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December 24, 1992

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DEC 31 1992
Division of Air
Resources Management

Mr. Max Linn
Meteorologist
Division of Air Resources Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Cedar Bay Cogeneration Project
Air Quality Analysis - November 1992

Dear Mr. Linn:

The purpose of this letter is to confirm our telephone conversation of 23 December, 1992 concerning the subject analysis. Our conversation addressed the following key elements of the air quality analysis as documented in ENSR's November 1992 report which you have reviewed:

1. The use of the ISCST2 dispersion model (version 92062) and model options as listed in Table 2-1 of the subject report (attached).

2. The use of 1983-1987 meteorological data made up of surface data from Jacksonville International Airport and upper air data from Ware County Airport in Waycross, Georgia.

3. The use of 1989-1991 air quality data for SO_2, PM-10, and NO_2 to develop background concentrations for use in determining compliance with the AAQS. And, as described in Section 3.4 of the subject report, the selection of the lowest second-highest short-term and lowest annual average concentration as representative background, as summarized in Table 3-15 of the subject report.

4. The model receptor grid as described in Section 2.3 of the subject report, a polar grid represented by the intersection of 36 radials at 10° intervals and 28 concentric rings centered on the Cedar Bay CFB stack at the following distance intervals:

Range (km)	Interval (km)
0.1 to 1.0	0.1
1.0 to 2.0	0.25
2.0 to 5.0	0.5
5.0 to 10.0	1.0
10.0 to 25.0	5.0

5. The SO_2, PM/TSP, and NO_x source inventories selected for interactive modeling for PSD increment and AAQS compliance as described in Section 3.3 of the subject report.

6. The PSD baseline emissions data for SO_2, TSP, and NO_2 developed by KBN for the SKC sources being shut down, specifically the three power boilers and two bark boilers.

Concerning items 1 and 2 above, you indicated that these elements of the analysis were appropriate and that you approve of their selection.

Concerning item 3, you indicated that these data were appropriate and reasonable for selecting background concentrations and that the use of the lowest of the second-highest short-term and lowest annual average concentrations was reasonable and appropriate, particularly given the large number of sources being considered in the interactive modeling. You also indicated that given the large number of sources being modeled, one could argue that the lowest annual average would more reasonably represent background for all averaging periods but that, since our use of the short-term values is more conservative, that alternative was reasonable and acceptable to you for the subject analysis.

Concerning item 4, you indicated that the receptor grid chosen was of a reasonable and appropriate density, particularly within the range of the distances of most of the predicted maximum impacts, (less than 0.5 km). You suggested that where a maximum impact is predicted at 2.5 km or further that dense grid (100-m spacing) receptor modeling be repeated for the highest and second-highest predictions at the receptor to resolve the maximum impact.

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Concerning item 5, you indicated that although you had not performed an exhaustive review of all the detailed information provided, you felt that these inventories were fairly complete and contained those sources which you would have recommended should be included in the subject analysis.

Concerning item 6, you indicated that you would not normally take responsibility for approving the PSD baseline source emissions assumptions. The SKC PSD baseline data was supplied to us by KBN during their preparation of the SKC permit application. You indicated that a Mr. Cleve Holiday, of the Bureau of Air Regulation, was reviewing the SKC permit application for the three new package boilers, prepared by KBN. You further indicated that you would defer to Mr. Holiday's assessment of this data for your acceptance, and suggested that I speak with him.

For your information, I spoke with Mr. Holiday yesterday and he indicated that he had reviewed the PSD baseline data contained in the KBN report supporting the SKC permit application, had found no problems with it and was approving its use in that analysis. By copy of this letter to Mr. Holiday, I am also confirming my discussion with him.

Also, for your information, I have enclosed a copy of the City of Jacksonville, DRES, AQD's comments on the Cedar Bay Project, which were submitted to Mr. Oven by letter of 4 December, 1992.

I believe the above summary of our conversation accurately reflects your statements and opinion as to the appropriateness of these elements of our analysis. I appreciate your time in discussing these issues and hope that I have accurately portrayed our conversation. If you have any comments or clarifications, please feel free to call me at (508) 635-9500 x3161.

Sincerely,

Joseph A. Curreri
Vice President
Manager, Air Quality Measurements and Studies Group

ENSR Reference No. 5402-027
ENSR Document No. 12AQS049.JC

Attachment

cc: C. Holiday/DER

TABLE 2-1

ISCST2 Modeling Options

Option Description	Value
Dispersion Parameters	Rural
*Wind Profile Exponents	0.07, 0.07, 0.10, 0.15, 0.35, 0.55
*Vertical Potential Temperature Gradient	0.02, 0.035
*Stack-Tip Downwash	Used
*Buoyancy Induced Dispersion	Used
Anemometer Height (actual)	6.1 m
*Decay Coefficient	0.0
Building Downwash	Used as applicable for Cedar Bay and SK sources
*Gradual Plume Rise	Not used (except for building wake effect modeling)

* Default values recommended by EPA.

Cedar Bay Cogeneration Project
Air Quality Analysis

Technical Review Guide

Excerpts from "Cedar Bay Air Quality Analysis"
February 1993

Model Results Tables

Prepared for Max Linn of FDER

02AQS020.AH / 5402-027

Results Summary Tables

a. Case Comparisons - Tables 2-13 through 2-18

b. PSD, AAQS and NTLs - Tables 3-24 through 3-41

c. Soils and Vegetation - Tables 5-1 through 5-4

TABLE 2-13

Findings for Comparison No. 2, Assessment A, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375 k lb/hr Steam Firing Fuel Oil vs. Case 2: Cedar Bay as Certified

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved
			Case 2	Case 4		
SO_2	3 hr	1983	165.60	443.11	5.71	831
		1984	173.48	232.14	6.95	829
		1985	236.12	299.64	9.75	841
		1986	210.39	260.70	7.04	808
		1987	173.15	267.90	6.11	845
	24 hr	1983	60.99	112.51	3.12	742
		1984	89.88	68.84	4.23	766
		1985	70.75	83.23	3.71	809
		1986	81.04	65.46	3.59	768
		1987	72.54	86.35	3.37	750
	Annual	1983	9.33	3.74	0.47	468
		1984	9.84	2.81	0.50	477
		1985	9.82	3.71	0.49	483
		1986	12.39	2.64	0.51	497
		1987	10.10	3.42	0.47	460
PM-10	24 hr	1983	35.91	20.43	0.55	755
		1984	33.00	19.52	0.53	653
		1985	33.73	20.07	0.50	738
		1986	32.91	24.89	0.45	736
		1987	33.77	19.31	0.45	676
	Annual	1983	3.97	3.04	-0.009	369
		1984	4.75	3.49	-0.014	308
		1985	3.71	3.39	-0.013	337
		1986	4.31	3.70	-0.017	310
		1987	3.85	2.89	-0.005	383

