitation entered in Field 3 reflects the maximum allowable emission rate per the SIP regulations (62-296.405(1)(c)1,h, F.A.C.) .**

B.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing on the Unit 8 combustion turbine.**
3. Requested Allowable Emissions and Units: **80 TPY**
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters): **40 CFR Part 75, Appendix D**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Annual emissions will be limited by facility wide cap after completion of compliance testing on Unit 8.**

Pollutant Detail Information: Pollutant 2 of 3

1. Pollutant Emitted: **PM**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **77.6** lb/hour, **Caps** tons/year

4. Synthetically Limited?
   [**X**] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor: **0.1 lb/mmBtu (0.3 lb/mmBtu during Excess Emissions)**
   Reference: **62-296.405(1)(b) and 62-210.700, F.A.C.**

7. Emissions Method Code:
   [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):
   Allowable Emission Rate: 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess Emissions
   Max Heat Input Rate = 621 mmBtu/hr
   Estimated 12.5% Excess Emissions

   lb/hr =(1-.125)x(621 mmBtu/hr x 0.1lb/mmBtu)+(.125)x(621 mmBtu/hr x 0.3 lb/mmBtu)
   lb/hr = 77.6

   See Attachment EU11-01

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   The maximum allowable emission rate is 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess emissions for load changes and boiler cleaning. The maximum heat input rate is 621 mmBtu/hr. Potential PM emissions are estimated utilizing these allowable rates, the annual emissions are limited indirectly by the requested facility-wide emission caps on SO_2 and NO_x.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **RULE**
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.1 lb/mmBtu and 0.3 lb/mmBtu during excess emissions when firing fuel oil**
4. Equivalent Allowable Emissions: **77.6** lb/hour **Caps** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Methods 1,2,3,5, or 17 in any fiscal year in which the fossil fuel system generator burns more than 400 hrs of fuel oil other than startup.**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Emissions limitations entered in Field 3 reflect the maximum allowable emission rates listed in the SIP regulations (62-296.405(1)(b) and 62-210.700(3), F.A.C.)**

B.

1. Basis for Allowable Emissions Code:
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

Pollutant Detail Information: Pollutant **3** of **3**

1. Pollutant Emitted: **NOx**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **204.93** lb/hour, **Caps** tons/year

4. Synthetically Limited?
   [**X**] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor:
   Reference:

7. Emissions Method Code:
   [ ] 0 [ ] 1 [ ] 2 [**X**] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   Maximum Firing Rate: 621 mmBtu/hr
   Emission Factor: 0.33 lb/mmBtu (CEMS Data)

   lb/hr =(621 mmBtu) x (0.33 lb-NOx/mmBtu) = 204.93 lb/hr

   See Attachment EU11-01

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   Potential emissions will be capped by the requested facility wide emission limitation, following the completion of compliance testing of the Unit 8 combustion turbine.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing of the Unit 8 combustion turbine**
3. Requested Allowable Emissions and Units: **467 TPY**
4. Equivalent Allowable Emissions: **204.93** lb/hour **Cap** tons/year
5. Method of Compliance (limit to 60 characters): **CEMS Data**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

B.

1. Basis for Allowable Emissions Code:		
2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units:		
4. Equivalent Allowable Emissions:	lb/hr	tons/year
5. Method of Compliance (limit to 60 characters):		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation **1** of **2**

1. Visible Emissions Subtype: **VE20**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: **40 %** Maximum Period of Excess Opacity Allowed: **2** min/hour
4. Method of Compliance: **Annual VE in accordance with EPA Method 9 using the maximum fuel oil to gas ratio used during the fiscal year.**
5. Visible Emissions Comment (limit to 200 characters):

Visible Emissions Limitation: Visible Emissions Limitation **2** of **2**

1. Visible Emissions Subtype: **VE60**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **60 %** Exceptional Conditions:**100 %** Maximum Period of Excess Opacity Allowed: ***See Field 5**
4. Method of Compliance
5. Visible Emissions Comment (limit to 200 characters): **In accordance with 62-210.700(1),(2), &(3), F.A.C., excess emissions are allowed at the following opacities for the associated time periods: 60% - 3 hrs/ 24 hrs for boiler cleaning and load change, 100% - 2 hrs / 24 hrs for malfunction, 100 % - unlimited for start-up and shutdown**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor **1** of **4**

1. Parameter Code:	2. Pollutant(s): **Gas Fuel Flow**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Superior** Model Number: **GHFA 8" 600RF** Serial Number: **94128**	
5. Installation Date: **12-31-94**	
6. Performance Specification Test Date: **12-31-94**	
7. Continuous Monitor Comment (limit to 200 characters): **Orifice Meter. Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.** **Note: The serial number reflects the primary unit.**	

Continuous Monitoring System: Continuous Monitor **2** of **4**

1. Parameter Code:	2. Pollutant(s): **Oil Fuel Flow Monitor (2)**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Micro Motion** Model Number: **CMF200M342NV & EX122A** Serial Number:**319657 & 9210S0005062**	
5. Installation Date: **12-21-94 & 12-16-94**	
6. Performance Specification Test Date: **12-21-94 & 12-16-94**	
7. Continuous Monitor Comment (limit to 200 characters): **Coriolis Type Meter. Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.** **Note: The serial number reflects the primary unit.**	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor **3** of **4**

1. Parameter Code: **EM**	2. Pollutant(s): **NOx**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Teco** Model Number: **42D**	Serial Number: **42D45683274**
5. Installation Date: **2-28-95**	
6. Performance Specification Test Date: **5-24-95 (certification date)**	
7. Continuous Monitor Comment (limit to 200 characters): **Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.** **Note: The serial number reflects the primary unit.**	

Continuous Monitoring System: Continuous Monitor **4** of **4**

1. Parameter Code: **CO2**	2. Pollutant(s): **Carbon Dioxide**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: **Teco** Model Number: **41H**	Serial Number:**41H48548281**
5. Installation Date: **2-28-96**	
6. Performance Specification Test Date: **2-28-96**	
7. Continuous Monitor Comment (limit to 200 characters): **Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.** **Note: The serial number reflects the primary unit.**	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[**X**] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[ ] C	[X] E	[ ] Unknown
SO2	[ ] C	[X] E	[ ] Unknown
NO2	[ ] C	[X] E	[ ] Unknown
4. Baseline Emissions:			
PM		**77.63** lb/hour	**155** tons/year
SO2		**1707.75** lb/hour	**3390** tons/year
NO2			**41.6** tons/year
5. PSD Comment (limit to 200 characters):			

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: **EU11-02** [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [X] Previously submitted, Date: **September 19, 1996** [ ] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: **EU11-03** [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[X] Attached, Document ID: **EU11-04** [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [ ] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID: _____ [X] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: **EU11-05**

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Not Applicable

Attachment EU11-01

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Client: City of Tallahassee
OFS No: 1584.0005.0008

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Sheet No.: 1 of 3
Calc. No.: 940819DH09

Rv'd: 02/26/97 By: D. Graziani, P.E.

Emission Unit Description:
The emissions unit is a Riley steam generator designated Boiler No. 7. The unit is currently operating under a nonfederally enforceable operating permit issued by the FDEP and has been assigned the tracking number 10TLH65000107. The unit pre-dates the PSD regulations. The unit is capable of firing residual fuel oil, on-spec used oil, natural gas, any of the lighter fuel oils (i.e., fuel oil Nos. 5, 4, ..) or any combination thereof. The unit is rated for a maximum heat input rate of 621 mmBtu/hr when firing fuel oil or natural gas and a nominal 44 MW and 500,000 lbs/hr of steam. The existing operating permit allows continuous operation with restrictions on VE (20% & excess emissions), PM (0.1 lb.mmBtu - normal operation & 0.3 lb/mmBtu - soot blowing), and SO2 (1.87 lb/mmBtu & sulfur content of 1.8% by wt). The federally enforceable emission limitations established through the SIP are the same as those in the permit. Following the successful operation of Unit 8, annual emissions from Unit 7 will be limited by the requested facility wide caps on sulfur dioxide and nitrogen oxides.

References:
No. 1 - FDEP Permit No. AO37-242825, Spec. Condition Nos. 3, 4 & 6
No. 2 - FDEP Rules 62-210.700(1)(2) & (3), 62-296.405(1)(a),(b),(c),1,.h
No. 3 - FGT Maximum Sulfur Content allowed by Tariff
No. 4 - CEMS Data averages

Operating Parameters

Annual Hours Of Operation (hrs/yr) AHOP := 8760

Maximum Heat Input Rate (mmBtu/hr) MHR1 := 621 (higher heating value) MHR2 := MHR1

Fuel Oil Heat Content (Btu/Gal) FOHC := 150000

Fuel Oil Sulfur Content (% wt) FOSC := 1.8

Natural Gas Heat Content (Btu/CF) NGHC := 1040

Natural Gasl Sulfur Content (gr/CF) NGSC := 0.1

Calculated Fuel Oil Usage Rate (kgal/hr)

$$FOUR := MHR1 \cdot \frac{10^6}{FOHC \cdot 1000} \qquad FOUR = 4$$

Calculated Natural Gas Usage Rate (mmCF/hr)

$$NGUR := MHR1 \cdot \frac{10^6}{NGHC \cdot 10^6} \qquad NGUR = 1$$

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Rv'd: 02/26/97 By: D. Graziani, P.E.

Client: City of Tallahassee
OFS No: 1584.0005.0008

Sheet No.: 2 of 3
Calc. No.: 940819DH09

Emission Estimates

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimates are based on allowable emission limitations as specified by Rule or permit condition. The emission estimates provide hourly rates (lbs/hr) denoted with a "H" and annual emission rates (tons/year) denoted with an "A".

Emission Estimates - Segment No. 1 (Natural Gas Firing)

Sulfur Dioxide (SO2) - Potential Emissions (Reference No. 3)

$$NGHSO2 := NGUR \cdot 10^6 \cdot \frac{NGSC}{7000} \cdot \frac{64}{32} \qquad NGHSO2 = 17.1$$

$$NGASO2 := NGHSO2 \cdot \frac{AHOP}{2000} \qquad NGASO2 = 74.72$$

Nitrogen Oxides (NOx) - Potential Emissions (Reference No. 4)

$$NGHNOX := MHR2 \cdot 0.23 \qquad NGHNOX = 142.8$$

$$NGANOX := NGHNOX \cdot \frac{AHOP}{2000} \qquad NGANOX = 625.6$$

Emission Estimates - Segment No. 2 (Fuel Oil Firing)

Particulate Matter Emissions (Reference Nos. 1 & 2) based on 12.5% annual excess emissions.

$ER1PM := 0.1$ $ER2PM := 0.3$

$H1PM := MHR1 \cdot ER1PM$ $H1PM = 62$ Allowable Emissions

$H2PM := MHR1 \cdot ER2PM$ $H2PM = 186$ Excess Emissions

$HPM := (1 - .125) \cdot H1PM + .125 \cdot H2PM$ Annual Average

FOSTER WHEELER ENVIRONMENTAL CORPORATION
CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel
Date: 08/19/94

Client: City of Tallahassee
OFS No: 1584.0005.0008

Ck'd By: D. Graziani, P.E.
Date: 08/26/94

Sheet No.: 3 of 3
Calc. No.: 940819DH09

Rv'd: 02/26/97 By: D. Graziani, P.E.

Emission Estimates - Segment No. 2 (Fuel Oil Firing)

Sulfur Dioxide (SO2) - Federally Enforceable Limits (Reference No. 2)

ER1SO2 := 1.87

FOHSO2 := MHR1·ER1SO2 FOHSO2 =1161.27

$$FOASO2 := FOHSO2 \cdot \frac{AHOP}{2000} \qquad FOASO2 = 5086.36$$

Nitrogen Oxides (NOX) - Potential Emissions (Reference No. 4)

ER1NOX := 0.33

FOHNOX := MHR1·ER1NOX FOHNOX =204.9

$$FOANOX := FOHNOX \cdot \frac{AHOP}{2000} \qquad FOANOX = 897.6$$

In both cases, Unit 7 is limited by NOx emissions and is also limited by SO2 emissions in the case of fuel oil firing. The proposed emission caps of 80 tons and 467 tons of SO2 and NOx mean that Unit 7 can not continuously operate at full load. These caps also indirectly limit maximum annual emissions of particulate matter.

Attachment EU11-02

The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU11, Boiler No. 7. Maximum values may be higher. The fuels represented in the analyses are natural gas, fuel oil, and on-spec used oil.

TYPICAL NATURAL GAS ANALYSIS[1]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	64.84 - 75.25
Hydrogen	20.85 - 23.53
Oxygen	0 - 1.58
Nitrogen	0.76 - 12.90
Sulfur	0 - 0.34
Ash	0.0
Proximate Analysis	99.65 - 100.0
Volatile Matter	0.0
Fixed Carbon	0.0 - 0.00138
Moisture	0.0
Ash	0.0 - 0.034
Sulfur[2]	

(1) Heating value (HHV): 964 - 1129 Btu/ft^3

(2) Total sulfur (maximum) 10 grains/100 SCF

Source: Babcock & Wilcox, 1972 and RE&C, 1997

TYPICAL NUMBER 6 FUEL OIL ANALYSIS[1], [2]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	86.5 - 90.2
Hydrogen	9.5 - 12.0
Oxygen	-
Nitrogen	-
Sulfur[3]	0.7 - 3.5
Ash	0.01 - 0.5

(1) Higher heating value: 17,410 - 18,990 Btu/lb
(2) Density: 8.51 - 7.68 lb/gal
(3) Total sulfur (maximum) 1.8%

Source: Babcock & Wilcox, 1972

Attachment EU11-03

The City follows best operational practices in the start-up and shut-down of the boilers at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the boilers. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emission.

Attachment EU11-04

Boiler No. 7 (EU11) located at the Purdom Generating Station has a maximum heat input capacity of 621 mmBtu/hour and produces 44 MW electricity. The alternative methods of operation (AMO) associated with the steam generator are related to the fuel type being fired and the operating rate. The current AMOs include the following:

Natural Gas - Up to Maximum Rate of 621 mmBtu/hour

Fuel Oil Firing - Up to Maximum Rate of 621 mmBtu/hour

Fuel Oil No. 6 (residual fuel oil)
Fuel Oil Nos. 2 through 6
On-Spec Used Oil
Co-firing any combination of Fuel Oil No. 6, Fuel Oil Nos. 2 through 6, On-Spec Used Oil, or Natural Gas up to 621 mmBtu/hr.

Attachment EU11-05

A new acid rain permit application is included as Attachment EU13-09. The new application includes Unit 7 (Existing Phase II Unit) and Unit 8 combustion turbine (New Unit).

EMISSION UNIT - 12

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Auxilary Boiler**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **010**		
3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [ ] Yes [X] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters): **Operation of Emissions Unit 12 (EU12) is restricted by a federally enforceable construction permit which limits operation to 2,000 hours per year, the firing of natural gas and only to periods when steam geneating units 5,6, and 7 are not operating. Following completion of compliance testing on Unit 8, the auxiliary boiler will be limited to operation only during periods when Units 7 and 8 are not operating.**		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

B.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date: **Pending**	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **Kewanee** Model Number: **H3S-400-G**	
4. Generator Nameplate Rating: MW	
5. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **16.74** mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **The maximum heat input rate reported was based on the manufacturer specifications and a heating value of 1,000 Btu/ft^3 of natural gas. The actual heat input may vary from the manufacturer specifications based upon the heat content of the natural gas.**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	2,000 hours/year

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Rule 62-204.800(7)(b)4,(d) (as applicable) F.A.C.	
Rule 62-210.700(1),(4),(6) F.A.C.	
Rule 62-296.406, F.A.C.	
Rule 62-297.310(2)(b) F.A.C.	
Rule 62-297.310(4)(a)2 (except a-c) F.A.C.	
Rule 62-297.310(7)(a)1,4a*9 F.A.C.	
Rule 62-297.310(8)(a), (b) F.A.C.	
40 CFR 60.7(a)(1),(2),(3),(b)	
40 CFR 60.12	
40 CFR 60.48c(a),(g),(i)	
The City of Tallahassee has requested that FDEP authorize visible emissions compliance testing once every 5 years, pursuant to Rule 62-297.310(7)(a)4, rather than annual compliance testing required pursuant to Rule 62-297.310(7)(a)4a.	

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU12**
2. Emission Point Type Code: [X] 1 [ ] 2 [ ] 3 [ ] 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): **This emission point, EU12, represents the exhaust for the Auxilary Boiler.**
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: [ ] D [ ] F [ ] H [ ] P [ ] R [ ] V [X] W
6. Stack Height: **30** feet
7. Exit Diameter: **2** feet
8. Exit Temperature: **420** °F
9. Actual Volumetric Flow Rate: **4,000** acfm

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **16** East (km): **769.767** North (km): **3,339.784**	
14. Emission Point Comment (limit to 200 characters): **The exhaust gas exit temperature and actual volumetric flow rate were estimated by a manufacturer service representative. The actual exit temperature and actual flow rate may vary.**	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural Gas**	
2. Source Classification Code (SCC): **1-02-006-02**	
3. SCC Units: **mmSCF**	
4. Maximum Hourly Rate: **0.017**	5. Maximum Annual Rate: **33.5**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.033**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **1,000 (HHV)**	
10. Segment Comment (limit to 200 characters): **Maximum Annual Rate is based on 2000 hours per year operation at manufacturer specification. Actual Maximum Hourly Rate and Maximum Annual Rate may vary slightly from manufactures specifications.**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
SO_2			EL
NO_x			EL

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: Pollutant 1 of 2

1. Pollutant Emitted: SO_2	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	0.47 lb/hour, Cap tons/year
4. Synthetically Limited? [X] Yes [ ] No	
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3	_____ to _____ tons/year
6. Emission Factor: Reference:	
7. Emissions Method Code: [ ] 0 [ ] 1 [X] 2 [ ] 3 [ ] 4 [ ] 5	
8. Calculation of Emissions (limit to 600 characters): **lb/hr = (16.47 x 10^6 Btu/hr) x (CF/1000 Btu) x (10 gr-S/100 CF) x (lb-S/7000 gr) x (64 lb-SO_2/lb-S) = 0.47 lb/hr**	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emissions unit will be subject to the proposed facility-wide cap following completion of compliance testing of the Unit 8 combustion turbine.**	

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing on the Unit 8 combustion turbine.**
3. Requested Allowable Emissions and Units: **facility-wide cap (80 TPY)***
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):. **FGT data on sulfur content and fuel flow meter**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): *** Auxiliary boiler is limited to firing natural gas and 2000 hours of operation per year by its construction permit. Its emissions are included in within the cap.**

B.

