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**BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION**

**DOCKET NO. 950007-EI
FLORIDA POWER & LIGHT COMPANY**

JANUARY 17, 1995

**ENVIRONMENTAL COST RECOVERY
FACTOR**

**PROJECTIONS
APRIL 1995 THROUGH SEPTEMBER 1995**

TESTIMONY & EXHIBITS OF:

**B. T. BIRKETT
W. M. REICHEL**

DOCUMENT NUMBER-DATE

00627 JAN 17 95

FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF BARRY T. BIRKETT

DOCKET NO. 950007-EI

JANUARY 17, 1995

1 **Q. Please state your name and address.**

2 **A. My name is Barry T. Birkett and my business address is 9250 West Flagler**
3 **Street, Miami, Florida, 33714.**

4

5 **Q. By whom are you employed and in what capacity?**

6 **A. I am employed by Florida Power & Light Company (FPL) as the Manager of Rates**
7 **and Tariff Administration.**

8

9 **Q. Have you previously testified in this docket?**

10 **A. Yes, I have.**

11

12 **Q. What is the purpose of your testimony in this proceeding?**

13 **A. The purpose of my testimony is to present for Commission review and approval**
14 **proposed Environmental Cost Recovery Clause (ECRC) factors for the April**
15 **1995 through September 1995 billing period, including the costs to be**

1 recovered through the clause. In addition, I am presenting the estimat-
2 ed/actual costs for the October 1994 through March 1995 period together with
3 an explanation of significant project variances.

4
5 **Q. Is this filing by FPL in compliance with Order No. PSC-93-1580-FOF-EI,**
6 **issued in docket No. 930661-EI?**

7 A. Yes, it is. The costs being submitted for recovery for the projected period
8 are consistent with that order. The costs reflected in the true-up amount
9 are those approved for recovery by the Commission in Order No. PSC-94-1207-
10 FOF-EI dated October 3, 1994.

11
12 **Q. Have you prepared or caused to be prepared under your direction,**
13 **supervision or control an exhibit in this proceeding?**

14 A. Yes, I have. It consists of eight documents, Document No. 1 summarizes the
15 costs being presented for recovery at this time, Document No. 2 reflects the
16 allocation of costs to the rate classes, Document 3 shows the billing
17 factors as calculated for each rate class, Documents 4 and 8 consist of the
18 calculation of depreciation expense and return on capital investment,
19 Documents 5, 6 and 7 consists of the True-up and variance calculations for
20 the prior period.

21
22 **Q. Please describe Document No. 1.**

23 A. Document No. 1 provides a summary of the costs being requested for recovery

1 through the Environmental Cost Recovery Clause. Total recoverable envi-
2 ronmental costs amount to \$3,956,201, and include \$4,356,494 of environmen-
3 tal project costs offset by a net overrecovery of \$462,940 reflected on line
4 18. The net overrecovery of \$462,940 includes the final overrecovery of
5 \$111,561 for the period April 1994 through September 1994 plus the estimat-
6 ed/actual overrecovery of \$351,379 for the October 1994 - March 1995 period.

7

8 In addition, Document No. 1 presents the method of classifying costs consis-
9 tent with Order No. PSC-94-0393-FOF-EI.

10

11 **Q. Are all costs listed in Document No. 1 attributable to Environmental**
12 **Compliance projects previously approved by the Commission?**

13 **A.** Yes they are, with exception of the Continuous Emission Monitoring Systems-
14 O&M project reflected on line 13 and RCRA Corrective Action - O&M projects
15 reflected on line 14. These new projects are discussed in the testimony of
16 William M. Reichel.

17

18 **Q. Please describe Document No. 2.**

19 **A.** Document No. 2 calculates the allocation factors for demand and energy at
20 generation. The demand allocation factors are calculated by determining
21 the percentage each rate class contributes to the monthly system peaks. The
22 energy allocators are calculated by determining the percentage each rate
23 contributes to total kWh sales, as adjusted for losses, for each rate class.