TABLE 2-13 (Cont'd)

Findings for Comparison No. 2, Assessment A, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375 k lb/hr Steam Firing Fuel Oil vs. Case 2: Cedar Bay as Certified

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved
			Case 2	Case 4		
CO	1 hr	1983	47.38	367.00	-15.84	87
		1984	57.94	356.02	-15.38	91
		1985	60.60	366.01	-15.41	90
		1986	69.07	365.43	-15.37	95
		1987	52.69	369.33	-15.20	96
	8 hr	1983	14.17	147.08	-5.36	117
		1984	16.84	96.23	-5.26	115
		1985	16.86	131.09	-5.41	113
		1986	16.39	132.16	-5.28	114
		1987	15.58	111.10	-5.23	115
NO_2	Annual	1983	4.47	2.48	0.20	446
		1984	4.72	1.86	0.22	555
		1985	4.70	2.46	0.22	506
		1986	5.94	1.73	0.23	544
		1987	4.83	2.24	0.21	535
Pb	Monthly	1983	1.9e-02	3.2e-04	0.006	977
		1984	1.8e-02	2.4e-04	0.006	976
		1985	1.9e-02	3.5e-04	0.006	978
		1986	2.9e-02	3.6e-04	0.007	978
		1987	2.1e-02	3.8e-04	0.006	976
	Annual	1983	6.2e-03	1.1e-04	0.002	976
		1984	7.0e-03	1.0e-04	0.002	976
		1985	6.3e-03	1.1e-04	0.002	976
		1986	7.6e-03	1.1e-04	0.002	978
		1987	7.9e-03	1.1e-04	0.002	977

TABLE 2-13 (Cont'd)

Findings for Comparison No. 2, Assessment A, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375 k lb/hr Steam Firing Fuel Oil vs. Case 2: Cedar Bay as Certified

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved
			Case 2	Case 4		
Total Air Toxics	8 hr	1983	9.71	9.36	1.94	966
		1984	11.54	11.02	2.10	964
		1985	11.55	9.51	2.25	965
		1986	11.23	9.27	1.96	966
		1987	10.67	8.66	1.96	966
	24 hr	1983	5.02	3.95	0.99	964
		1984	7.39	2.44	1.12	968
		1985	5.82	2.95	1.12	965
		1986	6.66	2.31	1.01	972
		1987	5.96	3.04	1.02	967
	Annual	1983	0.77	0.22	0.07	963
		1984	0.81	0.19	0.08	964
		1985	0.81	0.22	0.08	962
		1986	1.02	0.18	0.08	971
		1987	0.83	0.21	0.07	966

[a] Out of a total of 1008

TABLE 2-14

Findings for Comparison No. 2, Assessment A, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375 k lb/hr Steam Firing Natural Gas vs. Case 2: Cedar Bay as Certified

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved[a]
			Case 2	Case 4		
CO	1 hr	1983	47.38	375.86	-16.55	85
		1984	57.94	364.04	-16.10	86
		1985	60.60	374.80	-16.12	90
		1986	69.07	374.28	-16.14	93
		1987	52.69	378.33	-15.92	94
	8 hr	1983	14.17	150.53	-5.62	113
		1984	16.84	98.48	-5.52	114
		1985	16.86	135.03	-5.67	110
		1986	16.39	135.45	-5.54	112
		1987	15.58	113.46	-5.49	112
NO_2	Annual	1983	4.47	2.63	0.19	447
		1984	4.72	1.97	0.21	478
		1985	4.70	2.61	0.21	456
		1986	5.94	1.84	0.22	490
		1987	4.83	2.40	0.20	461

[a]Out of total of 1008

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TABLE 2-15

Findings for Comparison No. 2, Assessment B, Net Air Quality Effect of Case 3: CBCP as Proposed to be Modified Supplying 380 k lb/hr Steam to SKC with SKC Package Boilers at 260 k lb/hr Steam Firing Fuel Oil vs. Case 1: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 640 k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 3 Net Air Quality Effect ($\mu g/m^3$)	Case 3 Number of Receptors Improved[a]
			Case 1	Case 3		
SO_2	3 Hr	1983	666.45	421.76	80.92	991
		1984	631.77	259.34	67.77	1002
		1985	482.83	275.87	66.80	999
		1986	442.37	264.61	60.25	984
		1987	501.22	280.84	66.27	991
	24 Hr	1983	274.39	108.36	26.08	995
		1984	189.23	61.31	20.68	1004
		1985	246.53	70.01	19.07	999
		1986	174.78	68.99	20.42	990
		1987	162.97	93.54	20.84	991
	Annual	1983	5.79	3.99	1.40	1004
		1984	4.84	3.12	1.28	1003
		1985	5.78	3.88	1.33	1004
		1986	4.93	2.95	1.22	1004
		1987	8.95	3.46	1.42	1004
PM10	24 Hr	1983	41.24	20.43	5.26	996
		1984	35.33	19.52	4.77	989
		1985	49.38	20.07	4.59	988
		1986	42.41	24.89	4.63	998
		1987	39.17	19.31	4.86	1001
	Annual	1983	2.27	3.04	0.29	947
		1984	2.26	3.47	0.27	937
		1985	2.27	3.40	0.29	946
		1986	2.06	3.70	0.25	921
		1987	3.08	2.89	0.30	941

TABLE 2-15 (Cont'd)

Findings for Comparison No. 2, Assessment B, Net Air Quality Effect of Case 3: CBCP as Proposed to be Modified Supplying 380 k lb/hr Steam to SKC with SKC Package Boilers at 260 k lb/hr Steam Firing Fuel Oil vs. Case 1: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 640 k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 3 Net Air Quality Effect ($\mu g/m^3$)	Case 3 Number of Receptors Improved[a]
			Case 1	Case 3		
CO	1 Hr	1983	986.81	330.24	205.75	1004
		1984	947.32	336.40	207.05	1004
		1985	927.57	331.98	206.68	1004
		1986	913.88	334.01	209.02	1004
		1987	1036.09	331.82	212.23	1004
	8 Hr	1983	412.55	151.28	81.52	1004
		1984	368.58	95.31	79.82	1004
		1985	432.25	135.57	78.97	1004
		1986	367.64	136.10	75.91	1004
		1987	382.77	103.21	78.97	1004
NO_2	Annual	1983	5.28	2.64	1.27	1004
		1984	5.49	2.06	1.21	1004
		1985	5.44	2.57	1.25	1004
		1986	4.70	1.94	1.17	1004
		1987	7.79	2.27	1.29	1004
Pb	Monthly	1983	2.43e-03	3.0e-04	5.20e-04	941
		1984	3.02e-03	2.4e-04	4.91e-04	934
		1985	2.69e-03	3.1e-04	4.74e-04	944
		1986	2.08e-03	3.6e-04	5.05e-04	932
		1987	3.07e-03	3.9e-04	5.50e-04	935
	Annual	1983	9.8e-04	1.2e-04	2.24e-04	915
		1984	9.8e-04	9.0e-05	2.14e-04	916
		1985	9.8e-04	1.1e-04	2.22e-04	929
		1986	9.0e-04	1.1e-04	2.08e-04	931
		1987	1.33e-03	1.1e-04	2.27e-04	916