1. Basis for Allowable Emissions Code:
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: Pollutant 2 of 2

1. Pollutant Emitted: **NO_x**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **2.3** lb/hour, **Cap** tons/year
4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year
6. Emission Factor: **140 lb/mmCF** Reference: **AP-42**
7. Emissions Method Code: [ ] 0 [ ] 1 [X] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **lb/hr = (16.47 x 10^6 Btu/hr) x (CF/1000 Btu) x (mmCF/10^6 CF) x (140 lb/mmCF)** **= 2.3 lb/hr**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Emissions unit will be subject to the proposed facility-wide cap following completion of compliance testing of the Unit 8 combustion turbine.**

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing on the Unit 8 combustion turbine.**
3. Requested Allowable Emissions and Units:**Facility-wide cap 467 TPY**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):. **AP-42 emission factor (140 lb-NO_x/mmCF) and fuel flow meter.**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): *** Auxiliary boiler is limited to firing natural gas and 2000 hours of operation per year by its construction permit. Its emissions are included in within the cap.**

B.

1. Basis for Allowable Emissions Code:
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: **VE20**
2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: **40 %** Maximum Period of Excess Opacity Allowed: **2 min/hour**
4. Method of Compliance: **VE in accordance with EPA Method 9** **Requested once prior to renewal**
5. Visible Emissions Comment (limit to 200 characters):

Visible Emissions Limitation: Visible Emissions Limitation of

1. Visible Emissions Subtype: **VE99**
2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: **100%** Maximum Period of Excess Opacity Allowed: **2 hours/24-hour period**
4. Method of Compliance
5. Visible Emissions Comment (limit to 200 characters): **In accordance with 62-210.700(1),F.A.C., excess emissions resulting from startup, shutdown or malfunction are permitted providing that the duration of excess emissions be minimized but in no case to exceed two hours in any 24 hour period unless authorized by the Department for longer duration.**

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date: 1	
7. Continuous Monitor Comment (limit to 200 characters):	

Continuous Monitoring System: Continuous Monitor of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[X] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[X] C	[ ] E	[ ] Unknown
SO2	[X] C	[ ] E	[ ] Unknown
NO2	[X] C	[ ] E	[ ] Unknown

4. Baseline Emissions:		
PM	0 lb/hour	0 tons/year
SO2	0 lb/hour	0 tons/year
NO2		0 tons/year

5. PSD Comment (limit to 200 characters):

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [ ] Attached, Document ID: _____ [ ] Not Applicable [X] Waiver Requested
2. Fuel Analysis or Specification [ ] Attached, Document ID: _____ [ ] Not Applicable [X] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: [X] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [X] Attached, Document ID: EU12-01 [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID:_____ [X] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [X] Not Applicable

12. Identification of Additional Applicable Requirements
[X] Attached, Document ID:EU12-02 [ ] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[X] Not Applicable

Attachment EU12-01

The City of Tallahassee follows best operational practices in the startup and shutdown of the boilers at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the boilers. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.

Attachment EU12-02

Following completion of compliance testing on the Unit 8 combustion turbine the auxiliary boiler's SO_2 and NO_x emisions will be subject to the facility-wide caps. This is an additional requirement outside the scope of the regulations. The City requests that a condition be included within the PSD permit, which will become effective upon the completion of compliance testing on Unit 8, which includes SO_2 and NO_x emissions within the facility-wide caps.

EMISSION UNIT - 13

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

A. TYPE OF EMISSIONS UNIT
(Regulated and Unregulated Emissions Units)

Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

[**X**] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[**X**] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

B. GENERAL EMISSIONS UNIT INFORMATION
(Regulated and Unregulated Emissions Units)

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Unit 8 - Combined Cycle Combustion Turbine**		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [X] Unknown		
3. Emissions Unit Status Code: **C**	4. Acid Rain Unit? [X] Yes [ ] No	5. Emissions Unit Major Group SIC Code: **49**
6. Emissions Unit Comment (limit to 500 characters):		

Emissions Unit Control Equipment

A.

1. Description (limit to 200 characters): **Oxides of Nitrogen** **Dry Low NOx Combustors - Natural Gas Firing**
2. Control Device or Method Code: **025**

B.

1. Description (limit to 200 characters):
Oxides of Nitrogen **Water Injection - Fuel Oil Firing**
2. Control Device or Method Code: **028**

C.

1. Description (limit to 200 characters):
2. Control Device or Method Code:

C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Details

1. Initial Startup Date:	
2. Long-term Reserve Shutdown Date:	
3. Package Unit: Manufacturer: **General Electric**	Model Number: **MS7001FA**
4. Generator Nameplate Rating: **Nominal 160** MW	
5. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate: **1914.1** mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters): **The total generating capacity of the unit has been set at a nominal 250 MW (GT-160 MW and ST - 90 MW). Attachment EU13-01 contains the General Electric data sheets for the proposed unit. These data sheets provide the heat input rates for various loads, ambient temperatures and fuels. The maximum heat input occurs while firing distillate fuel oil at 100 percent load. At 20 °F this corresponds to 1914.1 mmBtu/hr for Number 2 (0.05% Sulfur) diesel fuel oil and 1682.2 mmBtu/hr for natural gas. Upon completion of compliance testing, the City will provide temperature and heat input curves.**		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule:	
hours/day	days/week
weeks/year	**8,760** hours/year

B. FACILITY REGULATIONS

Rule Applicability Analysis (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

List of Applicable Regulations (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Rule 62-204.800(7)(b)38,(d), F.A.C.*	**40 CFR 60.13 (a),(b),(d)(1),(e),(f),(h)**
Rule 62-204.800(14);(15);(16);(18), F.A.C.	**40 CFR 60.332 (a)(1),(3); (b);(f);(i)**
Rule 62-210.300(1), F.A.C.	**40 CFR 60.333**
Rule 62-210.550, F.A.C.	**40 CFR 60.334**
Rule 62-210.650, F.A.C.	**40 CFR 60.335**
Rule 62-210.700(1),(4),(6) , F.A.C.	**40 CFR 72.6(a)(3)(i)**
Rule 62-214.300, F.A.C.	**40 CFR 72.9**
Rule 62-214.320(1)(b),(2) F.A.C	**40 CFR 72.20 (a)-(c)**
Rule 62-214.330(1), F.A.C.	**40 CFR 72.21**
Rule 62-214.350(2),(3),(5),(6), F.A.C.	**40 CFR 72.22**
Rule 62-296.320(4)(b), F.A.C.	**40 CFR 72.23**
Rule 62-297.310(1),(2),(3),(4),(5), F.A.C.	**40 CFR 72.24**
Rule 62-297.310(6)(a),(c)-(g) F.A.C.	**40 CFR 72.30(a),(b)(2)(ii),(c),(d)**
Rule 62-297.310(7)(a)1,3,4,5,8,9,(c) F.A.C.	**40 CFR 72.31**
Rule 62-297.310(8) F.A.C.	**40 CFR 72.32**
40 CFR 60.7(a)(1),(2),(3),(4),(5)	**40 CFR 72.40(a)(1)**
40 CFR 60.7(b),(c),(d),(f)	**40 CFR 72.51**
40 CFR 60.8(a),(b),(c),(d),(e),(f)	**40 CFR 72.80(b),(c),(d),(f),(g)**
40 CFR 60.11(a),(b),(c);(e)(1),(2)	**40 CFR 72.81****
40 CFR 60.12	**40 CFR 72.82****

List of Applicable Regulations (Required for Category I applications and Category III applications involving TitleV sources. See Instructions.)

40 CFR 72.83**	**40 CFR 75.33(a),(c)**
40 CFR 72.84**	**40 CFR 75.35**
40 CFR 72.90	**40 CFR 75.36**
40 CFR Part 72, Appendices A and B	**40 CFR 75.50(a),(b),(d),(e)**
40 CFR 75.4(b)(2)	**40 CFR 75.53**
40 CFR 75.5	**40 CFR 75.54 [except (c) & (f)]**
40 CFR 75.10(a)(1),(2),(3)	**40 CFR 75.55(c)**
40 CFR 75.10(b),(c),(d),(f),(g)	**40 CFR 75.56**
40 CFR 75.11(d)(2)	**40 CFR 75.60**
40 CFR 75.12 (a),(b)	**40 CFR 75.61**
40 CFR 75.13	**40 CFR 75.62**
40 CFR 75.14(c)	**40 CFR 75.63**
40 CFR 75.20(a)	**40 CFR 75.64**
40 CFR 75.20(b),(c),(d),(g)	**40 CFR 75, Appendix A**
40 CFR 75.22	**40 CFR 75, Appendix B**
40 CFR 75.24	**40 CFR 75, Appendix C**
40 CFR 75.30	**40 CFR 75, Appendix D**
40 CFR 75.31	**40 CFR 75, Appendix G, 2,4**
40 CFR 75.32	**40 CFR 75, Appendix H**

List of Applicable Regulations (Required for Category I applications and Category III applications involving TitleV sources. See Instructions.)

40 CFR 77.3**	
40 CFR 77.5(b)**	
40 CFR 77.6**	
40 CFR 73.33(c),(d),(e)	
40 CFR 73.35	
40 CFR 75.52	
40 CFR 72.21(a),(c)	

*** - State Only Requirements**
**** - Potential Future Regulations**

E. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: **EU13**

2. Emission Point Type Code:
   [X] 1 [ ] 2 [ ] 3 [ ] 4

3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

   This emission point, EU13, represents the exhaust for the Unit 8 combustion turbine.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

5. Discharge Type Code:
   [ ] D [ ] F [ ] H [ ] P
   [ ] R [X] V [ ] W

6. Stack Height: **200 Above Ground Level** feet

7. Exit Diameter: **16.5** feet

8. Exit Temperature: **171 - 203** °F

9. Actual Volumetric Flow Rate: **622,306 - 1,119,935** acfm

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: **16** East (km): **769.611** North (km): **3339.767**	
14. Emission Point Comment (limit to 200 characters):	

F. SEGMENT (PROCESS/FUEL) INFORMATION
(Regulated and Unregulated Emissions Units)

Segment Description and Rate: Segment **1** of **2**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Natural Gas**	
2. Source Classification Code (SCC): **10100601**	
3. SCC Units: **mmSCF**	
4. Maximum Hourly Rate: **1.9**	5. Maximum Annual Rate: **see field 10**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.033**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **904 (LHV)**	
10. Segment Comment (limit to 200 characters): **Maximum hourly usage rate is based on full load operation at an ambient temperature of 20 °F. Actual hourly rate will vary depending on ambient conditions.** **Actual Annual Rate will vary based on the requested facility-wide caps**	

Segment Description and Rate: Segment **2** of **2**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **No. 2 (0.05% Sulfur) Diesel Fuel Oil**	
2. Source Classification Code (SCC): **10100401**	
3. SCC Units: **Gallons**	
4. Maximum Hourly Rate: **14,500**	5. Maximum Annual Rate: **see field 10**
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: **0.05**	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: **132,000 (LHV)**	
10. Segment Comment (limit to 200 characters): **Maximum hourly usage rate is based on full load operation at an ambient temperature of 20 °F. Actual hourly rate will vary depending on ambient conditions.** **Actual Annual Rate will vary based on the requested facility-wide caps**	

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			**NS**
PM			**NS**
PM10			**NS**
NOx			**EL**
SO2			**EL**
VOC			**NS**
H106			**NS**
H133			**NS**
HAPS			**NS**

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Pollutant Detail Information: Pollutant **1** of **6**

1. Pollutant Emitted: **CO**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **192** lb/hour, **(See Field 9)** tons/year
4. Synthetically Limited? [**X**] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year
6. Emission Factor: Reference:
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **lb/hr - See Appendix A of the PSD Application.** **See Field 9**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Actual hourly emissions will vary based on load and ambient temperature. Actual annual emissions will be limited indirectly by the facility-wide emission caps on SO_2 and NO_x.**

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **Rule - BACT (62-212.400 (5) (c)), F.A.C.**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing**
3. Requested Allowable Emissions and Units: **See Field 6**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **BACT for this unit is "good combustion practices," no short-term emission limits are proposed.**

B.

1. Basis for Allowable Emissions Code:
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

Pollutant Detail Information: Pollutant **2** of **6**

1. Pollutant Emitted: **PM**	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions: **17** lb/hour,	**(*See Field 9)** tons/year
4. Synthetically Limited? [**X**] Yes [ ] No	
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3	_____ to _____ tons/year
6. Emission Factor: Reference:	
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5	
8. Calculation of Emissions (limit to 600 characters): **lb/hr - See Appendix A of the PSD Application.**	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Actual annual emissions will be limited indirectly by the facility-wide emission caps on SO_2 and NO_x.**	

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: : **RULE - BACT (62-212.400(5)(c), F.A.C.)**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing**
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **BACT for this unit is combustion turbine inlet air filtration, good combustion practices and fuel quality. No emission limits are proposed.**

B.

1. Basis for Allowable Emissions Code: :
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

Pollutant Detail Information: Pollutant **3** of **6**

1. Pollutant Emitted: **PM10**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **17** lb/hour, **(*See Field 9)** tons/year
4. Synthetically Limited? [**X**] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year
6. Emission Factor: Reference:
7. Emissions Method Code: [**X**] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **lb/hr - See Appendix A of the PSD Application.**
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): **Actual annual emissions will be limited indirectly by facility-wide emission caps on SO_2 and NO_x.**

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: : **RULE - BACT (62-212.400(5)(c).F.A.C.)**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing**
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **BACT for this unit is combustion turbine inlet air filtration, good combustion practices, and fuel quality. No emission limits are proposed.**

B.

1. Basis for Allowable Emissions Code: :
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

Pollutant Detail Information: Pollutant 3 of 6

1. Pollutant Emitted: **NOx**
2. Total Percent Efficiency of Control: %
3. Potential Emissions: **347** lb/hour, **Cap** tons/year
4. Synthetically Limited? [X] Yes [ ] No
5. Range of Estimated Fugitive/Other Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year
6. Emission Factor: Reference:
7. Emissions Method Code: [] 0 [ ] 1 [X] 2 [ ] 3 [ ] 4 [ ] 5
8. Calculation of Emissions (limit to 600 characters): **lb/hr - See Appendix A of the PSD Application.** **TPY=467 TPY - Facility Wide Cap**
9. Pollutant Potential Estimated Emissions Comment (limit to 200 characters): **Potential hourly emissions based on 100 percent load at an ambient temperature of 20 °F while firing fuel oil. These short term potentials do not include start-up, shut-down or malfunctions which are included within the requested annual cap. Information in Appendix A of the PSD application regarding short term NOx emission rates reflects operations at steady-state and does not include allowances for fuels containing fuel bound nitrogen levels above 0.015 percent. Predicted short-term steady-state emission levels follow 2-4 hour start-up periods.**

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **Rule**
2. Future Effective Date of Allowable Emissions: **Upon Completion of Compliance Testing**
3. Requested Allowable Emissions and Units: **NSPS Emission Limits**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **EPA Reference Method 20**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **This unit is subject to 40 CFR Part 60, Subpart GG. Maximum short-term rates, excluding start-up, shutdown and malfunction must meet the limits of 40 CFR 60.332(a)(1), and (3). Actual annual emissions are limited by the proposed facility-wide caps on NO_x and SO_2.**

B.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing**
3. Requested Allowable Emissions and Units: **467 TPY**
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters): **CEMS Data**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

Pollutant Detail Information: Pollutant 3 of 6

1. Pollutant Emitted: **SO2**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **98** lb/hour, **Cap** tons/year

4. Synthetically Limited?
   [X] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:
   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year

6. Emission Factor:
   Reference:

7. Emissions Method Code:
   [] 0 [ ] 1 [X] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   lb/hr - See Appendix A of the PSD application

   TPY=80 TPY - Facility Wide Cap

9. Pollutant Potential Estimated Emissions Comment (limit to 200 characters):

   Potential hourly emissions are based on 100 percent load at an ambient temperature of 20 °F while firing No. 2 diesel fuel oil with a maximum sulfur content of 0.05 percent by weight, based on 95 percent conversion of the sulfur to SO_2 per the GE data sheets.

Allowable Emissions (Pollutant identified on front of page)

A.

1. Basis for Allowable Emissions Code: **Rule**
2. Future Effective Date of Allowable Emissions: **Upon start-up of Unit 8**
3. Requested Allowable Emissions and Units: **Maximum Fuel Sulfur Content of 0.8 percent by weight.**
4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters): **Custom Fuel Monitoring Schedule** **(See Appendix PGS-10)**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Short-term emissions are limited by 40 CFR 60.333(b) which limits fuel oil sulfur content to 0.8 percent by weight. Actual annual emissions are limited by the facility-wide caps on SO_2 and NO_x.**

B.