- 1 **Q. Please describe Document No. 3.**
- 2 A. Document No. 3 presents the calculation of the proposed ECRC factors by rate
- 3 class.
- 4
- 5 **Q. How do the estimated/actual project expenditures for October 1994**
- 6 **through March 1995 period compare with the original projection?**
- 7 A. As shown on Document 5, overall, costs were \$190,546 lower than projected.
- 8 The largest variances were associated with the following projects:
- 9 1. **Oil Spill Cleanup/Response Equipment - Revenue**
- 10 Revenues were \$359,463 greater than estimated as the original
- 11 estimate excluded the final payments from Maritrans for FPL's
- 12 assistance in the August 10, 1993, Tampa Bay Oil Spill as the final
- 13 settlement was still under negotiation. FPL completed negotiations
- 14 for a final settlement with Maritrans and all payments were received
- 15 by December 1994.
- 16 2. **Clean Closure Equivalency (CCED) - O&M**
- 17 Project expenditures are estimated to be \$254,648 lower than origi-
- 18 nally projected. This variance was mainly due to resource con-
- 19 straints and additional time required for resolution of technical
- 20 issues being negotiated with the EPA. Issues associated with RCRA
- 21 Corrective Action and the potential implications relevant to CCED
- 22 also impacted the schedule.
- 23

- 1 3. **New Activities - Continuous Emission Monitoring Systems - O&M**
2 **and RCRA Corrective Action.**
3 Total estimated expenditures for the period for the two new activi-
4 ties which were not included in the previous projection are
5 \$180,050.
- 6 4. **Maintenance of Stationary Above Ground Fuel Storage Tanks - O&M**
7 Project expenditure are estimated to be \$97,960 greater than
8 previously projected. This higher level of expenditure was neces-
9 sary earlier than originally projected to ensure that all project
10 upgrades required by Chapter 17-762, F.A.C. are completed by the end
11 of 1999.
- 12 5. **Low Nox Burner Technology-Capital**
13 Depreciation and Return is estimated to be \$83,308 greater than
14 previously projected. This variance is due to a four-month acceler-
15 ation in the scheduled in-service date for Riviera Unit 4.
- 16 6. **Air Operating Permit Fees-O&M**
17 Project expenditures are estimated to be \$66,327 greater than previ-
18 ously projected. The variance is due to a revised estimate of FPL's
19 emissions utilizing expected 1994 operating history, while the
20 projection was based upon 1993 emissions.

21
22 **Q. Does this conclude your testimony?**

23 **A. Yes, it does.**

FLORIDA POWER & LIGHT COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 FOR THE RECOVERY PERIOD OF APRIL 1995 - SEPTEMBER 1995

ENVIRONMENTAL COSTS	PROJECTED					TOTAL	DEMAND	ENERGY	METHOD OF CLASSIFICATION
	APRIL	MAY	JUNE	JULY	AUGUST				
1. Air Operating Permit Fees - O & M	84,108	84,108	84,773	84,773	84,773	84,773	827,307	27,307	100% ENERGY
2. Low NOx Burner Technology - Capital	219,818	237,561	257,053	290,392	290,143	258,895	1,494,462	1,494,462	100% ENERGY
3. Continuous Emission Monitoring Systems - Capital	173,015	172,459	172,429	172,315	172,118	171,873	1,034,247	1,034,247	100% ENERGY
4a. Clean Closure Equivalency - O & M	0	84,000	25,000	15,000	52,000	10,000	176,000	176,000	100% DEMAND
4b. Clean Closure Equivalency - Capital	1,341	1,330	1,327	1,324	1,321	1,318	7,981	7,348	12CP 1/13
5a. Maintenance of Stationary Above Ground Fuel Storage Tanks - O & M	79,833	79,833	79,833	79,833	79,833	79,833	478,998	478,998	100% DEMAND
5b. Maintenance of Stationary Above Ground Fuel Storage Tanks - Capital	26,575	26,897	26,601	40,858	42,710	43,514	240,755	222,225	12CP 1/13
7. Release Turbine Lube Oil Underground Piping To Above Ground - Capital	262	259	258	258	257	256	2,150	1,965	12CP 1/13
8a. Oil Spill Cleanup / Response Equipment - O & M	13,833	13,833	13,833	13,833	13,833	13,833	82,998	82,998	100% ENERGY
8b. Oil Spill Cleanup / Response Equipment - Capital	10,555	10,556	10,494	10,432	10,370	10,308	62,715	57,891	12CP 1/13
8c. Oil Spill Cleanup / Response Equipment - Revenue	0	0	0	0	0	0	0	0	
9. Low-level Radioactive Waste Access Fees - O & M	100,000	0	0	98,082	0	0	106,082	198,082	100% ENERGY
10. Release Storm Water Runoff - Capital	1,459	1,447	1,445	1,442	1,439	1,436	8,698	8,001	12CP 1/13
*1. SO2 Allowances - Working Capital	(8,253)	(8,253)	(8,253)	(8,253)	(8,253)	(8,253)	(38,118)	(38,118)	100% ENERGY
12. Sulfur Discharge Pipeline - Capital	9,954	8,879	8,805	8,825	8,815	8,795	50,129	54,581	12CP 1/13
13. Continuous Emission Monitoring Systems - O & M	105,950	93,200	33,700	80,900	18,700	20,700	322,700	322,700	100% ENERGY
14. NCRMA Corrective Action - O & M	45,000	50,000	50,000	50,000	50,000	50,000	295,000	295,000	100% DEMAND
15. TOTAL (Lines 1 Thru 14)	795,750	730,945	702,348	840,874	710,557	671,081	4,451,054	1,302,023	
16. JURISDICTIONAL % *							87.87555%	87.87555%	
17. JURISDICTIONALIZED ENVIRONMENTAL COSTS							84,356,494	81,274,378	
18. FINAL TRUE UP APRIL 1994 - SEPT 1994 OCT 1994 - MARCH 1995 \$ 111,561 Overrecovery \$291,379 Overrecovery							84,882,940	81,252,421	
19. TOTAL (Line 17 18)							\$3,893,554	\$1,138,957	
20. REVENUE TAX MULTIPLIER							1.01609	1.01609	
21. TOTAL RECOVERABLE ENVIRONMENTAL COSTS							<u>\$3,958,201</u>	<u>\$1,152,283</u>	