TABLE 2-15 (Cont'd)

Findings for Comparison No. 2, Assessment B, Net Air Quality Effect of Case 3: CBCP as Proposed to be Modified Supplying 380 k lb/hr Steam to SKC with SKC Package Boilers at 260 k lb/hr Steam Firing Fuel Oil vs. Case 1: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 640 k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 3 Net Air Quality Effect ($\mu g/m^3$)	Case 3 Number of Receptors Improved[a]
			Case 1	Case 3		
Total Air Toxics	8 Hr	1983	55.35	9.36	11.58	1004
		1984	48.72	11.02	11.22	1004
		1985	56.62	9.51	11.13	1004
		1986	53.22	9.27	10.70	1004
		1987	58.01	8.66	11.08	1004
	24 Hr	1983	33.76	3.78	6.52	1004
		1984	30.05	2.15	6.32	1004
		1985	39.23	2.45	6.00	1004
		1986	53.22	2.44	5.98	1004
		1987	31.88	3.28	6.21	1004
	Annual	1983	1.97	0.23	0.49	1004
		1984	2.01	0.19	0.48	1004
		1985	1.98	0.23	0.49	1004
		1986	1.85	0.18	0.46	1004
		1987	2.65	0.21	0.50	1004

[a]Out of a total of 1008

TABLE 2-16

Findings for Comparison No. 2, Assessment B, Net Air Quality Effect of Case 3: CBCP as Proposed to be Modified Supplying 380 k lb/hr Steam to SKC with SKC Package Boilers at 260 k lb/hr Steam Firing Natural Gas vs. Case 1: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 640 k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 3 Net Air Quality Effect ($\mu g/m^3$)	Case 3 Number of Receptors Improved(a)
			Case 1	Case 3		
CO	1 Hr	1983	986.81	339.81	205.14	1004
		1984	947.32	343.18	206.46	1004
		1985	927.57	340.70	206.08	1004
		1986	913.88	342.88	208.40	1004
		1987	1036.09	339.64	211.64	1004
	8 Hr	1983	412.55	154.82	81.30	1004
		1984	368.58	97.06	79.60	1004
		1985	432.25	139.31	78.75	1004
		1986	367.64	139.56	75.70	1004
		1987	382.77	106.09	78.76	1004
NO_2	Annual	1983	5.28	2.77	1.26	1004
		1984	5.49	2.16	1.20	1004
		1985	5.44	2.70	1.24	1004
		1986	4.70	2.04	1.16	1004
		1987	7.79	2.39	1.28	1004

(a) Out of a total of 1008

TABLE 2-17

Findings for Comparison No. 2, Assessment C, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375k lb/hr Steam Firing Fuel Oil vs. Case 1a: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 745k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved[a]
			Case 1a	Case 4		
SO_2	3 hr	1983	677.67	443.11	85.35	989
		1984	637.65	232.14	72.60	1001
		1985	500.03	299.64	71.04	997
		1986	460.42	260.70	64.68	985
		1987	528.98	267.90	70.51	990
	24 hr	1983	281.03	112.51	27.51	997
		1984	189.90	68.84	22.18	1004
		1985	259.03	83.23	20.40	997
		1986	184.22	65.46	21.89	993
		1987	171.44	86.35	22.24	989
	Annual	1983	5.98	3.74	1.49	1004
		1984	4.88	2.81	1.37	1003
		1985	6.08	3.71	1.41	1004
		1986	5.01	2.64	1.30	1003
		1987	9.26	3.42	1.51	1004
CO	1 hr	1983	980.12	367.00	203.00	1004
		1984	943.78	356.02	204.44	1004
		1985	922.11	366.01	204.14	1004
		1986	910.40	365.43	206.40	1004
		1987	1036.23	369.33	209.60	1004
	8 hr	1983	410.77	147.08	80.64	1003
		1984	367.68	96.23	78.98	1003
		1985	431.98	131.09	78.03	1004
		1986	365.36	132.16	75.33	1004
		1987	380.01	111.10	78.12	1004

TABLE 2-17 (Cont'd)

Findings for Comparison No. 2, Assessment C, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375k lb/hr Steam Firing Fuel Oil vs. Case 1a: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 745k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved[(a)]
			Case 1a	Case 4		
NO_2	Annual	1983	5.75	2.48	1.40	1004
		1984	5.55	1.86	1.33	1004
		1985	5.85	2.46	1.37	1004
		1986	5.00	1.73	1.28	1004
		1987	8.21	2.24	1.42	1004
PM-10	24 hr	1983	39.80	20.43	4.94	994
		1984	32.56	19.52	4.49	988
		1985	46.21	20.07	4.34	986
		1986	39.24	24.89	4.37	991
		1987	36.26	19.31	4.56	992
	Annual	1983	2.14	3.04	0.28	942
		1984	2.18	3.49	0.25	931
		1985	2.16	3.39	0.28	943
		1986	1.99	3.70	0.24	914
		1987	2.93	2.89	0.28	935
Pb	Monthly	1983	2.27e-03	3.2e-04	5.01e-04	945
		1984	2.83e-03	2.4e-04	4.75e-04	936
		1985	2.52e-03	3.5e-04	4.59e-04	950
		1986	2.00e-03	3.6e-04	4.91e-04	934
		1987	2.88e-03	3.8e-04	5.31e-04	939
	Annual	1983	9.3e-04	1.1e-04	2.18e-04	922
		1984	9.5e-04	1.0e-04	2.09e-04	921
		1985	9.4e-04	1.1e-04	2.16e-04	933
		1986	8.7e-04	1.1e-04	2.02e-04	927
		1987	1.27e-03	1.1e-04	2.21e-04	923

TABLE 2-17 (Cont'd)

Findings for Comparison No. 2, Assessment C, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375k lb/hr Steam Firing Fuel Oil vs. Case 1a: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 745k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved[a]
			Case 1a	Case 4		
Total Air Toxics	8 hr	1983	55.14	9.36	11.48	1004
		1984	49.30	11.02	11.16	1004
		1985	57.45	9.51	11.08	1004
		1986	51.50	9.27	10.68	1004
		1987	55.28	8.66	11.03	1004
	24 hr	1983	33.06	3.95	6.46	1004
		1984	28.93	2.44	6.30	1004
		1985	37.31	2.95	5.99	1004
		1986	34.68	2.31	5.96	1004
		1987	30.52	3.04	6.18	1004
	Annual	1983	1.95	0.22	0.49	1004
		1984	2.04	0.19	0.48	1004
		1985	1.97	0.22	0.50	1004
		1986	1.87	0.18	0.47	1004
		1987	2.63	0.21	0.50	1004

[a]Out of a total of 1008.