1. Basis for Allowable Emissions Code: **ESCPSD**
2. Future Effective Date of Allowable Emissions: **Upon completion of compliance testing**
3. Requested Allowable Emissions and Units: **80 tons/yr**
4. Equivalent Allowable Emissions:
5. Method of Compliance (limit to 60 characters): **40 CFR Part 75 Appendix D with a 95 percent conversion factor based on the custom fuel monitoring schedule.**
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):

VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Visible Emissions Limitation: Visible Emissions Limitation **1** of **1**

1. Visible Emissions Subtype: **VE20**
2. Basis for Allowable Opacity: [**X**] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: **20 %** Exceptional Conditions: **100 %** Maximum Period of Excess Opacity Allowed: **2 hours/24 hours**
4. Method of Compliance: **EPA Reference Method 9**
5. Visible Emissions Comment (limit to 200 characters): **Excess emissions allowed per Rule 62-210.700(1), F.A.C.**

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions Maximum Period of Excess Opacity Allowed: *
4. Method of Compliance

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor **1** of **3**

1. Parameter Code: **EM**	2. Pollutant(s): **NO_x**
3. CMS Requirement:	[X] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): **See Attachment EU13-01.** **(Acid Rain Regulations)**	

Continuous Monitoring System: Continuous Monitor **2** of **3**

1. Parameter Code: **O_2 or CO_2**	2. Pollutant(s):
3. CMS Requirement:	[X] Rule [] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters): **See Attachment EU13-01.** **(Acid Rain Regulations)**	

J. CONTINUOUS MONITOR INFORMATION
(Regulated Emissions Units Only)

Continuous Monitoring System: Continuous Monitor **3** of **3**

1. Parameter Code: **WTF**	2. Pollutant(s):
3. CMS Requirement:	[**X**] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:)	
7. Continuous Monitor Comment (limit to 200 characters): **See Attachment EU13-01.** **(NSPS Regulations)**	

Continuous Monitoring System: Continuous Monitor of

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number:	Serial Number:
5. Installation Date:	
6. Performance Specification Test Date:	
7. Continuous Monitor Comment (limit to 200 characters):	

K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
(Regulated and Unregulated Emissions Units)

PSD Increment Consumption Determination

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.

[X] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

3. Increment Consuming/Expanding Code:			
PM	[X] C	[ ] E	[ ] Unknown
SO2	[X] C	[ ] E	[ ] Unknown
NO2	[X] C	[ ] E	[ ] Unknown

4. Baseline Emissions:		
PM	**0** lb/hour	**0** tons/year
SO2	**0** lb/hour	**0** tons/year
NO2		**0** tons/year

5. PSD Comment (limit to 200 characters):

L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements for All Applications

1. Process Flow Diagram [X] Attached, Document ID: **EU13-02** [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [X] Attached, Document ID: **EU13-03** [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID: **EU13-04** [ ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [X] Attached, Document ID: **EU13-05** [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable:_____
6. Procedures for Startup and Shutdown [X] Attached, Document ID: **EU13-06** [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [X] Not Applicable
8. Supplemental Information for Construction Permit Application **PSD** [X] Attached, Document ID: **PGS07** [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____[X] Not Applicable

Additional Supplemental Requirements for Category I Applications Only

10. Alternative Methods of Operation
[X] Attached, Document ID: **EU13-07** [ ] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____[X] Not Applicable

12. Identification of Additional Applicable Requirements
[ ] Attached, Document ID: [X] Not Applicable

13. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: _____[X] Not Applicable

14. Acid Rain Application (Hard-copy Required)

[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: **EU13-08**

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Not Applicable

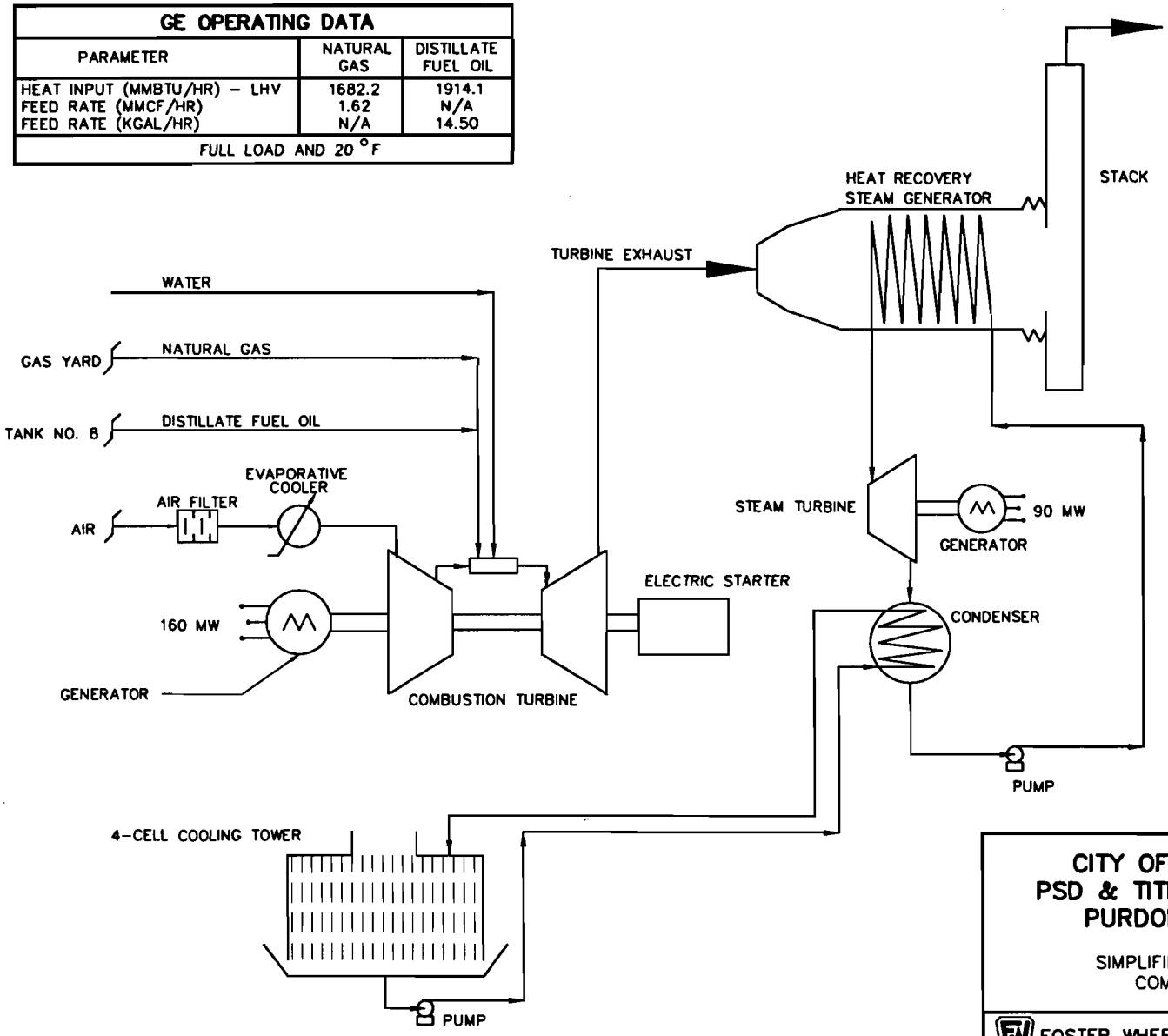
Attachment EU13-01

The Unit 8 combustion turbine will be subject to the Acid Rain regulations and required to implement a continuous emissions monitoring program. Currently the pollutants expected to monitored include oxidies of nitrogen (NO_x) and a diluent gas (CO_2). In addition, a water-to-fuel ratio monitoring system will be required when firing Number 2 oil under Subpart GG. The City plans to submit a monitoring protocol prior to start-up of Unit 8. The specific parameters to monitored and equipment used for the monitoring will be provided in this protocol.

Attachment EU13-02

GE OPERATING DATA		
PARAMETER	NATURAL GAS	DISTILLATE FUEL OIL
HEAT INPUT (MMBTU/HR) – LHV	1682.2	1914.1
FEED RATE (MMCF/HR)	1.62	N/A
FEED RATE (KGAL/HR)	N/A	14.50
FULL LOAD AND 20 °F		

EU13 – EXHAUST PARAMETERS
EXHAUST TEMP. – 171 TO 203 °F
STACK HEIGHT – 200'
SO2 EMISSIONS – 80 TPY
NOx EMISSIONS – 467 TPY
OPACITY – 20% EXCEPT AS ALLOWED



SOURCE: FOSTER WHEELER ENVIRONMENTAL CORPORATION, 1997

CITY OF TALLAHASSEE, FLORIDA
PSD & TITLE V PERMIT APPLICATIONS
PURDOM GENERATING STATION

SIMPLIFIED PROCESS FLOW DIAGRAM
COMBINED CYCLE – UNIT 8

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A	BY: DJG	CAD FILE NO. PUNIT8.DWG
DATE: 02/27/97	CKD' BY: DF REV. BY: djg	FIGURE NO. EU13-02

Attachment EU13-03

The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in the Unit 8 combustion turbine. Actual values may vary, The fuels represented in the analyses include natural gas and Number 2 (0.05% Sulfur) diesel fuel Oil

TYPICAL NATURAL GAS ANALYSIS[1]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	64.84 - 75.25
Hydrogen	20.85 - 23.53
Oxygen	0 - 1.58
Nitrogen	0.76 - 12.90
Sulfur	0 - 0.34
Ash	0.0
Proximate Analysis	99.65 - 100.0
Volatile Matter	0.0
Fixed Carbon	0.0 - 0.00138
Moisture	0.0
Ash	0.0 - 0.034
Sulfur[2]	

(1) Heating value (HHV): 964 - 1129 Btu/ft^3

(2) Total sulfur (maximum) 10 grains/100 SCF

Source: Babcock & Wilcox, 1972 and RE&C, 1997

TYPICAL NUMBER 2 (0.05% S) DIESEL FUEL OIL ANALYSIS[1]

Analysis	Gravimetric Breakdown (%)
Ultimate Analysis	
Carbon	86.1 - 88.2
Hydrogen	11.8 - 13.9
Oxygen	0.0
Nitrogen	0.0 - 0.1
Sulfur[2]	0.0 - 0.05
Ash	0.0 - 0.05
Proximate Analysis	
Volatile Matter	99.05 - 99.5
Fixed Carbon	0.25 - 1.0
Moisture	0.0 - 0.1
Ash	0.0 - 0.05

(1) Higher heating value: 19,170 - 19,750 Btu/lb
(2) Total sulfur (maximum) 0.05%

Source: Babcock & Wilcox, 1972 and RE&C, 1997

Attachment EU13-04

For the Unit 8 combustion turbine the proposed air pollution controls based on the evaluation of Best Available Control Technology (BACT) included the following:

- For the primary control of CO and VOC, good combustion practices which maximize NO_x reductions while minimizing CO, VOC, and PM_{10} emissions is proposed as BACT.
- For the primary control of PM_{10}, trace metals, and total fluorides combustion inlet air filtration coupled with good combustion practices and fuel quality is proposed as BACT. The use of clean pipeline quality natural gas and Number 2 (0.05% Sulfur) diesel fuel oil is the most stringent control technology available.
- For the primary control of NO_x, combustion controls including dry-low NO_x combustors and wet injection techniques coupled with fuel quality is representative of BACT given the regulatory status of NO_x emissions.
- For the primary control of SO_2, and H_2SO_4, and the secondary control of NO_x and PM_{10}, clean pipeline quality natural gas and Number 2 (0.05% Sulfur) diesel fuel oil is the most stringent control technology available.

The overall control strategy is based on the use of clean fuels and good combustion practices which are necessary for the proper operation of the combustion turbine. Appendix A of the PSD application contains a GE paper which further describes the operation of the Dry-Low NOx combustors.

Attachment EU13-05

Combined Cycle Unit 8 (EU13) will be required to conduct compliance testing of the stack gas emissions for oxides of nitrogen per 40 CFR 60 Subpart GG. Therefore, the project will include stack sampling facilities pursuant to Section 62-297.310(6), Florida Administrative Code (F.A.C.), on the stack. The final design of these facilities will meet the requirements of Rules 62-297.310(6)(a), (c), (d), (e), (f), and (g), or be capable of meeting the requirements on a temporary basis as allowed by Rule 62-297.310(6)(b).

Attachment EU13-06

The City of Tallahassee proposes to follow best operational practices in the startup and shutdown of the Unit 8 combined cycle at the Purdom Generating Station. Under normal conditions, standard operating guidelines will be followed for startup and shutdown of the unit. Under any abnormal condition of operation, best operational practices will followed to minimize emissions and to minimize the duration of any excess emissions. Available information indicates that the start-up of Unit 8, including the combustion turbine and the nonfired heat recovery steam generator will require more than the two hour time limit allowed to achieve steady-state operation.

Attachment EU13-07

The Unit 8 combustion turbine (EU13) is planned to be used as a base loaded unit. It will be fueled by either clean pipeline quality natural gas or Number 2 (0.05% Sulfur) diesel fuel oil. The alternative methods of operation (AMO) associated with the combustion turbine are related to the type of fuel being fired and the rate of operation. The current AMOs include the following:

Natural Gas Firing

No. 2 Fuel Oil Firing

The unit can also vary load between 50 and 100 percent as required.

Attachment EU13-08

The Acid Rain permit application is attached.

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR RESOURCES MANAGEMENT

INSTRUCTIONS FOR DEP FORM NO. 62-210.900(1)(a)
AIR PERMIT APPLICATION FORM
ACID RAIN PART (PHASE II)

The Acid Rain Program regulations require that the designated representative submit an Acid Rain Part application for each Acid Rain source with an Acid Rain unit. The Acid Rain Part application is binding on the owners and operators of the Acid Rain source and is enforceable in the absence of a Title V permit until the Department either issues a permit to the source or disapproves the application. You must submit the Acid Rain Part application for an initial Title V permit for Acid Rain sources no later than the deadlines for Title V permit applications under Rule 62-213.420, F.A.C.

STEP 1

Please type the required entries in the form.

If you need more space, make copies of the pertinent page(s).

When you have completed the form, indicate the page order and total number of pages (e.g., 1 of 4, 2 of 4, etc.) on each page of the submission.

The alternate designated representative may sign in lieu of the designated representative.

If you need further assistance, contact the office listed below.

STEP 2

The monitor certification deadline is the date on which the tabulation of emissions for purposes of compliance begins. You must determine this date in accordance with 40 CFR 75.4. If the commence operation date or monitor certification date changes, you must notify the Department under the administrative Acid Rain Part correction procedures of Rule 62-214.370, F.A.C.

Submission Instructions

Mail one form and any required attachments with original signatures, and three photocopies of the entire submission, to the following address:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Air Resources Management
Bureau of Air Regulation
MAIL STATION #5505
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

FLORIDA DEP LOGO

Department of Environmental Protection

DIVISION OF AIR RESOURCES MANAGEMENT

AIR PERMIT APPLICATION FORM
ACID RAIN PART (PHASE II)

For more information, see instructions, and refer to 40 CFR 72.30 and 72.31

This submission is: [ ] New [x] Revised Copy [ ] of [ ]

STEP 1

Identify the source by plant name, State, and ORIS code from the National Allowance Data Base (NADB).

Plant Name	State	ORIS* Code
Sam O. Purdom	FL	689

*Office of Regulatory Information Systems

STEP 2

Enter boiler ID# from NADB for each unit, and indicate whether a repowering plan is applicable by entering "yes" or "no" at column b. For **new units**, enter requested information in columns c and d.

a Boiler ID#	b Repowering Plan?	c **New Units** Commence Operation Date	d **New Units** Monitor Certification Deadline
7	NO		
8	NO	02/21/00	05/24/00

STEP 3

If you responded "yes" in column b of Step 2 for any unit, mark the box [ ] For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted, is included, or will be submitted by June 1, 1996.

DEP Form No. 62-210.900(1)(a) - Form
Effective: 1-2-95

Plant Name (from Step 1)
Sam O Purdom

STEP 4

Read the **Standard Requirements** and **Certification**, enter the name of the designated representative, and sign and date.

Standard Requirements

Permit Requirements.

(1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:

(a) Submit a complete Acid Rain part, including a compliance plan, under this part in accordance with the deadlines specified in Rule 62-213.420, F.A.C.; and Rule 62-214.320, F.A.C.

(b) Submit in a timely manner any supplemental information that the State determines is necessary in order to review an Acid Rain part application and issue or deny a Title V permit;

(2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:

(a) Operate the unit in compliance with a complete Acid Rain part application or a superseding Title V permit issued by the Department; and

(b) Have a Title V permit with an Acid Rain part.

Monitoring Requirements.

(1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source, and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR Parts 75 and 76.

(2) The emissions measurements recorded and reported in accordance with 40 CFR Parts 75 and 76 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR Parts 75 and 76 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

(1) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:

(a) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount, after deductions by EPA under 40 CFR 73.34(c), not less than the total annual emissions of sulfur dioxide from the unit for the previous calendar year; and

(b) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

Plant Name (from Step 1)
Sam O. Purdom

Sulfur Dioxide Requirements (Continued).

(3) An Acid Rain unit shall be subject to the requirements under Rule 62-214.330(1), F.A.C., and 40 CFR 72.9(c)(1) as follows:

(a) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2) that is not a substitution or compensating unit; or

(b) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an Acid Rain Unit under 40 CFR 72.6(a)(3) that is not a substitution or compensating unit.