FFSC	AVG. 12 CP	
FERC	17992	87.87555%
TOTAL	282	2,24452%
	1,3274	100.00000%

NOTE 1: BASED ON 1993 ACTUAL DATA
 NOTE 2: TRUE UP COSTS SPLIT IN PROPORTION TO THE CURRENT PERIOD SPLIT OF DEMAND RELATED (79.25% LAND AND ENERGY RELATED (20.75%) COSTS.

FLORIDA POWER & LIGHT COMPANY
 CALCULATION OF ENERGY & DEMAND ALLOCATION % BY RATE CLASS
 APRIL 1995 THROUGH SEPTEMBER 1995

Rate Class	(1) AVG 12CP Load Factor at Meter (%)	(2) Projected Sales at Meter (kwh)	(3) Projected AVG 12 CP at Meter (kW)	(4) Demand Loss Expansion Factor	(5) Energy Loss Expansion Factor	(6) Projected Sales at Generation (kwh)	(7) Projected AVG 12 CP at Generation (kW)	(8) Percentage of Sales at Generation (%)	(9) Percentage of Demand at Generation (%)
RS1	60.222%	20,466,284,429	7,759,071	1.096852931	1.072653616	21,953,233,999	8,510,560	52.09695%	59.46217%
GS1	68.684%	2,542,543,998	845,160	1.096852931	1.072653616	2,727,269,013	927,016	6.47205%	6.47694%
GSD1	79.091%	9,190,081,947	2,652,884	1.096768487	1.072585454	9,857,148,217	2,909,599	23.39188%	20.32899%
OS2	112.125%	11,308,187	2,303	1.066062788	1.049677128	11,869,945	2,455	0.02817%	0.01715%
GSLD1/CS1	83.973%	3,904,739,882	1,061,643	1.095333573	1.071360016	4,183,382,182	1,162,853	9.92753%	8.12470%
GSLD2/CS2	89.963%	1,005,244,336	255,114	1.089411561	1.065266755	1,070,853,372	277,924	2.54123%	1.94182%
GSLD3/CS3	93.423%	492,079,271	120,256	1.037953652	1.028561922	506,134,001	124,820	1.20110%	0.87210%
ISST1D	70.680%	1,125,310	363	1.096852931	1.072653616	1,207,068	399	0.00286%	0.00279%
SST1T	101.212%	42,175,525	9,514	1.037953652	1.028561922	43,380,139	9,875	0.10294%	0.06900%
SST1D	126.750%	14,656,575	2,640	1.082352375	1.061081741	15,551,824	2,857	0.03691%	0.01996%
CILC D/CILC G	97.784%	837,396,055	195,519	1.091550450	1.067983620	894,325,270	213,419	2.12231%	1.49113%
CILC T	99.844%	543,509,095	124,283	1.037953652	1.028561922	559,032,759	129,000	1.32663%	0.90131%
MET	74.148%	44,359,257	13,659	1.066062788	1.049677128	46,562,897	14,561	0.11050%	0.10174%
OL1/SL1	289.907%	217,232,087	17,108	1.096852931	1.072653616	233,014,784	18,765	0.55296%	0.13111%
SL2	100.005%	33,775,045	7,711	1.096852931	1.072653616	36,228,924	8,458	0.08597%	0.05909%
TOTAL		39,346,511,000	13,067,225			42,139,194,396	14,312,561	100.00%	100.00%