TABLE 2-18

Findings for Comparison No. 2, Assessment C, Net Air Quality Effect of Case 4: CBCP as Proposed to be Modified with SKC Package Boilers at 375k lb/hr Steam Firing Natural Gas vs. Case 1a: The Future Operation of the 3 Power Boilers and 2 Bark Boilers at 745k lb/hr Steam for the SKC Recycling Operation

Pollutant	Averaging Period	Meteorological Year	Maximum Predicted Impacts ($\mu g/m^3$)		Case 4 Net. Air Quality Effect ($\mu g/m^3$)	Case 4 Number of Receptors Improved[(a)]
			Case 1a	Case 4		
CO	1 hr	1983	980.12	375.86	202.29	1004
		1984	943.78	364.04	203.73	1004
		1985	922.11	374.80	203.43	1004
		1986	910.40	374.28	205.63	1004
		1987	1036.23	378.33	208.88	1004
	8 hr	1983	410.77	150.53	80.37	1003
		1984	367.68	98.48	78.71	1003
		1985	431.98	135.03	77.77	1004
		1986	365.36	135.45	75.06	1004
		1987	380.01	113.46	77.85	1004
NO_x	Annual	1983	5.75	2.63	1.39	1004
		1984	5.55	1.97	1.32	1004
		1985	5.85	2.61	1.36	1004
		1986	5.00	1.84	1.27	1004
		1987	8.21	2.40	1.41	1004

[(a)]Out of a total of 1008.

TABLE 3-24

Maximum Predicted CO Impacts Due To The CBCP As Proposed to be Modified

Averaging Period	Meteorological Year	Concentration ($\mu g/m^3$)	Location[a]		SIL ($\mu g/m^3$)
			Distance (km)	Azimuth (deg)	
1-Hour	1983	54.9	1.25	270	2000
	1984	54.6	1.0	180	
	1985	65.6	1.0	70	
	1986	64.5	1.0	240	
	1987	55.0	1.25	50	
8-Hour	1983	22.1	0.155	59	500
	1984	20.5	0.155	59	
	1985	16.7	[b]	[b]	
	1986	16.7	[b]	[b]	
	1987	19.7	0.152	51	

[a]Relative to the CFB Boilers Stack
[b]Impact falls within CFB building cavity region

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TABLE 3-25

Maximum Predicted Annual Average NO_2 Impacts Due To The CBCP As Proposed to be Modified

Meteorological Year	Concentration ($\mu g/m^3$)	Location[a]		SIL ($\mu g/m^3$)	Significant Impact Distance[b] (km)
		Distance (km)	Azimuth (deg)		
1983	3.16	[c]	[c]	1.0	0.2
1984	3.16	[c]	[c]	1.0	0.2
1985	3.16	[c]	[c]	1.0	0.2
1986	3.16	[c]	[c]	1.0	0.2
1987	3.16	[c]	[c]	1.0	0.2

[a]Relative to the CFB Boilers Stack
[b]Furthest Distance Beyond Which Impacts Are Less Than SILs
[c]Impact falls within CFB Building cavity region

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TABLE 3-26

Maximum Predicted PM-10 Impacts Due To The CBCP As Proposed to be Modified

Averaging Period	Meteorological Year	Concentration ($\mu g/m^3$)	Location[a]		SIL ($\mu g/m^3$)	Significant Impact Distance[b] (km)
			Distance (km)	Azimuth (deg)		
24-Hour	1983	26.4	[c]	[c]	5.0	1.00
	1984	26.6	[c]	[c]		1.25
	1985	29.8	[c]	[c]		1.00
	1986	27.0	0.370	351		1.00
	1987	24.6	[c]	[c]		0.90
Annual	1983	5.08	[c]	[c]	1.0	0.50
	1984	4.81	[c]	[c]		0.50
	1985	5.23	[c]	[c]		0.50
	1986	5.13	[c]	[c]		0.50
	1987	5.14	[c]	[c]		0.50

[a]Relative to CFB Boiler Stack
[b]Furthest Distance Beyond Which Impacts Are Less Than SILs
[c]Impact falls within CFB Building cavity region

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TABLE 3-27

Maximum Quarterly Predicted Pb Impacts Due To The CBCP As Proposed to be Modified

Meteorological Year	Concentration ($\mu g/m^3$)	Location[a]		SIL ($\mu g/m^3$)
		Distance (km)	Azimuth (deg)	
1983	8.1e-04[b]	[c]	[c]	0.03
1984	8.1e-04[b]	[c]	[c]	
1985	8.1e-04[b]	[c]	[c]	
1986	8.1e-04[b]	[c]	[c]	
1987	8.1e-04[b]	[c]	[c]	

AAQS = 1.5 $\mu g/m^3$ on a 3-month average. Background is below detectable
[a]Relative to the CFB Boilers Stack
[b]24-hour impact for conservatism
[c]Impact falls within CFB Building cavity region

TABLE 3-28

Maximum Predicted SO_2 Impacts Due To The CBCP As Proposed to be Modified

Averaging Period	Meteorological Year	Concentration ($\mu g/m^3$)	Location[a]		SIL ($\mu g/m^3$)	Significant Impact Distance[b] (km)
			Distance (km)	Azimuth (deg)		
3-Hour	1983	204.8	0.155	59	25.0	1.5
	1984	228.0	0.152	51		1.75
	1985	179.2	[c]	[c]		2.5
	1986	184.6	0.152	51		2.5
	1987	298.1	0.152	51		2.5
24-Hour	1983	31.6	0.155	59	5.0	3.5
	1984	27.1	0.152	51		4.0
	1985	26.5	[c]	[c]		4.5
	1986	26.5	[c]	[c]		4.5
	1987	33.4	0.152	51		4.5
Annual	1983	6.64	[c]	[c]	1.0	0.3
	1984	6.64	[c]	[c]		0.3
	1985	6.64	[c]	[c]		0.4
	1986	6.64	[c]	[c]		0.4
	1987	6.64	[c]	[c]		0.3

[a]Relative to CFB Boiler Stack
[b]Furthest Distance Beyond Which Impacts Are Less Than SILs
[c]Impact falls within CFB Building cavity region