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts by EPA in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under 40 CFR 72.9(c)(1)i prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by EPA under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Title V permit application that includes the Acid Rain Part, the Title V permit that includes the Acid Rain Part, or the written exemption under Rule 62-214.340, F.A.C., and 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by EPA under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements.

The owners and operators of the Acid Rain source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides, pursuant to 40 CFR Part 76.

Excess Emissions Requirements.

(1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.

(2) The owners and operator of an Acid Rain unit that has excess emissions in any calendar year shall:

(a) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR Part 77; and

(b) Comply with the terms of an approved offset plan, as required by 40 CFR Part 77.

Recordkeeping and Reporting Requirements.

(1) Unless otherwise provided, the owners and operators of the Acid Rain source and each Acid Rain unit at the source shall keep on-site at the source each of the following documents for a period of 5 years from the date the document is created. This period may by extended for cause in writing by EPA, at any time prior to the end of the 5 years.

Recordkeeping and Reporting Requirements (Continued).

(a) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on-site at the source beyond such 5-year period until such documents are superseded because of a new certificate of representation changing the designated representative;

(b) All emissions monitoring information, in accordance with 40 CFR Part 75;

(c) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and

(d) Copies of all documents used to complete the Acid Rain Part application, and any other submission under the Acid Rain Part, or to demonstrate compliance with the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR Part 72 subpart I and 40 CFR Part 75.

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain Part application, a Title V permit with an Acid Rain Part, or a written exemption under Rule 62-214.340, F.A.C., or 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to 42 U.S.C. 7413(c).

(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to 42 U.S.C. 7413(c) and 18 U.S.C. section 1001.

(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program, including Chapter 62-214, F.A.C.

(5) Any provision of the Acid Rain Program that applies to an Acid Rain source, including a provision applicable to the designated representative of an Acid Rain source, shall also apply to the owners and operators of such source and the Acid Rain units of the source.

(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit, including a provision applicable to the designated representative of an Acid Rain unit, shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44, Phase II repowering extension plans, and 40 CFR Part 76, and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75, including 40 CFR 75.16, 75.17, and 75.18, the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

Plant Name (from Step 1)
Sam O. Purdom

Liability (Continued).

(7) Each violation of a provision of 40 CFR Parts 72, 73, 75, 76, 77, 78, or Chapter 62-214, F.A.C., by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities.

No provision of the Acid Rain Program, an Acid Rain Part application, a Title V permit with Acid Rain Part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in Title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provisions of the Act, including the provisions of Title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a unit can hold; **provided**, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program of competitive bidding for power supply in a State in which such program is established.

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information, or omitting required statements and information, including the possibility of fine or imprisonment.

Robert E. McGarrah Name	
Signature	Date 3/4/97

10.1.6 Coastal Zone Management Certifications

The Coastal Management Act of 1978 (Sections 380.21-25, Florida Statutes) requires certification of consistency with the Florida Coastal Management Program (FCMP) for all federal licenses, permits, activities, and projects listed in Section 380.23 (3)(c), F.S., when such activities are subject to federal consistency review and affect land or water use, are seaward of the jurisdiction of the state, or there is no state agency with sole jurisdiction for such consistency review.

We are not aware of any project-related federal licenses, permits, activities, etc. which are subject to federal consistency review.

10.1.7 FAA Notice of Proposed Construction of Alteration

Following is a copy of the Notice of Proposed Construction or Alteration (FAA Form 7460-1) submitted to the U.S. Department of Transportation, Federal Aviation Administration (FAA) in accordance with FAA regulations (14 CFR Part 77).

CITY OF TALLAHASSEE

CITY HALL
300 S. ADAMS ST.
TALLAHASSEE, FL
32301-1731
904/891-8100
TDD 1-800/955-8771

RON WEAVER
Mayor
SCOTT MADDOX
Mayor Pro Tem

JOHN PAUL BAILEY
Commissioner
DEBBIE LIGHTSEY
Commissioner
STEVE MEISBURG
Commissioner

STEVEN C. BURKETT
City Manager
ROBERT B. INZER
City Treasurer-Clerk

JAMES R. ENGLISH
City Attorney
RICARDO FERNANDEZ
City Auditor

February 28, 1997

Federal Aviation Administration
Southern Regional Office
Attn: Air Traffic Division, ASO 532
Mr. Barry A. Knight
P.O. Box 20636
Atlanta, Georgia 30320

Re: Request for Evaluation of Existing and Proposed Structures for Marking and Lighting

Dear Mr. Knight:

The City of Tallahassee (City) currently maintains three structures at the Sam O. Purdom Generating Station (Station) in St. Marks, Wakulla County, Florida, that are marked and/or lighted for aviation conspicuity. The structures include a water tower with a height of approximately 150 feet above ground level (AGL), an exhaust stack (Unit 7 Stack) with a height of 180 feet AGL, and a microwave transmission tower with a height of 223 feet AGL. The microwave tower was determined to need red lighting and orange and white paint under Study No. 71ASO0339 and was issued the National Oceanic and Atmospheric Administration, NOS Identification No. 10-0903.

The City is proposing the construction of an exhaust stack (Unit 8 Stack) 200 feet AGL in height at the Station. (A completed Federal Aviation Administration (FAA) Form 7460-1, Notice of Proposed Construction or Alteration, prepared pursuant to Chapter 14 Code of Federal Regulations (CFR), Part 77 for the Unit 8 Stack, is enclosed for informational purposes.)

Due to the fact that both Unit 7 and 8 stacks and water tower are 200 feet AGL or less, neither lighting nor marking, for purposes of aviation conspicuity, is required on these stacks or the water tower. Therefore, pursuant to the Federal Aviation Act of 1958, the City requests an FAA evaluation to confirm that neither lighting nor marking is required on the Unit 7 Stack, the proposed Unit 8 Stack, or the water tower.

It should also be noted that the closest public airport has been identified as the Wakulla County Airport and is located approximately 14.4 nautical miles from the microwave tower.

The City will continue to maintain the red lighting and orange and white paint required on the microwave tower. However, please note that the City is planning to either relocate or remove completely the microwave tower at the Station in the future. Once the City has finalized plans for the microwave tower relocation, a completed Form 7460-1 will be submitted to the FAA.

Please call me at (904) 891-8850 should you have any questions on this letter or on the attached form.

Sincerely,

Jennette Curtis

Jennette Curtis
Environmental Administrator

Enclosure
cc: R. McGarrah (COT)
A. Roberts (FDOT)

Please Type or Print on This Form

Form Approved OMB NO. 2120-0001

U.S. Department of Transportation
Federal Aviation Administration

Notice of Proposed Construction or Alteration

Failure To Provide All Requested Information May Delay Processing Of Your Notice

Aeronautical Study Number

1. Nature of Proposal

A. Type	B. Class	C. Work Schedule Dates
[X] New Construction [ ] Alteration *	[X] Permanent [ ] Temporary (Duration _____ months)	Beginning 1998 End 2000

* If Alteration, provide previous FAA Aeronautical Study Number, if available :

3A. Name, address, and telephone number of individual, company corporation, etc. proposing the construction or alteration. (Number, Street, City, State, and Zip Code)

Mr. Robert McGarrah, Production Superintendent
City of Tallahassee
2602 Jackson Bluff Road, Tallahassee, FL 32304

(904) 891-5535
Area Code Telephone Number

3B. Name, address and telephone number of proponent's representative, if different than 3A. above.

( ) _____
Area Code Telephone Number

2. Complete Description of Structure

Please describe the proposed construction or alteration.

A. For proposals involving transmitting stations, include effective radiated power (ERP) and assigned frequency. If not known, give frequency band and maximum ERP.

B. For proposals involving overhead wire, transmission lines, etc., include the size and the configuration of the wires and their supporting structures.

C. For buildings, include site orientation, dimensions, and construction materials.

D. **Optional**— Describe the type of obstruction marking and lighting system desired. The FAA will consider this in their study.

One (1) combustion turbine/heat recovery steam generator 16.5 foot diameter stack constructed of steel, at the existing Sam O. Purdom Generating Station.

4. Location Of Structure

A. Coordinates (to hundredths of seconds, if known)	B. Nearest City or Town and State	C. Nearest public or military airport, heliport, flightpark, or seaplane base
Latitude 0 ' " : 30 | 9 | 40.	St. Marks	Wakulla Co.
Longitude 0 ' " : 84 | 12 | 01.	(1). Distance to 4B: (0)within city limits	(1). Distance from structure to nearest point of nearest runway: 14.4 nautical miles
4D. Source for item 4A data. [ ] USGS 7.5' Quad Chart [ ] Survey [X] Other Specify: d sheet and special purpose site boundary survey	(2). Direction to 4B: (n/a) within city limits	(2). Direction from structure to airport: SW
Indicate the reference datum. [X] NAD 27 [ ] NAD 83 [ ] Other Specify: _____		

5. Height and Elevation (to nearest foot)

A. Elevation of ground above mean sea level.	7
B. Height of structure including all appurtenances and lighting above ground or water.	200
C. Overall height above mean sea level	207

4E. **Description of site location with respect to highways, street, airports, prominent terrain, features, existing structures, etc.** Please attach a U.S. Geological Survey Map (or equivalent) showing the construction site. If available, attach a copy of a documented site survey with the surveyor's certification.

See Attachments 1 (topo), 2 (site survey), and 3 (site plan)

Notice is required by Part 77 of the Federal Aviation Regulations (14 C.F.R. Part 77) pursuant to Section 1101 of the Federal Aviation Act of 1958, as amended (49 U.S.C. app. § 1501). Persons who knowingly and willfully violate the Notice requirements of Part 77 are subject to a civil penalty of $1,000 per day until the notice is received, pursuant to Section 901(a) of the Federal Aviation Act of 1958, as amended (49 U.S.C. app § 1471(a)) as well as the fine (criminal penalty) of not more than $500 for the first offense and not more than $2,000 for subsequent offenses, pursuant to Section 902(a) of the Federal Aviation Act of 1958, as amended (49 U.S.C. app § 1472(a)).

I HEREBY CERTIFY that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to obstruction mark and/or light the structure in accordance with established marking & lighting standards as necessary.

Date	Typed or Printed Name and Title of Person Filing Notice	Signature
February 28, 1997	Robert McGarrah	

FOR FAA USE ONLY — *FAA will either return this form or issue a separate acknowledgement.*

The Proposal:

- [ ] Does not require a notice to FAA.
- [ ] Is not identified as an obstruction under any standard of FAR, Part 77, Subpart C, and would not be a hazard to air navigation.
- [ ] Is identified as an obstruction under the standards of FAR, Part 77, Subpart C, but would not be a hazard to air navigation.
- [ ] Should be obstruction [ ] marked [ ] lighted per FAA Advisory Circular 70/7460-1, Chapters _____
- [ ] Obstruction marking and lighting are not necessary.

Supplemental Notice of Construction, FAA Form 7460-2, is required any time the project is abandoned, or

- [ ] At least 48 hours before the start of construction.
- [ ] Within five days after the construction reaches its greatest height.

This determination expires on _____ unless:
(a) extended, revised or terminated by the issuing office.
(b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit is made to the FCC on or before the above expiration date. In such cases the determination expires on the date prescribed by the FCC for completion of construction, or on the date the FCC denies the application.

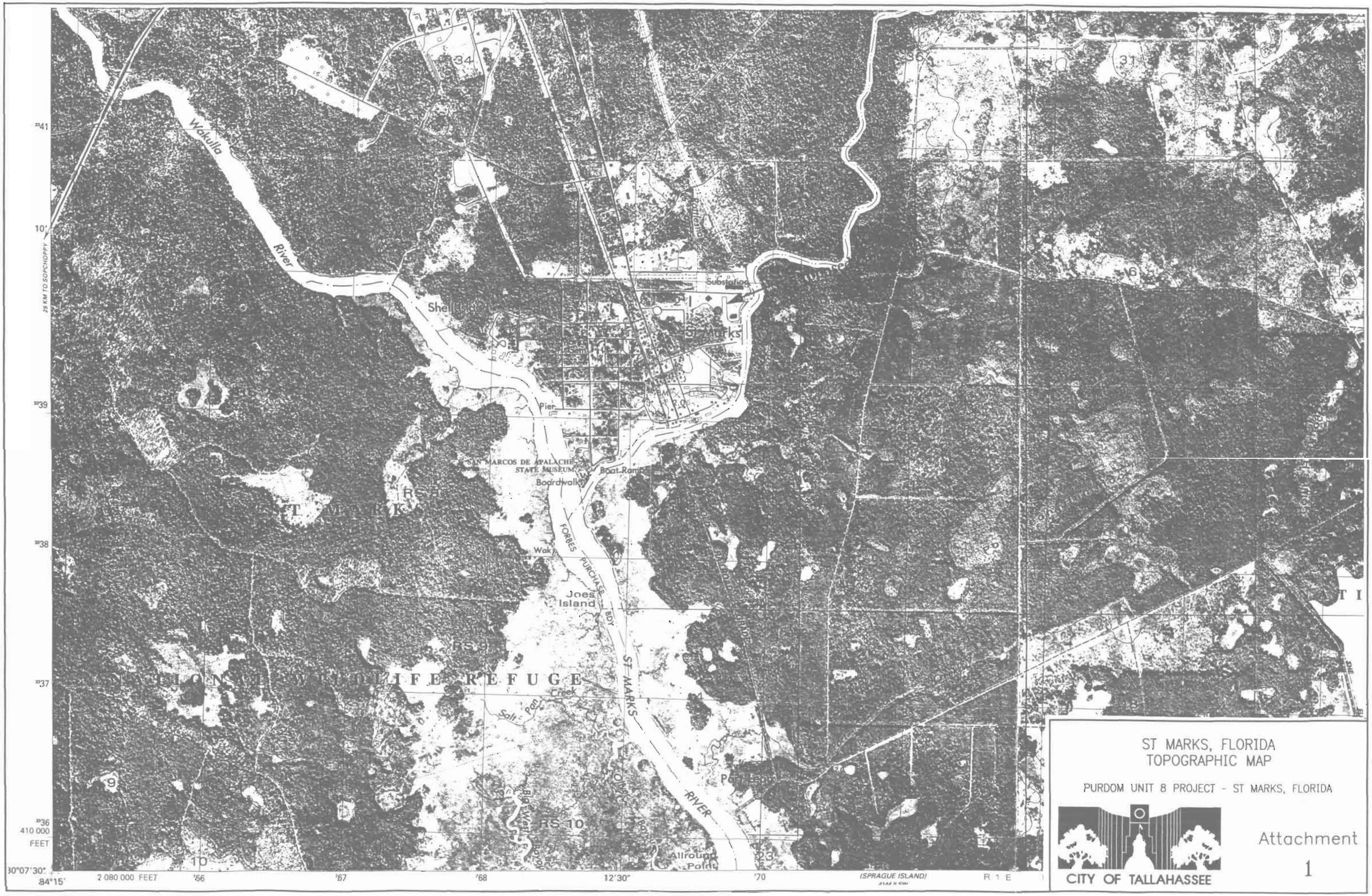
NOTE: Request for extension of the effective period of this determination must be postmarked or delivered to the issuing office at least 15 days prior to the expiration date.

If the structure is subject to the licensing authority of the FCC, a copy of this determination will be sent to that agency.

Remarks

NAD 83 Coordinates (Use these coordinates for any future correspondence with the FAA) — Latitude ° ' " : Longitude ° ' " :

Issued in	Signature	Date



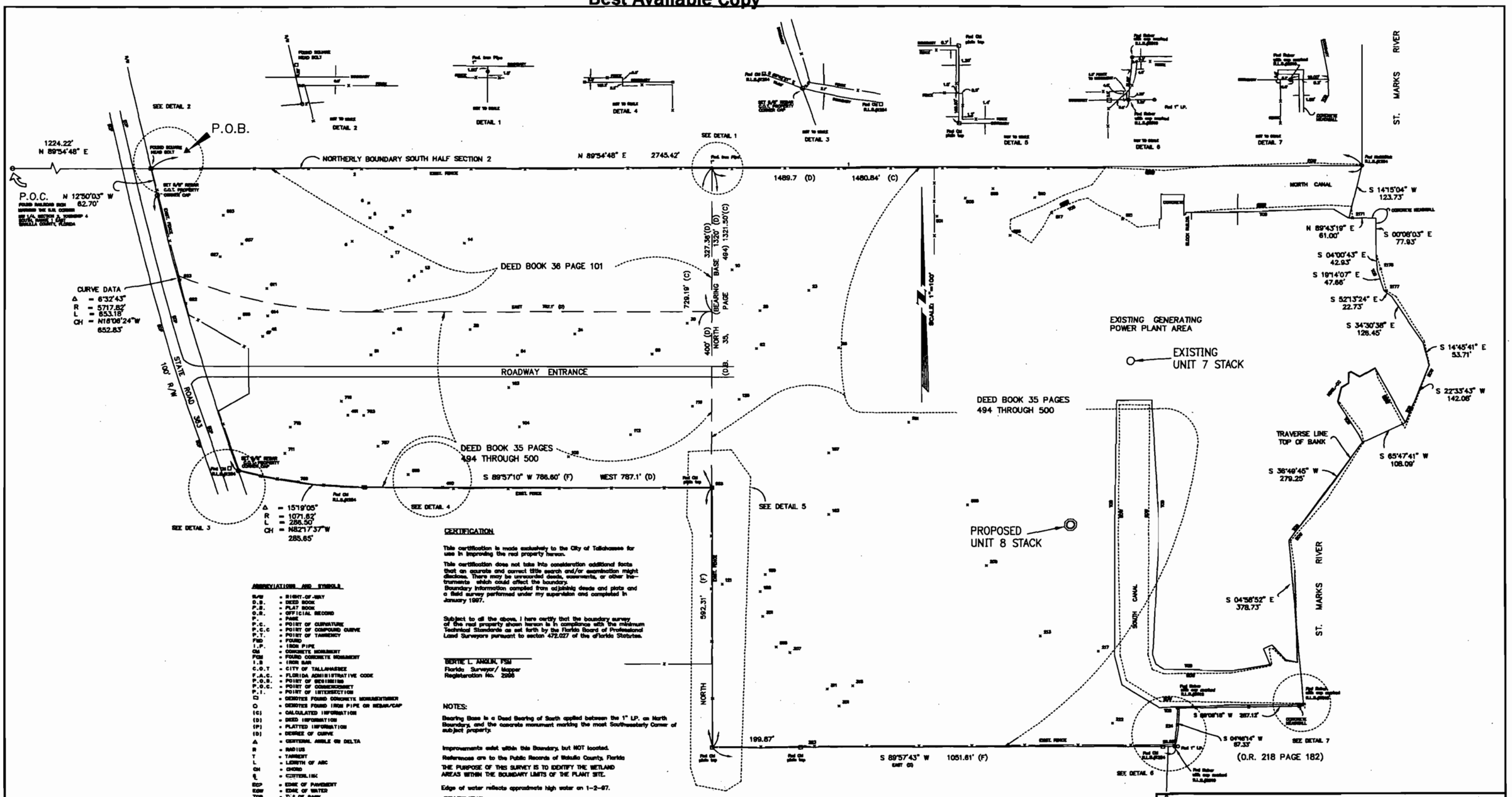
ST MARKS, FLORIDA
TOPOGRAPHIC MAP

PURDOM UNIT 8 PROJECT - ST MARKS, FLORIDA

CITY OF TALLAHASSEE

Attachment
1

PLOT DATE FEB 27, 1997 C:\15840002\----\00000-44.DWG



ABBREVIATIONS AND SYMBOLS

R/W	= RIGHT-OF-WAY
D.B.	= DEED BOOK
P.B.	= PLAT BOOK
O.R.	= OFFICIAL RECORD
P.K.	= PARK
P.C.	= POINT OF CURVATURE
P.C.C.	= POINT OF COMPOUND CURVE
P.T.	= POINT OF TANGENCY
FND	= FOUND
I.P.	= IRON PIPE
CM	= CONCRETE MONUMENT
FCM	= FOUND CONCRETE MONUMENT
I.R	= IRON BAR
C.O.T	= CITY OF TALLAHASSEE
F.A.C.	= FLORIDA ADMINISTRATIVE CODE
P.O.B.	= POINT OF BEGINNING
P.O.C.	= POINT OF COMMENCEMENT
P.I.	= POINT OF INTERSECTION
⊡	= DENOTES FOUND CONCRETE MONUMENT/MARKER
○	= DENOTES FOUND IRON PIPE OR REBAR/CAP
(C)	= CALCULATED INFORMATION
(D)	= DEED INFORMATION
(P)	= PLATTED INFORMATION
(D)	= DEGREE OF CURVE
Δ	= CENTERAL ANGLE OR DELTA
R	= RADIUS
T	= TANGENT
L	= LENGTH OF ARC
CH	= CHORD
℄	= CENTERLINE
EOP	= EDGE OF PAVEMENT
EOW	= EDGE OF WATER
TOB	= TOP OF BANK

CERTIFICATION

This certification is made exclusively to the City of Tallahassee for use in improving the real property hereon.

This certification does not take into consideration additional facts that an accurate and correct title search and/or examination might disclose. There may be unrecorded deeds, easements, or other instruments which could affect the boundary.
Boundary information compiled from adjoining deeds and plats and a field survey performed under my supervision and completed in January 1997.

Subject to all the above, I here certify that the boundary survey of the real property shown hereon is in compliance with the minimum Technical Standards as set forth by the Florida Board of Professional Land Surveyors pursuant to section 472.027 of the Florida Statutes.

BERTIE L. ANGLIN, PSM
Florida Surveyor/ Mapper
Registeration No. 2998

NOTES:

Bearing Base is a Deed Bearing of South applied between the 1" I.P. on North Boundary, and the concrete monument marking the most Southeasterly Corner of subject property.

Improvements exist within this Boundary, but NOT located.

References are to the Public Records of Wakulla County, Florida

THE PURPOSE OF THIS SURVEY IS TO IDENTIFY THE WETLAND AREAS WITHIN THE BOUNDARY LIMITS OF THE PLANT SITE.

Edge of water reflects approximate high water on 1-2-97.

STATEMENT:

The meander line of the wetland areas, depicted hereon, was established by a combination of the Army Corps of Engineers, Foster Wheeler Environmtal Corp. A Constructing Firm and the members of the Florida Department of Environmental Protection Agency, Jurisdictional Declaratory statement. The meander line were located by the City of Tallahassee Surveying Section/Engineering Division.

ALL FENCES SHOWN ARE 6' HIGH CHAIN LINK

NUMBERS SHOWN ON WETLAND BOUNDARIES REFLECT NUMBERS MARKED ON FLAGGING LOCATED IN FIELD. ALL NUMBERS NOT SHOWN FOR CLARITY.

SOURCE: CITY OF TALLAHASSEE, 1997

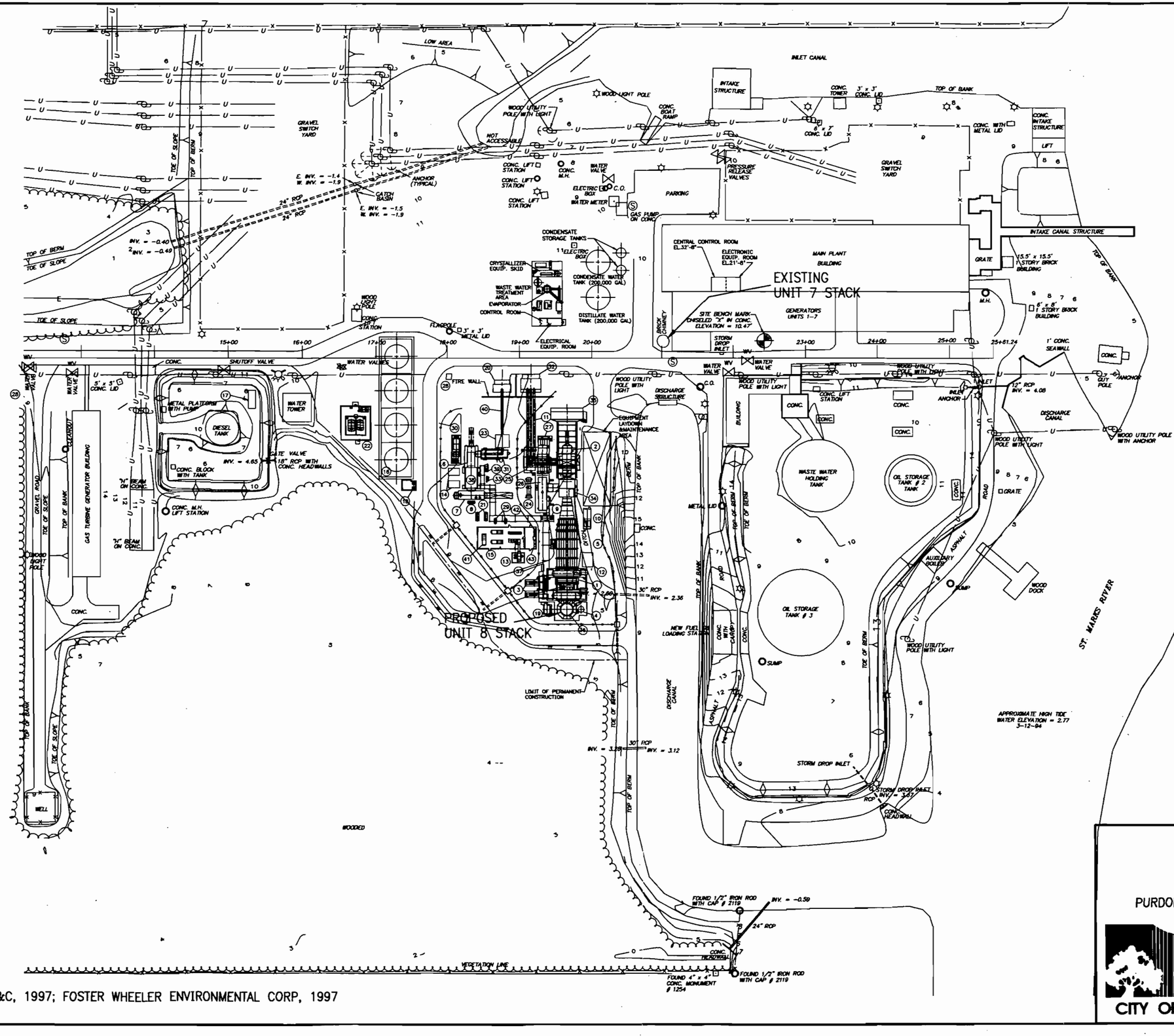
EXISTING PURDOM STATION AND ITS SITE

PURDOM UNIT 8 PROJECT - ST MARKS, FLORIDA

CITY OF TALLAHASSEE

Attachment 2

PLOT DATE FEB 28, 1997 C:\1584000\----\00000-40.DWG



LEGEND:

1. HEAT RECOVERY STEAM GENERATOR
2. COMBUSTION TURBINE GENERATOR
3. FEEDWATER PUMPS
4. BLOWDOWN TANK
5. WATER WASH SKID
6. STEAM TURBINE GENERATOR
7. CONDENSER
8. CONDENSATE PUMPS
9. CO2 FIRE PROTECTION SKID
10. WATER INJECTION SKID
11. ISO PHASE BUS DUCT
12. HRSG CHEMICAL FEED SYSTEM
13. AUXILIARY TRANSFORMER
14. VACUUM PUMPS
15. SWITCHGEAR BUILDING
16. COOLING TOWER
17. FUEL OIL TRANSFER PUMPS
18. CIRCULATING WATER PUMPS
19. CEMS
20. STG MAIN STEPUP TRANSFORMER
21. CLOSED COOLING WATER HEAT EXCHANGERS
22. COOLING TOWER CHEMICAL FEED SYSTEM
23. GENERATOR BREAKER
24. STATIC START SKID
25. CTG BUS ACCESSORY COMPARTMENT
26. ACCESSORY MODULE
27. PEECC
28. NATURAL GAS FILTER/SCRUBBER
29. CLOSED COOLING WATER PUMPS
30. STG LUBE OIL SKID
31. STG BUS ACCESSORY COMPARTMENT
32. CTG MAIN STEPUP TRANSFORMER
33. GLAND STEAM CONDENSER
34. COMBUSTION TURBINE
35. INLET FILTER
36. STACK
37. SAMPLE PANEL
38. STEAM TURBINE
39. GLAND STEAM CONTROL VALVE SKID
40. NON SEGREGATED BUS DUCT
41. COOLING TOWER LOAD CENTER
42. BAILEY CONTROL CABINETS
43. STM TURB/GENERATOR CONTROL CABINETS

SOURCE: RE&C, 1997; FOSTER WHEELER ENVIRONMENTAL CORP, 1997

SITE PLAN

PURDOM UNIT 8 PROJECT - ST MARKS, FLORIDA

CITY OF TALLAHASSEE

Attachment 3

PLOT DATE FEB 28, 1997 C:\15840002\----\00000-42.DWG

10.2 ZONING DESCRIPTIONS

Appendix 10.2 contains relevant excerpts from the draft (November 1990) St. Marks Land Development Code, specifically:

- Section 2.01.00 Land Use Districts
- Section 2.02.00 Uses Allowed in Land Use Districts

Multi-Family Dwelling

Any residential structure containing two (2) or more separate dwelling units.

Parcel

A unit of land within legally established property lines.

Recreation Vehicle

A vehicular-type portable structure without permanent foundation, which can be towed, hauled or driven and primarily designed as temporary living accommodation for recreation, camping, and travel use and including, but not limited to, travel trailers, truck campers, camping trailers, and self-propelled motor home.

Single-Family Dwelling

A structure containing one dwelling unit, and not attached to any other dwelling unit by any means. A single-family unit may contain an accessary apartment pursuant to this Code.

2.01.00 LAND USE DISTRICTS

2.01.01 Generally

Land use districts for the City/County are established in the Comprehensive Plan, Future Land Use Element, including a map

. The land use districts and classifications defined in the Future Land Use Element of the City Comprehensive Plan and delineated on the Future Land Use Map shall be the determinants of permissible activities on any parcel in the jurisdiction. Refer to the Future Land Use Element of the Comprehensive Plan for the definitions of each use category.

Allowable uses are shown in SECTION 2.02.03 to correlate individual land use activities with land use districts.

2.01.02 Residential

2.01.03 Commercial

2.01.04 Industrial

2.01.05 Public Buildings/Grounds

2.01.06 Recreation/Conservation

2.01.07 Agricultural

2.01.08 Mixed Use

2.02.00 USES ALLOWED IN LAND USE DISTRICTS

2.02.01 Generally

This Part defines and prescribes the specific uses allowed within each land use district described in the Comprehensive Plan and this Code.

2.02.02 Types Of Uses

A. Residential

1. The category of residential uses includes single-family dwellings, accessory apartments, multi-family dwellings in a variety of housing types, modular and manufactured housing, but specifically excludes recreational vehicles. (Recreational vehicle parks are considered commercial uses.)

2. While a district may be designated for residential use, it does not follow that any housing type (single-family, apartment, townhouse, etc.) is allowed. Certain areas are limited to one or more housing types in order to preserve the established character of the area. Refer to the table of density and dwelling unit types in SECTION 2.02.04 for regulations on housing types.

B. Institutional

This type of use includes educational facilities (public or private), pre-school and day care facilities (public or private), churches, cemeteries without funeral homes, residential care facilities, halfway housing, nursing home facilities, and all other similar institutional uses.

C. Outdoor Recreational

These uses include areas for outdoor recreational activities such as picnicking, jogging, cycling, arboretums, hiking, golf courses, play grounds, ball fields, outdoor ball courts, stables, outdoor swimming pools, and water-related or water-dependent uses such as boat ramps, fishing docks and piers, and all similar outdoor recreational uses, whether public or private. Specifically excluded from this group of uses are firing ranges, marinas, miniature golf courses, race tracks, and similar recreational or quasi-recreational activities inconsistent with the allowable outdoor recreational uses described.

D. Professional Service And Office

This group of uses includes business and professional offices, medical offices or clinics, government offices, financial institutions without drive-up facilities, and personal service businesses where the service is performed on an individual-to-individual basis as opposed to services which are performed on objects or personal property. Examples of

personal service businesses are barber shops, beauty shops, or photography studios. This group of uses may include a dispatching/communications/office center for the distribution of goods, but specifically excludes the warehousing or actual distribution of goods.

E. **General Commercial**

A wide variety of general commercial, commercial recreational, entertainment, and related activities is included in this group of uses. Examples include professional and office uses listed in SECTION 2.02.02D above, as well as the following specific uses, and all substantially similar types of uses:

1. Arcades, billiards/pool parlors, bowling alleys, indoor recreation centers and gymnasiums/spas/health clubs.
2. Community centers and fraternal lodges.
3. Commercial or trade schools such as dance and martial arts studios.
4. Department stores and other retail sales stores, such as shoe stores, clothing stores, pharmacies, florists, and book stores.
5. Funeral homes, cemeteries, and mortuaries.
6. Farm and garden supply, building supply, and vehicle parts and accessories (but specifically excluding vehicle sales/service/repair).

7. Grocery stores, supermarkets (excluding convenience stores), and specialty food stores (such as meat markets, and bakeries).
8. Hospitals.
9. Hotels or motels.
10. Service businesses such as blueprint, printing, catering, tailoring, travel agencies, upholstery shops, laundries/dry cleaners, and light mechanical repair stores (such as camera, TV, or bicycle repair shops).
11. Restaurants (standard sit-down, and high-turnover sit-down, but excluding all restaurants with drive-up facilities) including open air cafes.
12. Shopping centers (but not regional malls or centers).
13. Theaters and auditoriums.
14. Marinas.
15. Miniature golf, golf driving ranges.
16. Plant nurseries.
17. Veterinary offices and animal hospital, provided the facility has no outside kennels.

F. High Intensity Commercial

The uses in this group include those activities which require outdoor storage, have higher trip generations than general commercial listed above, or have the potential for greater nuisance to adjacent properties due to noise, light and glare, or typical hours of operation. This group of uses includes

the following list of specific uses and all substantially similar activities based upon similarity of characteristics.

1. Vehicle sales, rental, service, and repair, including truck stops, body shops, road services, car wash facilities, and the sales, rental, repair and service of new or used automobiles, boats, buses, farm equipment, motorcycles, trucks, recreational vehicles, and mobile homes.
2. Gasoline sales and service, combination gasoline sale and food marts, and similar facilities.
3. Recreational vehicle and travel trailer parks.
4. Taverns, bars, lounges, night clubs, and dance halls.
5. Financial institutions with drive-up facilities.
6. Restaurants with drive-up facilities.
7. Roadside produce stands, temporary or permanent.
8. Outdoor arenas, rodeo grounds, livestock auction facilities, race tracks (auto, dog, go-kart, horse, motorcycle), shooting and firing ranges), and similar activities.
9. Veterinary offices and animal hospital with outside kennels.
10. Storage yards for equipment, machinery, and supplies for building and trades contractors, garbage haulers.
11. Flea markets or similar outdoor or indoor/outdoor sales complexes.