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TABLE 3-29

Findings For The AAQS Compliance Evaluation Predicted Total Ambient SO_2 Concentrations To Which CBCP As Proposed to be Modified Contributes An Impact Above The SILs

Averaging Period	Meteorological Year	Maximum Concentration to Which CBCP Contributes Significantly ($\mu g/m^3$)	AAQS ($\mu g/m^3$)	Cedar Bay Contribution ($\mu g/m^3$)
3-Hour	1983	653.2*	1300	179.2
	1984	653.4*		179.2
	1985	775.6*		179.2
	1986	577.7*		179.2
	1987	596.2*		179.2
24-Hour	1983	177.2*	260	26.5
	1984	186.8*		26.5
	1985	186.5*		26.5
	1986	165.0*		26.5
	1987	194.6*		26.5
Annual	1983	43.6*	60	6.64
	1984	43.1*		6.64
	1985	46.3*		6.64
	1986	42.7*		6.64
	1987	41.0*		6.64

*Impact falls within the CFB building cavity region.
[a]Excluding the highest total concentration for 3, 24-hour averages.

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TABLE 3-30

Findings For The AAQS Compliance Evaluation Predicted Total Ambient PM-10 Concentrations To Which CBCP As Proposed to be Modified Contributes An Impact Above The SILs

Averaging Period	Meteorological Year	Maximum Concentration to Which CBCP Contributes Significantly[a] ($\mu g/m^3$)	AAQS ($\mu g/m^3$)	Cedar Bay Contribution ($\mu g/m^3$)
24-Hour	1983	60.7	150	12.2
	1984	62.8		14.8
	1985	61.9		14.3
	1986	58.9*		11.2
	1987	58.6		15.1
Annual	1983	35.3*	50	5.08
	1984	35.5*		4.81
	1985	36.0*		5.23
	1986	35.8*		5.13
	1987	35.4*		5.14

[a]Excluding the highest total concentration for 24-hour average.
*Impact occurs within the CFB building cavity region.

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TABLE 3-31

Findings For The AAQS Compliance Evaluation Predicted Total Ambient NO_2 Concentrations To Which CBCP As Proposed to be Modified Contributes An Impact Above The SILs

Averaging Period	Meteorological Year	Maximum Concentration to Which CBCP Contributes Significantly ($\mu g/m^3$)	AAQS ($\mu g/m^3$)	Cedar Bay Contribution ($\mu g/m^3$)
Annual	1983	34.69*	100	3.16
	1984	34.57*		3.16
	1985	35.17*		3.16
	1986	34.09*		3.16
	1987	33.90*		3.16

*Impact falls within the CFB building cavity region.

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TABLE 3-32

Maximum Predicted PSD SO_2 Increment Consumed By The CBCP As Proposed to be Modified

Averaging Period	Meteorological Year	PSD Class II Area		PSD Class I Areas		
				Concentration ($\mu g/m^3$)		Allowable Increment ($\mu g/m^3$)
		Concentration ($\mu g/m^3$)	Allowable Increment	Okefenokee	Wolf Island	
3-Hour	1983	204.8	512	2.97	1.50	25
	1984	228.0		3.93	1.82	
	1985	179.2*		3.11	2.97	
	1986	184.6		2.95	1.50	
	1987	298.1		4.10	1.55	
24-Hour	1983	31.6	91	0.98	0.30	5
	1984	27.1		0.85	0.46	
	1985	26.5*		1.12	0.60	
	1986	26.5*		1.12	0.25	
	1987	33.4		1.01	0.41	
Annual	1983	6.64*	20	0.03	0.02	2
	1984	6.64*		0.04	0.02	
	1985	6.64*		0.04	0.02	
	1986	6.64*		0.04	0.02	
	1987	6.64*		0.04	0.02	

*Impact falls within CFB Building cavity region

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TABLE 3-33

Findings For The PSD Increment Compliance Evaluation Maximum Predicted Total PSD Class II SO2 Increment Consumption To Which CBCP As Proposed to be Modified Contributes An Impact Above The SILs

Averaging Period	Meteorological Year	Maximum Increment Consumption to Which CBCP Contributes Significantly[a] ($\mu g/m^3$)	Class II Increment	Cedar Bay Contribution ($\mu g/m^3$)
3-Hour	1983	284.7*	512	179.2
	1984	291.7*		179.2
	1985	278.4*		179.2
	1986	283.8*		179.2
	1987	295.9*		179.2
24-Hour	1983	55.9*	91	26.5
	1984	54.3*		26.5
	1985	55.7*		26.5
	1986	52.6*		26.5
	1987	52.4*		26.5
Annual	1983	8.87*	20	6.64
	1984	8.28*		6.64
	1985	8.83*		6.64
	1986	8.06*		6.64
	1987	8.46*		6.64

*Impact occurs within the CFB Building cavity region.
[a]Excluding the highest total concentration for 3, 24-hour average.

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TABLE 3-34

Findings For The PSD Increment Compliance Evaluation
Total PSD Class I SO_2 Increment Consumption
In The Okefenokee and Wolf Island Wilderness Areas

Averaging Period	Meteorological Year	Allowable Increment ($\mu g/m^3$)	Okefenokee Concentrations ($\mu g/m^3$) for Compliance Evaluation		Wolf Island Concentrations ($\mu g/m^3$) for Compliance Evaluation	
			Concentration for Compliance Evaluation	Cedar Bay Contribution	Concentration for Compliance Evaluation	Cedar Bay Contribution
3-Hour	1983	25	13.2	1.2	10.6	0.29
	1984		15.9	0.9	9.1	0.45
	1985		16.8	0.7	12.3	0.94
	1986		16.7	1.6	7.8	0.63
	1987		14.5	0.2	9.7	0.42
24-Hour	1983	5	3.4	0.3	1.8	0.04
	1984		3.3	0.6	1.8	0.06
	1985		3.4	0.3	2.1	0.17
	1986		3.5	0.3	1.5	0.04
	1987		2.8	0.4	2.2	0.06
Annual	1983	2	-0.02	0.02	-0.07	0.02
	1984		-0.01	0.04	-0.12	0.02
	1985		-0.02	0.04	-0.12	0.02
	1986		-0.03	0.04	-0.06	0.02
	1987		0.003	0.04	-0.09	0.02

TABLE 3-35

Maximum Predicted PSD TSP Increment Consumed By The CBCP As Proposed to be Modified

Averaging Period	Meteorological Year	PSD Class II Area		PSD Class I Areas		
		Concentration ($\mu g/m^3$)	Allowable Increment ($\mu g/m^3$)	Concentration ($\mu g/m^3$)		Allowable Increment ($\mu g/m^3$)
				Okefenokee	Wolf Island	
24-Hour	1983	28.1*	37	0.10	0.06	10
	1984	30.9		0.10	0.06	
	1985	29.8*		0.14	0.07	
	1986	36.6		0.12	0.04	
	1987	26.7*		0.11	0.07	
Annual	1983	5.85*	19	0.005	0.002	5
	1984	5.63*		0.006	0.003	
	1985	5.95*		0.005	0.003	
	1986	5.96*		0.005	0.002	
	1987	5.93*		0.006	0.003	

*Impact falls within CFB Building cavity region.