G. **Public Service/Utility**

This group of activities includes those uses which provide essential or important public services, and which may have characteristics of outdoor storage, or potential nuisance to adjacent properties due to noise, light and glare, or appearance. Government offices or government agency offices specifically are not included in this group of uses. Uses include the following, and substantially similar activities, based upon similarity of characteristics:

1. Emergency service activities such as buildings, garages, parking, and/or dispatch centers for ambulances, fire, police and rescue.
2. Broadcasting stations, transmission towers.
3. Utility facilities, such as water plants, wastewater treatment plants, electricity substations serving 230 KV or greater.
4. Maintenance facilities and storage yards for schools, government agencies, and telephone and cable companies.
5. LP gas storage and/or distribution facility for up to one thousand (1000) gallons. This shall not be construed to prevent retail sales of LP gas in canisters or similar pre-filled containers.
6. Airports, airfields, and truck or bus terminals.

H. Agricultural

Agricultural uses include croplands, pastures, forestry, aquaculture, feed lots, and buildings which are an accessory to these agricultural uses. This category of uses does not include processing or distribution plants for agricultural products and supplies. Residential use may be allowed; refer to the table of residential densities.

I. Industrial

This type of use includes those wholesale and retail businesses for manufacturing, processing, storing, or distributing goods. Included in this category are uses which require primarily outdoor storage or the industrial activity itself is conducted outdoors. Such uses include, for example, LP gas storage and/or distribution exceeding 1000 gallons, junkyards or salvage yards, recycling centers, and borrow pits (but not excavation which requires blasting).

2.02.03 Allowable uses Within Each Land Use District

A. Residential

The following uses are allowed in the Residential land use district. All others are prohibited.

1. Residential

B. Commercial

The following uses are allowed in the Commercial land use district. All others are prohibited.

1. Institutional
2. Professional Service and Office
3. General Commercial
4. High Intensity Commercial
5. Public Service/Utility

C. Industrial

The following uses are allowed in the Industrial land use district. All others are prohibited.

1. Public Service/Utility
2. Industrial

D. Public Buildings/Grounds

The following uses are allowed in the Public Building/Grounds land use district. All others are prohibited.

1. Institutional
2. Outdoor Recreation
3. Public Service/Utility

E. Recreation/Conservation

The following uses are allowed in the Recreation/Conservation land use district. All others are prohibited.

1. Residential
2. Outdoor Recreation
3. Public Service/Utility
4. Agricultural

F. Agricultural
The following uses are allowed in the Agricultural land use district. All others are prohibited.

1. Residential
2. Agricultural

G. Mixed Use

The following uses are allowed in the Mixed Use land use district. All others are prohibited.

1. Residential
2. Institutional
3. Professional Service and Office
4. General Commercial
5. High Intensity Commercial
6. Public Service/Utility

2.02.04 Table of Density and Dwelling Unit Types for Residential Use

Land Use/Districts	Gross Density	Housing Types S-F	M-F	MH
Residential	4DU/1AC	A	A	A
Recreation/Conservation	1DU/1AC	A	P	A
Agricultural	1DU/10AC	A	P	P
Mixed Use	4DU/1AC	A	A	A

Notes for Table 2.02.04:
"A" stands for "Allowed". "P" stands for "Prohibited".
"S-F" stands for single-family which includes site built homes and modular homes manufactured under the Florida Manufactured Building Act and certified by the Florida Department of Community Affairs as complying with the structural requirements of the Standard Building Code. "M-F" stands for multi-family as defined in this Code. "MH" stands for manufactured housing not meeting the standards of the Florida Manufactured Building Act. Where indicated as being allowed, they are so allowed only if in a mobile home park designed exclusively for such houses.

2.02.05 Floor Area Ratio

A. Generally

A floor area ratio is a measurement of the intensity of development on a site. For purposes of this Code, floor area ratios (FAR) are provided only for non-residential development.

B. Calculating Floor Area Ratio

The floor area ratio is the relationship between the total floor area on a site and the gross site area. The FAR is calculated by adding together all floor areas of all floors and dividing this total by the gross site area. See FIGURE 2.02.05-A for a graphic illustration of this concept.

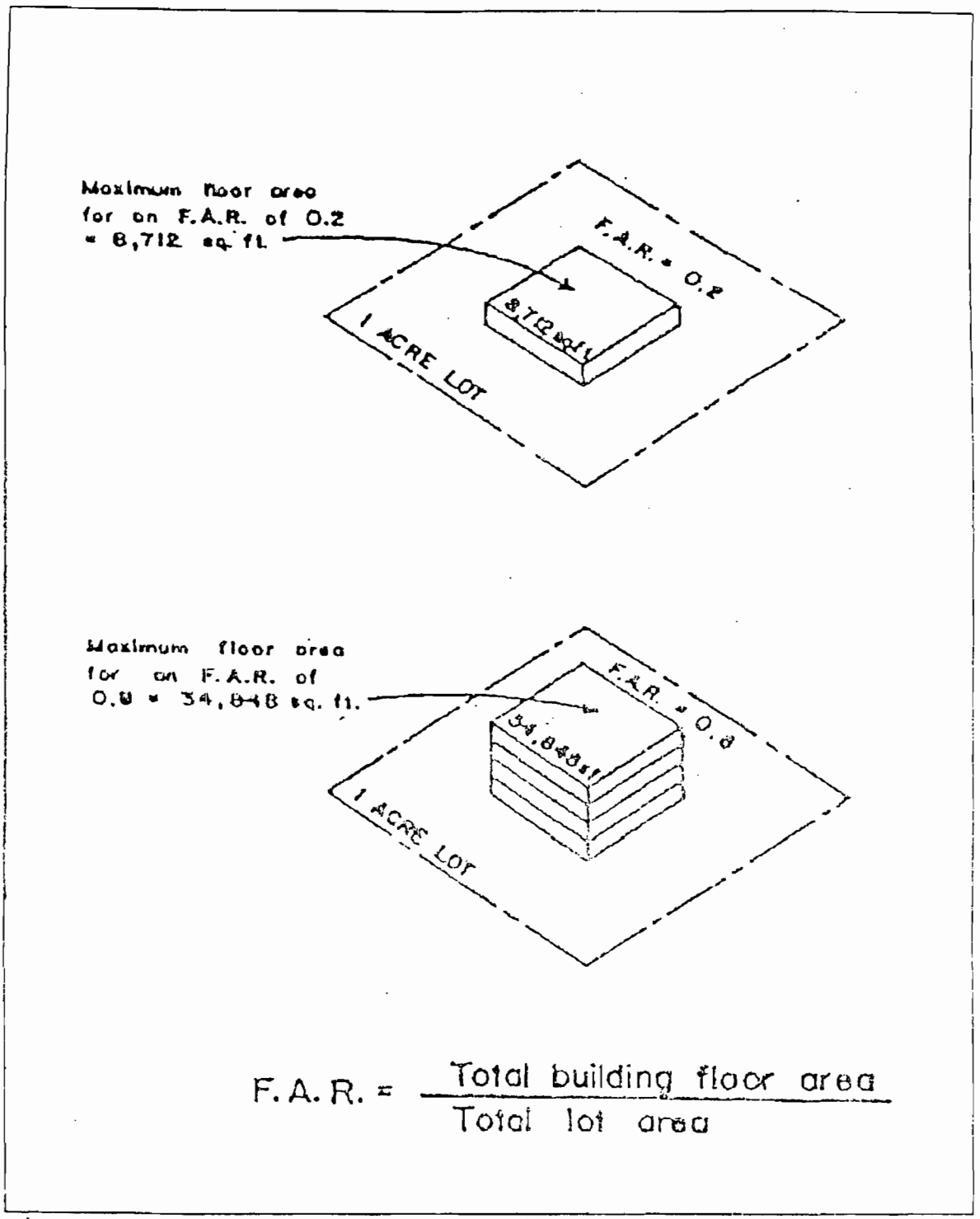


Figure 2.02.04-A Floor Area Ratio

c. Table of Floor Area Ratios

Land Use/Districts	Maximum FAR
Commercial District	
Institutional	0.5
Professional Service and Office	1.0
General Commercial	1.0
High Intensity Commercial	0.5
Public Service/Utility	0.25
Industrial District	
Public Service/Utility	1.0
Industrial	0.5
Public Buildings/Grounds District	
Institutional	1.0
Public Service/Utility	1.0
Mixed Use District	
Institutional	0.5
Professional Service and Office	0.5
General Commercial	0.5
High Intensity Commercial	0.25
Public Service/Utility	0.25

10.3 LAND USE PLAN DESCRIPTIONS

Appendix 10.3 contains relevant excerpts from the Future Land Use Element of the St. Marks Comprehensive Plan, specifically:

- Policy 1.1.1
- Policy 1.2.4

CITY OF ST. MARKS

COMPREHENSIVE PLAN

Prepared by

St. Marks City Commission

The City of St. Marks

COMPREHENSIVE PLAN

	DATE
Local Planning Agency Public Hearing on Proposed Comprehensive Plan	11/27/89
Local Planning Agency Public Hearing on Proposed Comprehensive Plan	12/14/89
Local Planning Agency Recommendation of Proposed Comprehensive Plan to City Commission	12/14/89
City Commission Public Hearing on Proposed Comprehensive Plan	12/14/89
City Commission Approval for Transmittal of Proposed Comprehensive Plan	12/14/89
City Commission Public Hearing on Comprehensive Plan	08/21/90
City Commission Adoption of Comprehensive Plan	08/21/90
City Commission Public Hearing on Proposed Comprehensive Plan Amendment	07/17/91
City Commission Approval for Transmittal of Proposed Comprehensive Plan Amendemnt	07/17/91
City Commission Public Hearing on Comprehensive Plan Amendment	04/09/92
City Commission Adoption of Comprehensive Plan Amendment	06/18/92

Prepared for the St. Marks City Commission, as the Local Planning Agency, by the consultant firm of EDWARD WATERS ASSOCIATES, Post Office Box 502, Tallahassee, Florida 32302

"Preparation of this Document was Aided Through Financial Assistance Received from the State of Florida under the Local Comprehensive Planning Assistance Program Authorized by Chapter 86-119, Laws of Florida and Administered by the Florida Department of Community Affairs."

FUTURE LAND USE ELEMENT

Goals, Objectives and Policies

Goal 1: Ensure that future land uses are consistent with the existing character of the City of St. Marks and do not pose a threat to human health and safety or to natural resources.

Objective 1.1: Manage future growth and development through the adoption and enforcement of land development regulations.

Policy 1.1.1: Coordinate the implementation of land development activity with the distribution, extent, location, and performance characteristics of the land uses of the adopted future land use map:

a) Residential land use, includes land area used for housing purposes, including single family, duplex, multi-family structures and group quarters, owner or renter occupied, permanent or seasonal residents.
b) Commercial land use, includes land area used for retail and wholesale sale, rental, and distribution of products, or performance of services.
c) Industrial land use, includes land area used for manufacturing, assembly, processing, or storage of products.
d) Public Buildings/Grounds land use, includes land area used by public owned and operated facilities or other activities performing a public or quasi-public function.
e) Recreation/Conservation land use, includes land area used for neighborhood and community parks, spectator sport facilities, and certain pastoral open space areas; land area designated for the purpose of conserving or protecting natural resources or environmental quality; land area designated by a governmental entity as historically, architecturally, or archaeologically significant.

f) Agricultural land use, includes land area used for silvaculture production and harvesting, pasture, food and fiber crop production, land lying fallow which has been in agricultural production, and otherwise undesignated land area planned to remain rural in character; very low residential density.
g) Mixed land use includes land area consisting of a mixture of compatible, as identified in the land development regulations, residential and commercial activities. Residential activity is permitted up to 4 units per acre. Commercial activities include wholesale and retail sale activities, office activities, and service activities.

Policy 1.1.2: Adopt a set of land development regulations by 1990 which implement and are consistent with the goals, objectives and policies of the St. Marks' Comprehensive Plan, and as a minimum:

a) Regulate the subdivision of land;
b) Regulate the use of land and water consistent with this Element and ensure the compatibility of adjacent land uses and provide for open space;
c) Protect the environmentally sensitive land designated on the future land map series, and referenced in the Conservation Element and Coastal Management Element;
d) Regulate and protect areas subject to periodic flooding and provide for drainage and stormwater management;
e) Regulate signage;
f) Provide that development orders and permits shall not be issued which result in a reduction in the level of services for the affected public facilities below the level of service standards adopted in this Comprehensive Plan; and
g) Contain performance standards which address historically significant properties meriting protection.

Policy 1.1.3: Support the enforcement of a building code which requires new construction and/or substantial renovations to meet acceptable levels for safety, plumbing, electrical and other needs.

Policy 1.1.6: Manage the location of vehicle access to SR 363 and promote the sharing of access for adjacent parcels fronting on SR 363 by including an access assessment process which incorporates standards consistent with FDOT rules in the land development regulations.

Objective 1.2: Insure the provision of public facilities and services adequate to meet demands of existing and future needs.

Policy 1.2.1: The City shall review and evaluate each proposed land use development -- whether of a private or public nature -- within the broad context of all adopted elements and standards of the comprehensive plan so as to ensure that the overall health, safety, convenience, and general welfare of the City and its citizens will be reasonably and properly protected upon development of any said proposed land use.

Policy 1.2.2: Require that development orders and permits shall be issued only if public facilities necessary to meet level of services standards adopted in this Comprehensive Plan are available concurrent with the impacts of development.

Policy 1.2.3: Adequate and suitable land for utility facilities will be provided to serve future development.

Policy 1.2.4: Public Utilities needed to provide essential service to existing and future land uses in the City of St. Marks shall be permitted in all of the land use classifications established by this plan.

Objective 1.3: Consider future development in light of its ability to enhance, maintain, and be appropriately compatible with existing land use patterns and relationships.

Policy 1.3.1: The City's land development regulations shall contain specific and detailed provisions which preserve and protect the integrity and stability of established residential areas.

CITY OF ST. MARKS

ORDINANCE NO. 92-1

AN ORDINANCE OF THE CITY OF ST. MARKS, FLORIDA TO BRING THE COMPREHENSIVE PLAN INTO COMPLIANCE.

WHEREAS, the City of St. Marks, Florida, recognizes the necessity to amend the Comprehensive Plan to include terms and conditions of Exhibit B of the Stipulated Settelment Agreement with the Department of Community Affairs.

Duly passed and adopted in regular session of the City Commission of St. Marks, Florida this 18 day of June, 1992.

CITY OF ST. MARKS, FLORIDA

By: _____
Charles C. Shields, Jr.
Mayor

First Reading: 14 May 1992

Second Reading: 18 June 1992

Attest:

Julie Brock
Julie Brock, City Clerk

10.4 EXISTING STATE PERMITS

Florida Department of Environmental Regulation
Northwest District • 160 Governmental Center • Pensacola, Florida 32501-5794
Lawton Chiles, Governor
Carol M. Browner, Secretary

PERMITTEE:

Mr. P. R. Ellis
Production Superintendent
City of Tallahassee

I.D. Number: 1065M02695
Permit/Certification Number: I065-188446
Date of Issue: MAY 31 1991
Expiration Date: May 1, 1996
County: Wakulla
Latitude/Longitude: 30°09'45"N/84°11'49"W
Section/Township/Range: 2/4-S/1-E
Project: Sam O. Purdom Generating Station

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-4, 17-302 and 17-660. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Operate a seven unit steam turbine electrical generating station with treated wastewater discharges into the St. Marks River. Wastewater from boiler blowdown, air preheater wash, and other minor process streams are discharged into the river after pretreatment in holding ponds. Condenser cooling water and demineralized wastewater are also discharged into the river.

Operation shall be in accordance with the renewal application and supporting documents received by the Department on October 29, December 14, 1990 and March 29, 1991.

PERMITTEE:

Mr. P. R. Ellis

I.D. Number: 1065M02695
Permit/Certification Number: I065-188446
Date of Issue: MAY 31 1991
Expiration Date: May 1, 1996

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "permit conditions", and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

PERMITTEE:

Mr. P. R. Ellis

I.D. Number: 1065M02695
Permit/Certification Number: I065-188446
Date of Issue: MAY 31 1991
Expiration Date: May 1, 1996

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of this permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and,

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. A description of and cause of noncompliance; and

b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:

Mr. P. R. Ellis

I.D. Number: 1065M02695
Permit/Certification Number: I065-188446
Date of Issue: MAY 31 1991
Expiration Date: May 1, 1996

GENERAL CONDITIONS:

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-730.300, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically, unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurement;
- the person responsible for performing the sampling or measurement;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

PERMITTEE:

Mr. P. R. Ellis

I.D. Number: 1065MO2695
Permit/Certification Number: I065-188446
Date of Issu

Expiration D

→ Moved to:
2815 Remington
Green Circle

GENERAL CONDITIONS:

14. When requested by the Department, the
reasonable time furnish any information req
determine compliance with the permit. If t
relevant facts were not submitted or were i
or in any report to the Department, such fa
corrected promptly.

SPECIFIC CONDITIONS:

15. Operation of the wastewater facilities
supervision of a person who is qualified by
experience in the field of water pollution

16. All analyses and reports on the monitoring of water quality required by this permit shall be submitted to the Northwest District Office, Department of Environmental Regulation, 160 Governmental Center, Pensacola, Florida 32501-5794 within 20 days after the specified reporting period. A copy shall also be submitted to the Northwest District Branch Office, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

17. Solids, sludges, waste, or other pollutants removed in the course of construction, treatment, or control of effluent shall be disposed of in such a manner so as to prevent said materials from entering waters of the State. Permittee shall obtain the Department's written approval prior to disposal of these materials.