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TABLE 3-36

Findings For The PSD Increment Compliance Evaluation Predicted Total PSD Class II TSP Increment Consumption To Which CBCP As Proposed to be Modified Contributes An Impact Above The SILs

Averaging Period	Meteorological Year	Maximum Increment Consumption to Which CBCP Contributes Significantly[a] ($\mu g/m^3$)	Class II Increment	Cedar Bay Contribution ($\mu g/m^3$)
24-Hour	1983	25.2*	37	8.0
	1984	27.0*		8.0
	1985	29.1*		8.0
	1986	33.1		33.1
	1987	25.4*		8.0
Annual	1983	5.80*	19	1.94
	1984	5.53*		1.94
	1985	5.86*		1.94
	1986	5.92*		1.94
	1987	5.86*		1.94

*Impact occurs within CFB Building cavity region.
[a]Excluding the highest total conentration for 24-hour averages.

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TABLE 3-37

Findings For The PSD Increment Compliance Evaluation
Total PSD Class I TSP Increment Consumption
In the Okefenokee and Wolf Island Wilderness Areas

Averaging Period	Meteorological Year	Allowable Increment ($\mu g/m^3$)	Okefenokee Concentrations ($\mu g/m^3$) for Compliance Evaluation		Wolf Island Concentrations ($\mu g/m^3$) for Compliance Evaluation	
			Concentration for Compliance Evaluation	Cedar Bay Contribution	Concentration for Compliance Evaluation	Cedar Bay Contribution
24-Hour	1983	10	0.06	0.006	0.05	0.003
	1984		0.07	0.012	0.05	0.008
	1985		0.07	0.003	0.05	0.002
	1986		0.05	0.006	0.04	0.006
	1987		0.07	0.011	0.08	0.004
Annual	1983	5	-0.012	0.003	-0.01	0.002
	1984		-0.009	0.002	-0.02	0.003
	1985		-0.015	0.003	-0.02	0.003
	1986		-0.008	0.002	-0.02	0.002
	1987		-0.01	0.003	-0.02	0.003

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TABLE 3-38

Maximum Predicted PSD NO_2 Increment Consumed By The CBCP As Proposed to be Modified

Averaging Period	Meteorological Year	PSD Class II Area		PSD Class I Areas		
				Concentration ($\mu g/m^3$)		Allowable Increment ($\mu g/m^3$)
		Concentration ($\mu g/m^3$)	Allowable Increment	Okefenokee	Wolf Island	
Annual	1983	3.16*	25	0.028	0.013	2.5
	1984	3.16*		0.036	0.016	
	1985	3.16*		0.034	0.020	
	1986	3.16*		0.033	0.014	
	1987	3.16*		0.033	0.013	

*Impact falls within CFB Building cavity region.

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TABLE 3-39

Findings For The PSD Increment Compliance Evaluation Predicted Total PSD Class II NO_2 Increment Consumption To Which CBCP As Proposed to be Modified Contributes An Impact Above The SILs

Averaging Period	Meteorological Year	Maximum Increment Consumption to Which CBCP Contributes Significantly ($\mu g/m^3$)	Class II Increment	Cedar Bay Contribution ($\mu g/m^3$)
Annual	1983	3.16*	25	3.16
	1984	3.16*		3.16
	1985	3.16*		3.16
	1986	3.16*		3.16
	1987	3.16*		3.16

*Impact falls with CFB building cavity region.

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TABLE 3-40

Findings For The PSD Increment Compliance Evaluation
Total PSD Class I Annual Average NO_2 Increment Consumption

Meteorological Year	Allowable Increment ($\mu g/m^3$)	Okefenokee Concentrations ($\mu g/m^3$)		Wolf Island Concentrations ($\mu g/m^3$)	
		Highest	Cedar Bay Contribution To Highest	Highest	Cedar Bay Contribution To Highest
1983	2.5	-0.009	0.024	-0.015	0.013
1984		-0.007	0.017	-0.027	0.016
1985		-0.012	0.018	-0.020	0.020
1986		-0.006	0.013	-0.017	0.014
1987		-0.007	0.022	-0.020	0.013

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TABLE 3-41

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Acetaldehyde	8-hour	1983	0.52	1800
		1984	0.63	1800
		1985	0.76	1800
		1986	0.64	1800
		1987	0.72	1800
	24-hour	1983	0.22	432
		1984	0.24	432
		1985	0.27	432
		1986	0.23	432
		1987	0.26	432
	Annual	1983	0.010	0.45
		1984	0.012	0.45
		1985	0.010	0.45
		1986	0.012	0.45
		1987	0.013	0.45

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Acetic Acid	8-hour	1983	6.25	250
		1984	5.80	250
		1985	3.52	250
		1986	4.60	250
		1987	5.58	250
	24-hour	1983	1.07	60
		1984	0.92	60
		1985	0.55	60
		1986	0.69	60
		1987	1.14	60

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Antimony Compounds	8-hour	1983	2.5e-03	5
		1984	2.3e-03	5
		1985	1.4e-03	5
		1986	1.9e-03	5
		1987	2.2e-03	5
	24-hour	1983	4.3e-04	1.2
		1984	3.9e-04	1.2
		1985	4.4e-04	1.2
		1986	3.6e-04	1.2
		1987	4.5e-04	1.2
	Annual	1983	3.0e-05	3.0e-01
		1984	3.0e-05	3.0e-01
		1985	2.0e-05	3.0e-01
		1986	3.0e-05	3.0e-01
		1987	4.0e-05	3.0e-01
		Cavity Region	9.04e-05	3.0e-01

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Arsenic	8-hour	1983	0.012	2
		1984	0.015	2
		1985	0.018	2
		1986	0.015	2
		1987	0.025	2
	24-hour	1983	5.2e-03	0.48
		1984	5.7e-03	0.48
		1985	6.4e-03	0.48
		1986	5.4e-03	0.48
		1987	9.0e-03	0.48
	Annual	1983	1.5e-04	2.3e-04
		1984	1.7e-04	2.3e-04
		1985	1.5e-04	2.3e-04
		1986	1.8e-04	2.3e-04
		1987	1.9e-04	2.3e-04