18. Sampling, monitoring and effluent limitations for this facility are as follows:

A. Outfall 001*

Parameters	Frequency***	Type of Sample	Limitation
Temperature	Continuous**	Recorder	90°F (32.2°C) (mon. Avg) 95°F (35°C) (max.)
Chlorine Residual	Daily	Grab	0.01 mg/l

PERMITTEE:

Mr. P. R. Ellis

I.D. Number: 1065MO2695
Permit/Certification Number: IO65-188446
Date of Issue: MAY 31 1991
Expiration Date: May 1, 1996

SPECIFIC CONDITIONS:

B. Outfall 002*

Parameters	Frequency	Type of Sample	Limitation
Temperature	Continuous**	Recorder	90°F (32.2°C) (mon. Avg) 95°F (35°C) (max.)
Chlorine Residual	Daily	Grab	0.01 mg/l
Copper	One per Quarter	8 hr. Composite	0.03 mg/l
Iron	One per Quarter	8 hr. Composite	1 mg/l
pH	Daily	Grab	6.0 (min.) 8.5 (max.)

C. Outfall 005*

Parameters	Frequency	Type of Sample	Limitation
Oil & Grease	~~One per Week~~ 1/Discharge	Grab (See Attached Amendment)	5 mg/l
Total Suspended Solids	~~One per Week~~ 1/Discharge	8 hr. Composite	30 mg/l (mon. Avg) 100 mg/l (max.)
Copper	One per Quarter	8 hr. Composite	0.03 mg/l
Iron	One per Quarter	8 hr. Composite	1 mg/l
pH	Daily	Grab	6.0 (min.) 8.5 (max.)

*Sampling point 001 is located at the throat of the discharge structure from units 1-5. Use reporting code 1065X10128 for this point. Sampling point 002 is located at the center of the discharge canal for units 6 and 7 opposite the turbine intake structure. Use reporting code 1065X10131 for this point. Sampling point 005 is a faucet on unit 7 intake structure. Use reporting code 1065X10133 for this point.

Florida Department of Environmental Regulation

Northwest District • 160 Governmental Center • Pensacola, Florida 32501-5794

Lawton Chiles, Governor

Carol M. Browner, Secretary

DEC 23 1992

Mr. Robert E. McGarrah
Production Superintendent
City of Tallahassee Electric Department
Route 4, Box 448
Tallahassee, Florida 32304

Dear Mr. McGarrah:

In accordance with Ms. Jennette Curtis' request, permit number IO65-188446 is modified as follows:

Add

Subparagraph D is added to Specific Condition 18.

D. Outfall 006*

Parameters	Frequency	Type of Sample	Limitations
	Discharge	(See attached amendment)	
Oil & Grease	One per ~~Week~~	Grab	5 mg/l
	Discharge		
Total Suspended	One per ~~Week~~	8 Hr. Composite	30 mg/l (Mon. Avg.)
Solids			100 mg/l (Max.)
pH	Daily	Grab	6.0 (min.) 8.5 (max.)

*Sampling point 006 is identical to sampling point 005.

This letter shall be attached to and become a part of permit number IO65-188446.

Sincerely,

Bobby A. Cooley
District Director

BAC/nmt

PERMITTEE:

Mr. P. R. Ellis

I.D. Number: 1065MO2695
Permit/Certification Number: IO65-188446
Date of Issue: MAY 31 1991
Expiration Date: May 1, 1996

SPECIFIC CONDITIONS:

**Two temperature readings shall be taken from the continuous temperature recorders on each operating shift. The average of these readings will be used in determining the monthly average discharge temperature. The average and maximum daily temperature readings shall be reported on the monthly operation report.

***The analytical results of all samples taken shall be reported on the monthly operation report.

19. Prior to commencement of the Chlorination/Dechlorination specified in Jennette D. Curtis' letter dated March 26, 1991, a 96 hour static screening acute toxicity test shall be performed on the once through condenser cooling water. Following testing, two additional 96 hour shall be performed at a 30 day interval. Testing shall be accomplished in accordance with Attachment 1.

20. The permittee shall conduct, on an annual basis during the first two weeks in August, Benthic Macroinvertebrate monitoring in the St. Marks River, above and below the points of discharge. Testing shall be accomplished in accordance with Attachment 2.

21. Polychlorinated Biphenyl compounds such as those commonly used for transformer fluid are specifically prohibited in the discharge.

22. Prior to sixty (60) days before the expiration date of this permit, the permittee shall apply for a renewal of the permit on proper forms and in a manner prescribed by the Department.

23. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 436-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, telephone (904) 436-8380 during normal working hours.

Expiration date:

May 1, 1996

Issued this 31st day of May, 1991.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

for Buddy Page

ROBERT V. KRIEGEL
Deputy Assistant Secretary

Attachment 1 to Permit Number IO65-188446

Biomonitoring Program

In accordance with specific condition 19 of this permit, the permittee shall initiate the tests described below to evaluate toxicity of the discharge from the once through condenser cooling water.

1. The permittee shall conduct 96 hour static screening toxicity tests on the test species Ceriodaphnia and Fathead minnow (Pimephales promelas), once prior to dechlorination on samples of 100% whole effluent. Two samples shall be taken after initiation of the dechlorination process during the year. Such static screening tests will be conducted on each of four grab samples of effluent collected over a 24 hour period in order to catch any peaks of toxicity and to account for diurnal variations in effluent quality. Results on 100% effluent for each grab sample shall be reported. The results of each toxicity test shall be submitted to FDER.

Once the permittee has demonstrated to the satisfaction of FDER that there are no effluent toxicity, the above requirement may be deleted.

2. If any such bimonthly screening test indicates toxicity (less than 50% survival of test organisms in 100% effluent) is found in any sample of effluent, further confirmatory acute static toxicity testing involving the determination of 96 hour LC_{50} values with 95 percent confidence limits will be required. A minimum of two (2) such 96 hour confirmatory tests are required to be conducted within 30 days form the date that any screening test indicates the presence of toxicity. Preferably, the first of these confirmatory tests shall be initiated within 48 hours of a failed screening test. The second confirmatory test shall be initiated at least seven days after completion of the first confirmatory test. Such tests shall be conducted using that test species which exhibited the most toxicity in the screening tests above, and shall be taken at the same time of day and day of the week during which the greatest toxicity was exhibited. Alternately, testing involving the use of 96 hour flow-through toxicity tests may also be required in place of the static tests, if the toxicity demonstrated in the screening tests show substantial variability over time. The results of each toxicity test shall be submitted to FDER concurrently with monthly discharge monitoring reports.

3. All test procedures, and quality assurance criteria used shall be in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms,

IPA-600/4-85/013 and/or Quality Assurance Manual for Performing Acute Toxicity Tests, FDER Biology Section. If the test organisms specified in Part 2 are unavailable or unsuitable for use in the toxicity tests, appropriate substitutes from the list of recommended test organisms in the above referenced bioassay manuals may be used. This and any other deviation from the standard bioassay procedures, shall be submitted to FDER for review and approval prior to use.

4. If either of the above confirmatory tests indicate that the wastewaters are being discharged in violation of FAC 17-3 or 17-4 toxicity limits, the permittee shall submit to the FDER a toxicity control plan and accompanying implementation schedule within 90 days of the finalization of the acute toxicity study results. The control plan shall include appropriate measures such as the establishment or re-evaluation of a pretreatment program, the use of dechlorination, additional wastewater treatment, or changes in the operation of the facility to reduce the toxicity of the wastewater discharge to acceptable levels.

Attachment 2 to Permit Number IO65-188446

Benthic Macroinvertebrate Monitoring

The permittee shall provide biological data from the receiving waters above (control) and below (test site) the permitted point of discharge. Macroinvertebrate assemblages shall be collected with Hester-Dendy type artificial substrates incubated in the receiving waters for 28 days. Organisms retained on the artificial substrates after washing through a Number 30 standard sieve shall be analysed for number of species present, number of individuals per Taxa, total number of individuals in the sample, number per Meter^2, and Shannon-Weaver species diversity . Three replicates will be incubated at each site. Each replicate and the composite of all three shall be treated as stated above. The raw data, a discussion of results and conclusion shall be submitted to FDER within 90 days after completion of species identification.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL

In the matter of an
Application for Permit
By:
Mr. P. R. Ellis
Production Superintendent
City of Tallahassee
City Hall
Tallahasssee, Florida 32301
_____/

DER File No. IO65-188446
Wakulla County

Enclosed is Permit Number IO65-188446 to operate the Sam O. Purdom Generating Station, issued pursuant to Section 403.087, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, Florida Statutes, and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

Executed in Pensacola, Florida.

State of Florida Department
of Environmental Regulation

for ROBERT V. KRIEGEL
Deputy Assistant Secretary

160 Governmental Center
Pensacola, Florida 32501-5794
(904) 436-8300

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT ISSUANCE and all copies were mailed by certified mail before the close of business on MAY 31 1991 to the listed persons.

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to §120.52(9), Florida Statutes, with the designated Department clerk, receipt of which is hereby acknowledged.

Yolanda Martin
Clerk

MAY 31 1991
Date

CITY OF TALLAHASSEE

ELECTRIC DEPARTMENT

CITY OF TALLAHASSEE

MEMORANDUM

TO: Gordon King, Purdom Plant Supervisor

FROM: Jennette D. Curtis, Environmental Affairs Administrator

DATE: November 30. 1995

SUBJECT: Industrial Wastewater Permit Revision

Please find attached a copy of the revision to sampling requirements for Outfalls 005 and 006 as requested by the COT Electric Department. Note: This change clarifies the fact that we sample once per discharge.

If you have any questions please do not hesitate to call me at 8850.

JDC/pg

cc: Marty Black, Manager, Utility Support Services
Phil Bucci, Environmental Specialist
Hal Avery, Environmental Specialist

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

November 7, 1995

Mr. Robert E. McGarrah
Production Superintendent
City of Tallahassee Electrical Department
300 South Adams Street
Tallahassee, Florida 32301-1731

RE: Permit Revision (Minor)
Wastewater Permit FL0025526
City of Tallahassee Electrical Department
Sam O. Purdom Generating Station

Dear Mr. McGarrah:

Pursuant to rule 62-620.330, Florida Administrative Code, the Department is revising Section II (State Permit IO65-188446) of Wastewater Permit FL0025526. Specific Condition 18, Subparagraphs C and D of the permit is revised as follows:

FROM:

Subparagraphs C and D include sampling, monitoring, and effluents limitations for Outfalls 005 and 006, respectively. Sampling frequencies for listed parameters are either daily, weekly, or quarterly.

TO:

Sampling frequencies for all listed parameters in Subparagraphs C and D shall be "once per discharge." All other requirements of Subparagraphs C and D remain the same.

The purpose of this permit revision is to provide a sampling frequency that is more compatible with the intermittent nature of the discharge. Outfall 005, metal cleaning waste, discharges approximately twice a year. Outfall 006, low volume waste, discharges approximately once per week.

This letter shall be attached to your existing Wastewater Permit. All other conditions of the permit shall remain in effect. If you object to this permit revision you may petition for an administrative hearing in accordance with the enclosed Notice Of Rights. If a petition is filed then this permit revision does not become effective. If you have any questions about this permit revision, you may contact Craig Diltz of the Industrial Wastewater Section at 904/488-4522.

Sincerely,

Richard M. Harvey, P.E.
Director
Division of Water Facilities

RMH/pc
Enclosure

cc: Bill Evans
Phil Coram
Craig Diltz

NOTICE OF RIGHTS

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. A petitioner, other than the applicant, shall mail a copy of the petition to the applicant at the address indicated in the attached letter at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this intent. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this intent in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that copies of this Permit Revision were mailed before the close of business on the date indicated below to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT
Filed, on this date, pursuant to section 120.52(9) of the Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

S. Shields 11-8-95

Clerk Date

Copies furnished to:

Robert McGarrah
Bill Evans
Phil Coram

Department of Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

PERMITTEE:

City of Tallahassee
Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001
Air Permit Number: 1290001-002-AC
Emission Unit: 010
Date of Issue: December 5, 1996
Expiration Date: December 31, 1997
County: Wakulla
Project: Natural Gas Fired Auxiliary Boiler

This permit is issued under the provisions of Section 403.087, Florida Statutes, and Florida Administrative Code Rules 62-296, 62-297 and 62-4. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Construction of a 16.74 MMBtu/hr natural gas fired auxiliary steam generating boiler (Kewanee, model number H3S-400-G) at the City of Tallahassee's Sam O. Purdom Generating Station.

Construction shall be consistent with the construction permit application signed September 20, 1996.

Located on the east side of State Road 363 at 667 Port Leon Drive, St. Marks

PERMITTEE:

Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001
Air Permit Number: 1290001-002-AC
Emission Unit: 010
Date of Issue: December 5, 1996
Expiration Date: December 31, 1997

SPECIFIC CONDITIONS:

General

1. The attached General Conditions are part of this permit. [FAC Rule 62-4.160]

Construction

2. The Department shall be notified of the date construction of this emission unit commences postmarked no later than 30 days after such date, of the anticipated date of initial startup postmarked not more than 60 days nor less than 30 days prior to such date, and of the actural date of initial startup postmarked within 15 days after such date. [FAC Rule 62-4.070, 62.204.800(7)(d)]

3. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction. [FAC Rule 62-4.030]

Operation

4. The maximum allowable operating rate is 16.74 MMBtu/hr heat input. [FAC Rule 62-4.070]

5. The maximum hours of operation are 2000 hours per year. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation and fuel consumption annually. [FAC Rule 62-4.070 and construction permit application]

6. This emission unit shall only be operated as an auxiliary source of steam when the existing steam generating units (boilers 5,6, &7) are not operating. (Construction permit application)

7. All applicable requirements of 40 CFR 60 Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, shall be met. (FAC Rule 62-204.800)

PERMITTEE:

Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001
Air Permit Number: 1290001-002-AC
Emission Unit: 010
Date of Issue: December 5, 1996
Expiration Date: December 31, 1997

SPECIFIC CONDITIONS:

Emissions

8. The maximum allowable emission limit for each pollutant is as follows:

Pollutant	FAC Rule	Allowable Emissions
VE	62-296.406	20% opacity except for one two minute period per hour during which the opacity shall not exceed 40%.

9. Excess emissions resulting from startup, shutdown or malfunction shall be allowed providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. The Permittee shall immediately notify the Department's Tallahassee Branch Office of excess emissions resulting from malfunctions. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence. (Rules 62-210.700, 62-4.130)

Testing

10. Visible emissions tests are required to show compliance with the standards of the Department. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. [FAC Rule 62-297.310(2)] A sixty minute visible emissions tests shall be conducted in accordance with DEP method 9 within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup of the emission unit. The Department shall be notified at least 15 days prior to testing to allow witnessing. Results shall be submitted to the Department within 45 days after testing.

The test report shall comply with F.A.C. Rule 62-297.310(8), Test Reports.

The Department can require special compliance tests in accordance with F.A.C. Rule 62-297.310(7)(b).

Other test methods and alternate compliance procedures may be used only after prior Departmental approval has been obtained in writing.

SPECIFIC CONDITIONS:

[10. (cont.'d)]

Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90 to 100% of the maximum allowable heat input rate. If it is impractical to test at capacity, then sources may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department. [FAC Rule 62-297.310(2)]

Administrative

11. An annual operating report for air pollutant emitting facility, DEP Form 62-210.990(5), shall be submitted by March 1 of each year. A copy of the form and instructions may be obtained from the Department of Environmental Protection, Northwest District Air Resources Management Program, (904) 444-8364. [FAC Rule 62-210.370(3)]

12. The applicant shall retain a Professional Engineer, registered in the State of Florida, for the inspection of this project. Upon completion the engineer shall inspect for conformity to the permit application and associated documents. An application for an operation permit [Form DEP 62-210.900(1), Long Form]shall be submitted with the compliance test results and appropriate fee when applicable. These are to be submitted within 105 days after achieving the maximum production rate at which the emission unit will be operated, but no later than 225 days after initial startup of the emission unit. The permittee shall obtain an operating permit for this source before the expiration of this construction permit if the permittee desires to continue operation. [FAC Rule 17-210.300]

13. The emission unit covered by this permit is 1290001010. Please cite this number on all test reports and other correspondence specific to this permitted emission unit. [FAC Rule 62-297.310(8)]

14. The Permittee, for good cause, may request that this construction permit be extended. Such a request with the required $50 extension fee shall be submitted 60 days prior to the expiration date of this permit. (FAC Rule 17-4.080(3)

PERMITTEE:

Sam O. Purdom Generating Station

AIRS I.D. Number: 1290001
Air Permit Number: 1290001-002-AC
Emission Unit: 010
Date of Issue: December 5, 1996
Expiration Date: December 31, 1997

SPECIFIC CONDITIONS:

15. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8364, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 413-9911. For routine business, telephone (904) 488-3704 during normal working hours. [FAC Rule 62-4.130]

Expiration Date:

December 31, 1997

Issued this 5th day of DEC, 1996.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Ed K. Middleswart

ED K. MIDDLESWART, P.E.
Air Program Administrator

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "permit conditions", and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

GENERAL CONDITIONS:

a. Having access to and copying any records that must be kept under the conditions of this permit;
b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and,
c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

a. A description of and cause of noncompliance; and
b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, as applicable. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

GENERAL CONDITIONS:

13. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurement;
- the person responsible for performing the sampling or measurement;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Department of Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

ELECTRIC UTILITIES ( )
GAS UTILITIES ( )
WATER UTILITIES ( )

Virginia B. Wetherell
Secretary

December 6, 1996

Robert E. McGarrah
Production Superintendent
City of Tallahassee, Electric Utility
2602 Jackson Bluff Road
Tallahassee, Florida 32304

Dear Mr. McGarrah:

On December 5, 1996, the Department issued permit 1290001-002-AC to construct an auxiliary boiler. This letter will correct an error made in that permit.