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Barium	8-hour	1983	0.048	5
		1984	0.059	5
		1985	0.071	5
		1986	0.060	5
		1987	0.068	5
	24-hour	1983	0.020	1.2
		1984	0.023	1.2
		1985	0.025	1.2
		1986	0.021	1.2
		1987	0.024	1.2
	Annual	1983	6.3e-04	5.0e+01
		1984	7.1e-04	5.0e+01
		1985	6.3e-04	5.0e+01
		1986	7.6e-04	5.0e+01
		1987	8.1e-04	5.0e+01

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Beryllium	8-hour	1983	1.6e-03	0.02
		1984	1.5e-03	0.02
		1985	9.5e-04	0.02
		1986	1.2e-03	0.02
		1987	1.4e-03	0.02
	24-hour	1983	2.8e-04	0.0048
		1984	3.1e-04	0.0048
		1985	3.5e-04	0.0048
		1986	2.9e-04	0.0048
		1987	3.2e-04	0.0048
	Annual	1983	2.0e-05	4.2e-04
		1984	2.0e-05	4.2e-04
		1985	2.0e-05	4.2e-04
		1986	2.0e-05	4.2e-04
		1987	2.0e-05	4.2e-04
		Cavity Region	5.66e-05	4.2e-04

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Bromine	8-hour	1983	4.4e-03	6.6
		1984	4.1e-03	6.6
		1985	2.5e-03	6.6
		1986	3.2e-03	6.6
		1987	3.9e-03	6.6
	24-hour	1983	7.5e-04	1.584
		1984	6.5e-04	1.584
		1985	3.9e-04	1.584
		1986	4.9e-04	1.584
		1987	8.0e-04	1.584

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Cadmium	8-hour	1983	6.6e-03	0.5
		1984	6.1e-03	0.5
		1985	4.2e-03	0.5
		1986	4.9e-03	0.5
		1987	5.9e-03	0.5
	24-hour	1983	1.2e-03	0.12
		1984	1.4e-03	0.12
		1985	1.5e-03	0.12
		1986	1.3e-03	0.12
		1987	1.4e-03	0.12
	Annual	1983	8.0e-05	5.6e-04
		1984	8.0e-05	5.6e-04
		1985	6.0e-05	5.6e-04
		1986	7.0e-05	5.6e-04
		1987	1.0e-04	5.6e-04
		Cavity Region	2.38e-04	5.6e-04

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Chromium VI Compounds	8-hour	1983	1.3e-4	0.5
		1984	1.2e-04	0.5
		1985	1.3e-04	0.5
		1986	1.1e-04	0.5
		1987	1.2e-04	0.5
	24-hour	1983	4.0e-05	0.12
		1984	4.0e-05	0.12
		1985	5.0e-05	0.12
		1986	4.0e-05	0.12
		1987	4.0e-05	0.12
	Annual	1983	<1.0e-05	8.3e-05
		1984	<1.0e-05	8.3e-05
		1985	<1.0e-05	8.3e-05
		1986	<1.0e-05	8.3e-05
		1987	<1.0e-05	8.3e-05
		Cavity Region	4.52e-06	8.3e-05

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Cobalt	8-hour	1983	0.039	0.5
		1984	0.037	0.5
		1985	0.022	0.5
		1986	0.029	0.5
		1987	0.035	0.5
	24-hour	1983	6.8e-03	0.12
		1984	5.8e-03	0.12
		1985	3.5e-03	0.12
		1986	4.4e-03	0.12
		1987	7.1e-03	0.12

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TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Copper	8-hour	1983	0.18	10
		1984	0.16	10
		1985	0.099	10
		1986	0.13	10
		1987	0.16	10
	24-hour	1983	0.030	2.4
		1984	0.026	2.4
		1985	0.015	2.4
		1986	0.019	2.4
		1987	0.032	2.4

TABLE 3-41 (Cont'd)

Maximum Cedar Bay Air Toxics Impacts ($\mu g/m^3$)

Pollutant	Averaging Period	Year	Cedar Bay	Draft No Threat Levels
Fluorides (as F)	8-hour	1983	0.044	25
		1984	0.054	25
		1985	0.065	25
		1986	0.054	25
		1987	0.062	25
	24-hour	1983	0.019	6
		1984	0.021	6
		1985	0.023	6
		1986	0.020	6
		1987	0.022	6

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TABLE 5-1

Okefenokee Swamp Comparison of Elemental Deposition with EPA Screening Levels[1]

Element	Maximum CBCP Annual Impact ($\mu g/m^3$)	Deposited Concentration	Plant Tissue Concentration	Plant:Soil Concentration Ratios	EPA Screening Concentration[2]	
					Soil	Plant Tissue
Antimony	2.22×10^{-6}	4.77×10^{-4}	---	---	NA	NA
Arsenic	3.00×10^{-5}	6.45×10^{-3}	9.03×10^{-4}	0.14	3	0.25
Barium	1.27×10^{-4}	2.73×10^{-2}	---	---	---	---
Beryllium	1.82×10^{-6}	3.91×10^{-4}	---	---	NA	NA
Cadmium	6.60×10^{-6}	1.42×10^{-3}	1.52×10^{-2}	10.7	2.5	3
Chromium	2.20×10^{-7}	4.73×10^{-5}	9.46×10^{-7}	0.02	8.4	1
Cobalt	8.02×10^{-6}	1.72×10^{-3}	1.89×10^{-4}	0.11	NA	19
Copper	1.75×10^{-5}	3.76×10^{-3}	1.77×10^{-3}	0.47	40	0.73
Fluoride	1.55×10^{-4}	3.33×10^{-2}	9.99×10^{-4}	0.03	400	310
Lead	1.26×10^{-5}	2.71×10^{-3}	1.22×10^{-3}	0.45	1,000	126
Manganese	1.04×10^{-4}	2.24×10^{-2}	1.48×10^{-3}	0.066	2.5	400
Mercury	6.02×10^{-6}	1.29×10^{-3}	2.58×10^{-5}	0.02 - 0.5	455	NA
Molybdenum	2.10×10^{-5}	4.52×10^{-3}	---	---	NA	NA
Nickel	1.73×10^{-5}	3.72×10^{-3}	1.67×10^{-4}	0.045	500	60
Selenium	3.32×10^{-6}	7.14×10^{-4}	7.14×10^{-4}	1.0	13	100
Vanadium	6.89×10^{-5}	1.48×10^{-2}	1.48×10^{-4}	0.01	NA	NA

[1]All units in parts per million by weight, unless otherwise noted.
[2]Source: Dvorak and Lewis, et al. 1978, as cited in Smith and Levenson 1980
NA - Not available

TABLE 5-2

Wolf Island Comparison of Elemental Deposition with EPA Screening Levels[1]