The Emission Unit number for the auxiliary boiler was listed incorrectly. The correct Emission Unit number for the auxiliary boiler is 011.

By this letter Specific Condition 13 is changed

From:

13. The emission unit covered by this permit is 1290001010. Please cite this number on all test reports and other correspondence specific to this permitted emission unit. [FAC Rule 62-297.310(8)]

To:

13. The emission unit covered by this permit is 1290001011. Please cite this number on all test reports and other correspondence specific to this permitted emission unit. [FAC Rule 62-297.310(8)]

Sincerely,

Ed K. Middleswart

Ed K. Middleswart, P.E.
Air Program Administrator

EKM:cmc

cc: Jennette Curtis, City of Tallahassee
DEP Northwest District Branch Office, Tallahassee

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF PERMIT

In the matter of an
Application for Permit
By:
Robert E. McGarrah, Production Superintendent
City of Tallahassee, Electric Utility
2602 Jackson Bluff Road
Tallahassee, FL 32304

DEP File No. 1290001-002-AC
Wakulla County

Enclosed is Permit Number 1290001-002-AC, issued pursuant to Section 403.087, Florida Statutes.

Any party to this Order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the 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 fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the Clerk of the Department.

Executed in Pensacola, Florida.

State of Florida Department
of Environmental Protection

Edk. Middleswart

ED K. MIDDLESWART, P.E.
Director of District Management

160 Governmental Center
Pensacola, Florida 32501-5794
(904) 444-8364

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on December 5, '96 to the listed persons.

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52(11), Florida Statutes, with the designated Department clerk, receipt of which is hereby acknowledged.

Clerk [illegible] Date 12/5/96

Copies Furnished to:
Jennette D. Curtis, City of Tallahassee
DEP Northwest District Branch Office, Tallahassee

Department of Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

PERMITTEE:

City of Tallahassee
Sam O. Purdom Generating Station

I.D. Number: 10TLH65000108,09
Permit/Certification Number: AO65-242827
Date of Issue: March 8, 1994
Modification Date: June 10, 1994
Modification Date: June 24, 1994
Expiration Date: March 1, 1999
County: Wakulla
Latitude/Longitude: 30°09'30"N\84°12'00"W
Project: Purdom Combustion Turbines 1 & 2

This permit is issued under the provisions of Section 403.087, Florida Statutes, and Florida Administrative Code Rules 17-296, 17-297 and 17-4. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Operation of combustion turbines 1 and 2, manufactured by Westinghouse, model W171G, each with a heat input rate of 228 MMBtu/hour, fueled by natural gas or No. 2 fuel oil with a maximum of 0.4% sulfur. These turbines are used as peaking units during peak demand hours, during emergencies, and during controls testing; and each runs a nominal 12.3 MW generator.

Located on the east side of SR 363 in St. Marks, Wakulla County.

Specific Condition No. 2 establishes maximum operating and testing rates.

Specific Condition No. 4 establishes maximum allowable emission rates.

Specific Condition No. 5 establishes testing requirements.

Specific Condition No. 6 limits the sulfur content of the fuel oil.

Specific Condition No. 7 requires submission of an annual operation report.

Specific Condition No. 8 requires submission of a Major Air Pollution Source Annual Operation Fee Form.

Specific Condition No. 9 requires submission of a renewal permit application prior to December 31, 1998.

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000108,09
Permit/Certification Number: AO65-242827
Date of Issue: March 8, 1994
Modification Date: June 10, 1994
Modification Date: June 24, 1994
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.

2. The maximum allowable heat input rate per combustion turbine is 228 MMBtu/hour (LHV) at an ambient temperature of 80 degrees Fahrenheit. Testing of emissions shall be conducted at 95-100% of the permitted rated heat input based on the average ambient air temperature during the test. Data for correcting heat input rates (corrected for air temperatures other than 80 degrees Fahrenheit) must be submitted with the compliance test report. If it is impracticable to test at 95-100% of the maximum allowable heat input rate corrected for the average ambient air temperature, then sources may be tested at less than 95% of the maximum allowable heat input. If the source is tested at less than 95% of the maximum allowable heat input, subsequent source operation is limited to 110% of the tested heat input rate corrected for average ambient air temperature until a new test is conducted. Once the unit is so limited, then operation at higher capacity is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit with prior notification to the Department.

3. The maximum hours of operation are 6993 hours/year for each turbine. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation annually.

4. The maximum allowable emission rate for each pollutant is as follows:

Pollutant	FAC Rule	Allowable Emissions
VE	17-296.310(2)	less than 20% opacity

The excess emissions provision of F.A.C. Rule 17-210.700 shall apply during periods of startup, shutdown and malfunctions.

5. Emissions tests for the following pollutants shall be performed annually between July 1 and September 30, in accordance with the test methods and frequency indicated, with notification to the Department 15 days prior to testing. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. For good cause, the Permittee may request an extension of a compliance test due date. However, inadequate planning of testing does not constitute good cause for an extension of the compliance test due date. The test report documentation must be submitted to the Department within 45 days after completion of testing.

Pollutant	Frequency	Test Method
VE	Annually	DEP 9

However, with the following exceptions, the visible emissions test shall only be required during those federal fiscal years during which the individual turbines operate greater than 400 hours.

- An initial VE test is required within 15 days of any use of fuel oil.
- A VE test is required in 1998 while operating on fuel oil.

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000108,09
Permit/Certification Number: AO65-242827
Date of Issue: March 8, 1994
Modification Date: June 10, 1994
Modification Date: June 24, 1994
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

6. If fueled 100% by oil the sulfur content of the oil shall not exceed 0.4% sulfur by weight. Records of fuel oil sulfur content shall be kept and made available for Department inspections.

7. An annual operation report [DEP Form 17-210.900(4) enclosed] shall be submitted by March 1 each year. The enclosed form shall be reproduced by the Permittee and used for future annual submittals.

8. In accordance with F.A.C. Rule 17-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) enclosed] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.220.807, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The enclosed form shall be reproduced by the Permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility I.D. Number), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

9. An application to renew this permit shall be submitted prior to December 31, 1998.

10. The permanent source identification numbers for these point sources are:

10TLH65000108 -- Combustion Turbine No. 1
10TLH65000109 -- Combustion Turbine No. 2

Please cite these numbers on all test reports and other correspondence specific to this permitted point source.

11. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, use telephone number (904) 488-3704 during normal working hours.

Expiration Date:

March 1, 1999

Modified this 24th day of June, 1994.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

BOBBY A. COOLEY
District Director

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000108,09
Permit/Certification Number: AO65-242827
Expiration Date: March 1, 1999

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "permit conditions", and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes. The Permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the Permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The Permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the Permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The Permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of this permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and,

GENERAL CONDITIONS:

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the Permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the Permittee shall immediately provide the Department with the following information:

a. A description of and cause of noncompliance; and

b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the Permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The Permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the Permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-730.300, as applicable. The Permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. The Permittee shall comply with the following:

a. Upon request, the Permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The Permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous

GENERAL CONDITIONS:

monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurement;
- the person responsible for performing the sampling or measurement;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the Permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the Permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

Florida Department of
Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

PERMITTEE:

City of Tallahassee
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07
Permit/Certification Number: AO65-242831
Date of Issue: March 8, 1994
Expiration Date: March 1, 1999
County: Wakulla
Latitude/Longitude: 30°09'30"N/84°12'00"W
Project: Purdom Boilers 5,6,7

This permit is issued under the provisions of Section 403.087, Florida Statutes, and Florida Administrative Code Rules 17-296, 17-297 and 17-4. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Operation of Boilers 5, 6, and 7 at the City of Tallahassee's Purdom Power Plant. Boilers 5 and 6 each have a maximum 300 MMBtu/hr heat input, are natural gas and/or No. 6 fuel oil fired, produce nominally 220,000 pounds of steam per hour, and each run a nominal 22 MW turbine-generator. Boiler 7 has a maximum 621 MMBtu/hr heat input, is fired with natural gas and/or No. 6 fuel oil, produces nominally 500,000 pounds of steam per hour, and runs a nominal 44 MW turbine-generator.

Located on the east side of State Road 363 in St. Marks.

Specific Condition No. 2 establishes maximum allowable operating and testing rates.

Specific Condition No. 4 establishes maximum allowable emission rates.

Specific Condition No. 5 establishes compliance testing requirements.

Specific Condition No. 6 limits fuel oil sulfur content.

Specific Condition No. 8 requires submission of an annual operation report.

Specific Condition No. 9 requires submission of a Major Air Pollution Source Annual Operation Fee Form.

Specific Condition No. 10 requires submission of a renewal permit application by December 31, 1998.

PERMITTEE:

City of Tallahassee
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07
Permit/Certification Number: AO65-242831
Date of Issue: March 8, 1994
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.

2. The maximum allowable heat input rate is for Boilers 5 and 6 is 300 MMBtu/hour per boiler. The maximum allowable heat input rate for Boiler 7 is 621 MMBtu/hour. Testing of particulate emissions shall be conducted with the source operating at capacity. Capacity is defined as 90 to 100% of the maximum allowable heat input rate for the fuel or mix of fuels being burned. If it is impracticable to test at capacity, then sources may be tested at less than capacity; if the source is tested at less than capacity subsequent source operation is limited to 110% of the test capacity until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department.

3. The maximum hours of operation are 24 hours/day, 7 days/week, and 52 weeks/year. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation annually.

4. The maximum allowable emission rate for each pollutant per source is as follows:

Pollutant	FAC Rule	Allowable Emission Rate
VE	17-296.405 17-210.700	20% opacity * 60% during Excess Emissions
PM	17-296.405 17-210.700	0.1 lbs/MMBtu heat input** 0.3 lbs/MMBtu heat input during Excess Emissions**
SO_2	17-296.405	1.87 lbs/MMBtu heat input

* except for one two-minute period per hour of not more than 40% opacity

** Emissions of particulate matter shall not exceed 0.1 (normal operations) and 0.3 (during excess emissions) lbs/MMBtu heat input when firing fuel oil. No particulate matter limit shall apply when firing natural gas.

The excess emissions provisions of F.A.C. Rule 17-210.700 shall apply during periods of startup, shutdown and malfunctions.

PERMITTEE:

City of Tallahassee
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07
Permit/Certification Number: AO65-242831
Date of Issue: March 8, 1994
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

5. Emissions tests for the following pollutants for each source shall be performed annually between July 1 and September 30, in accordance with the test methods and frequency indicated below, with notification to the Department 15 days prior to testing. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum heat input rate. ~~The tests shall be conducted using the maximum fuel oil/natural gas ratio to be used during the subsequent operating year~~. For good cause, the Permittee may request an extension of a compliance test due date. However, inadequate planning of testing does not constitute good cause for an extension of the compliance test due date. The test report documentation must be submitted to the Department within 45 days after completion of testing.

See letter dated 4/8/94 to J. Curtis Attachment "A"

Pollutant	Frequency	Test Method
VE*	Annually, during normal operation	DEP 9
	Annually, during excess emissions, when applicable	DEP 9
PM*,*1	Annually	EPA 1, 2, 3 and 5, or 17
	Annually, during excess emissions, when applicable	EPA 1, 2, 3 and 5, or 17

* shall be conducted using the maximum fuel oil to gas ratio in use during the current test year

*1 No particulate tests shall be required in any federal fiscal year in which the fossil fuel steam generator did not burn fuel oil for more than 400 hours, other than during startup.

The VE test shall be conducted during one of the P.M. test runs. Test reports shall comply with F.A.C. Rule 17-297.570, Test Reports. The Department can require special compliance tests in accordance with F.A.C. Rule 17-297.340(2).

6. If fueled 100% by oil the sulfur content of the oil shall not exceed 1.8% sulfur by weight. Records of fuel sulfur content shall be kept and made available for Department inspections.

7. Satisfactory ladders, platforms, and other safety devices as well as necessary parts shall be provided, maintained, and made available as necessary to facilitate compliance inspections.

8. An annual operation report [DEP Form 17-210.900(4) attached] shall be submitted by March 1 each year. The attached form shall be reproduced by the Permittee and used for future annual submittals.

PERMITTEE:

City of Tallahassee
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07
Permit/Certification Number: AO65-242831
Date of Issue: March 8, 1994
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

9. In accordance with F.A.C. Rule 17-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) attached] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.220.807, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The attached form shall be reproduced by the Permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility I.D. Number), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

10. An application to renew this permit shall be submitted prior to December 31, 1998.

11. The permanent source identification number for these point sources are:

10TLH65000105 - Boiler 5
10TLH65000106 - Boiler 6
10TLH65000107 - Boiler 7

Please cite these numbers on all test reports and other correspondence specific to a permitted point source.

12. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, use telephone number (904) 444-8300 during normal working hours.

Expiration Date:

March 1, 1999

Issued this 8th day of March, 1994.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

BOBBY A. COOLEY
District Director

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000105,06,07
Permit/Certification Number: AO65-242831
Date of Issue: March 8, 1994
Expiration Date: March 1, 1999

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "permit conditions", and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, Florida Statutes. The Permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the Permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The Permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the Permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The Permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the conditions of this permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and,

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000105,06,07
Permit/Certification Number: AO65-242831
Date of Issue: March 8, 1994
Expiration Date: March 1, 1999

GENERAL CONDITIONS:

c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the Permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the Permittee shall immediately provide the Department with the following information:

a. A description of and cause of noncompliance; and

b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the Permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The Permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the Permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.120 and 17-730.300, as applicable. The Permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. The Permittee shall comply with the following:

a. Upon request, the Permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The Permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous

GENERAL CONDITIONS:

monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurement;
- the person responsible for performing the sampling or measurement;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

14. When requested by the Department, the Permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the Permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

10.5 MONITORING PROGRAMS

10.5.1 Human Resources

10.5.1.1 Visual Analysis

Following is a description of the methodology used to complete the visual analysis conducted in conjunction with the discussion of aesthetic and scenic values presented in Section 7.2.2.2.

Field Methodology

In preparation of the field work, the project site plan was superimposed on a current aerial photograph at a scale of 1" = 200'. The potential for viewing the proposed project is greatest for boaters along the St. Marks River. Existing structures located on and near the project site were photographed from a variety of viewpoints. The viewpoints were established along the river from the bend near Rattlesnake Branch to the McKenzie Tank Lines property along the Purdom Station's south property line. Several of the photographs were used to further analyze the potential for visual impact. The existing structures were utilized to scale the photographic simulation. The view for boaters on the St. Marks River heading south was selected as the worst case view and a visual simulation was prepared for that key viewpoint.

Photographs were taken with a Canon EOS camera using a 50mm lens and Kodak Gold ASA 100 film. The camera was placed at approximately 5 feet 6 inches above the elevation of the St. Marks River and a series of photographs taken at each location. Photographs were taken on December 6, 1996, between the hours of 10:00 a.m. and 12:00 noon, and the weather was overcast.

The film was developed professionally and 4 x 6 inch prints were made of all exposures. The 4 x 6 inch prints were reviewed and one print was selected for use in the simulation effort. An enlargement of the selected print was made in preparation of this work for use in assessing potential visual impact.

Techniques Used in Preparation of the Simulation

In order to place the proposed facilities as accurately as possible, the following techniques were utilized to address position, scale, shape, color, detail and texture. Locating proposed facilities on photographs involved the following steps for each structural component of the new generating unit:

Step 1. On a 1" = 200' scale aerial photograph, lines were drawn connecting the view point with two existing stacks and the existing water tower.

Step 2. The angle between the sight lines to the water tower and the existing stacks were measured.

Step 3. On the color photograph, the distance between the stacks and water tower was measured in inches from center to center.

Step 4. The result of Step 3 was divided by the result of Step 2 to determine the number of inches on the photograph represented by each degree of angle as measured on the aerial. For example, if the angle between the two stacks was measured on the

aerials as 10 degrees and the distance between the stacks was measured on the photograph as 5 inches, the result would be a factor of 1 inch equals 2 degrees.

Step 5. The proposed facilities, as depicted on a 1" = 200' scale site plan, were drawn on the aerial photograph. Additional lines were then drawn connecting the view point with the proposed facilities to determine the left and right boundaries of the viewing area and the sight progression of the facilities from the view point.

Step 6. The angle between each proposed facility identified in Step 5 and the existing stacks was measured.

Step 7. Using the factor determined in Step 4, the angles measured in Step 6 were converted to inches on the photograph.

Step 8. The distances yielded in Step 7 were then plotted on the photograph along the water line. Perpendicular lines extending up from the horizon line at each of the plotted points were then drawn.

Step 9. The height of each proposed facility on the photograph was determined by the following method:

a. For an existing object of known height in a particular image, the following simple equation was used to determine a multiplier for the vertical dimension objects on the photograph:

Vertical Multiplier = image height/actual height X viewing distance.

b. The stack height for Unit 7 is approximately 180 feet above grade (190 feet above water line), measures 9 inches on the photograph, and is 1,200 feet from the viewpoint, as measured on the aerial photograph. This yields a vertical multiplier of 24.6.

c. To determine the heights of the proposed facilities on the photograph, the above formula was converted to solve for the unknown variable, image height:

Image Height = actual height/viewing distance X vertical multiplier.

d. Actual heights of the proposed stack was provided by the project engineer. Viewing distances from the view point were measured on the 1 inch equals 200 feet scale aerial.

e. The calculated height for the stack was plotted on the photograph at the points on the horizon line plotted in Step 8.

10.5.2 Cultural Resources

There are no monitoring programs associated with this technical category.

10.5.3 Groundwater

There are no monitoring programs associated with this technical category.