Element	Maximum CBCP Annual Impact ($\mu g/m^3$)	Deposited Concentration	Plant Tissue Concentration	Plant:Soil Concentration Ratios	EPA Screening Concentration[2]	
					Soil	Plant Tissue
Antimony	1.23×10^{-6}	2.64×10^{-4}	---	---	NA	NA
Arsenic	1.66×10^{-5}	3.57×10^{-3}	5.00×10^{-4}	0.14	3	0.25
Barium	7.02×10^{-5}	1.51×10^{-2}	---	---	---	---
Beryllium	1.01×10^{-6}	2.17×10^{-4}	---	---	NA	NA
Cadmium	3.65×10^{-6}	7.85×10^{-4}	8.40×10^{-3}	10.7	2.5	3
Chromium	1.20×10^{-7}	2.58×10^{-5}	5.16×10^{-7}	0.02	8.4	1
Cobalt	4.46×10^{-6}	9.59×10^{-4}	1.05×10^{-4}	0.11	NA	19
Copper	9.78×10^{-6}	2.10×10^{-3}	9.87×10^{-4}	0.47	40	0.73
Fluoride	8.56×10^{-5}	1.84×10^{-2}	5.52×10^{-4}	0.03	400	310
Lead	6.94×10^{-6}	1.49×10^{-3}	6.71×10^{-4}	0.45	1,000	126
Manganese	5.76×10^{-5}	1.24×10^{-2}	8.18×10^{-4}	0.066	2.5	400
Mercury	3.33×10^{-6}	7.16×10^{-4}	1.43×10^{-5}	0.02 - 0.5	455	NA
Molybdenum	1.16×10^{-5}	2.49×10^{-3}	---	---	NA	NA
Nickel	9.63×10^{-6}	2.07×10^{-3}	9.32×10^{-5}	0.045	500	60
Selenium	1.84×10^{-6}	3.96×10^{-4}	3.96×10^{-4}	1.0	13	100
Vanadium	3.84×10^{-5}	8.26×10^{-3}	8.26×10^{-5}	0.01	2.5	NA

[1]All units in parts per million by weight, unless otherwise noted
[2]Source: Dvorak and Lewis, et al. 1978, as cited in Smith and Levenson 1980
NA - Not available

TABLE 5-3

Class II Area (Vicinity of CBCP) Comparison of Elemental Deposition with EPA Screening Levels[1]

Element	Maximum CBCP Annual Impact ($\mu g/m^3$)	Deposited Concentration	Plant Tissue Concentration	Plant:Soil Concentration Ratios	EPA Screening Concentration[2]	
					Soil	Plant Tissue
Antimony	4.00×10^{-5}	8.60×10^{-3}	---	---	NA	NA
Arsenic	1.90×10^{-4}	4.09×10^{-2}	5.73×10^{-3}	0.14	3	0.25
Barium	8.10×10^{-4}	1.74×10^{-1}	---	---	---	---
Beryllium	2.00×10^{-5}	4.30×10^{-3}	---	---	NA	NA
Cadmium	1.00×10^{-4}	2.15×10^{-2}	2.30×10^{-1}	10.7	25	3
Chromium	1.00×10^{-5}	2.15×10^{-3}	4.30×10^{-5}	0.02	8.4	1
Cobalt	6.20×10^{-4}	1.33×10^{-1}	1.46×10^{-2}	0.11	NA	19
Copper	2.76×10^{-3}	5.93×10^{-1}	2.79×10^{-1}	0.47	40	0.73
Fluoride	1.00×10^{-3}	2.15×10^{-1}	6.45×10^{-3}	0.03	400	310
Lead	9.00×10^{-5}	1.94×10^{-2}	8.73×10^{-3}	0.45	1,000	126
Manganese	6.70×10^{-4}	1.44×10^{-1}	9.50×10^{-3}	0.066	2.5	400
Mercury	4.00×10^{-5}	8.60×10^{-3}	1.72×10^{-4}	0.02 - 0.5	455	NA
Molybdenum	4.80×10^{-4}	1.03×10^{-1}	---	---	NA	NA
Nickel	1.69×10^{-3}	3.63×10^{-1}	1.63×10^{-2}	0.045	500	60
Selenium	1.10×10^{-4}	2.37×10^{-2}	2.37×10^{-2}	1.0	13	100
Vanadium	7.42×10^{-3}	1.59	1.59×10^{-2}	0.01	2.5	NA

[1]All units in parts per million by weight, unless otherwise noted.
[2]Source: Dvorak and Lewis, et al. 1978, as cited in Smith and Levenson 1980
NA - Not available

TABLE 5-4

Timucuan Preserve Comparison of Elemental Deposition with EPA Screening Levels[1]

Element	Maximum CBCP Annual Impact ($\mu g/m^3$)	Deposited Concentration	Plant Tissue Concentration	Plant:Soil Concentration Ratios	EPA Screening Concentration[2]	
					Soil	Plant Tissue
Antimony	1.14×10^{-5}	2.45×10^{-3}	---	---	NA	NA
Arsenic	1.51×10^{-4}	3.25×10^{-2}	4.55×10^{-3}	0.14	3	0.25
Barium	6.38×10^{-4}	1.37×10^{-1}	---	---	---	---
Beryllium	9.27×10^{-6}	1.99×10^{-3}	---	---	NA	NA
Cadmium	3.38×10^{-5}	7.27×10^{-3}	7.78×10^{-2}	10.7	2.5	3
Chromium	1.12×10^{-6}	2.41×10^{-4}	4.82×10^{-6}	0.02	8.4	1
Cobalt	4.37×10^{-5}	9.40×10^{-3}	1.03×10^{-3}	0.11	NA	19
Copper	1.03×10^{-4}	2.21×10^{-2}	1.04×10^{-2}	0.47	40	0.73
Fluoride	7.80×10^{-4}	1.68×10^{-1}	5.04×10^{-3}	0.03	400	310
Lead	6.36×10^{-5}	1.37×10^{-2}	6.17×10^{-3}	0.45	1,000	126
Manganese	5.24×10^{-4}	1.13×10^{-1}	7.46×10^{-3}	0.066	.25	400
Mercury	3.04×10^{-5}	6.54×10^{-3}	1.31×10^{-4}	0.02 - 0.5	455	NA
Molybdenum	1.08×10^{-4}	2.32×10^{-2}	---	---	NA	NA
Nickel	9.61×10^{-5}	2.07×10^{-2}	9.32×10^{-4}	0.045	500	60
Selenium	1.73×10^{-5}	3.72×10^{-3}	3.72×10^{-3}	1.0	13	100
Vanadium	3.87×10^{-4}	8.32×10^{-2}	8.32×10^{-4}	0.01	2.5	NA

[1]All units in parts per million by weight, unless otherwise noted.
[2]Source: Dvorak and Lewis et al. 1978, as cited in Smith and Levenson 1980
NA - Not available

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