- (1) AVG 12 CP load factor based on actual 1993 calendar data.
 (2) Projected kwh sales for the period April 1995 through September 1995
 (3) Calculated: Col(2)/(8760 hours/2 * Col(1)) , 8760 hours/2 = hours over 6 mos .
 (4) Based on 1993 demand losses.
 (5) Based on 1993 energy losses.
 (6) Col(2) * Col(5).
 (7) Col(3) * Col(4).
 (8) Col(6) / total for Col(6)
 (9) Col(7) / total for Col(7)

FLORIDA POWER & LIGHT
 CALCULATION OF ENVIRONMENTAL COST RECOVERY CLAUSE FACTORS
 APRIL 1995 THROUGH SEPTEMBER 1995

Rate Class	(1) Percentage of Sales at Generation (%)	(2) Percentage of Demand at Generation (%)	(3) Energy Related Cost (\$)	(4) Demand Related Cost (\$)	(5) Total Environmental Costs (\$)	(6) Projected Sales at Meter (kwh)	(7) Environmental Recovery Factor (\$/kwh)
RS1	52.09695%	59.46217%	\$1,458,151	\$688,145	\$2,146,296	20,466,284,429	0.00010
GS1	6.47205%	6.47694%	\$181,147	\$74,957	\$256,104	2,542,543,998	0.00010
GSD1	23.39188%	20.32899%	\$654,720	\$235,264	\$889,984	9,190,081,947	0.00010
OS2	0.02817%	0.01715%	\$788	\$198	\$986	11,308,187	0.00009
GSLD1/CS1	9.92753%	8.12470%	\$277,863	\$94,026	\$371,889	3,904,739,882	0.00010
GSLD2/CS2	2.54123%	1.94182%	\$71,127	\$22,472	\$93,599	1,005,244,336	0.00009
GSLD3/CS3	1.20110%	0.87210%	\$33,618	\$10,093	\$43,711	492,079,271	0.00009
ISST1D	0.00286%	0.00279%	\$80	\$32	\$112	1,125,310	0.00010
SST1T	0.10294%	0.06900%	\$2,881	\$799	\$3,680	42,175,525	0.00009
SST1D	0.03691%	0.01996%	\$1,033	\$231	\$1,264	14,656,575	0.00009
CILC D/CILC G	2.12231%	1.49113%	\$59,402	\$17,257	\$76,659	837,396,055	0.00009
CILC T	1.32663%	0.90131%	\$37,131	\$10,431	\$47,562	543,509,095	0.00009
MET	0.11050%	0.10174%	\$3,093	\$1,177	\$4,270	44,359,257	0.00010
OL1/SL1	0.55296%	0.13111%	\$15,477	\$1,517	\$16,994	217,232,087	0.00009
SL2	0.08597%	0.05909%	\$2,406	\$684	\$3,090	33,775,045	0.00009
TOTAL			\$2,798,918	\$1,157,283	\$3,956,201	39,346,511,000	0.00010

Note: There are currently no customers taking service on Schedule ISST1(T). Should any customer begin taking service on this schedule during the period, they will be billed using the ISST(D) Factor.

- (1) Obtained from Document No. 2
- (2) Obtained from Document No. 2
- (3) Total obtained from Document No. 1 * Col 1
- (4) Total obtained from Document No. 1 * Col 2
- (5) Col (3) + Col (4)
- (6) Projected kwh sales for the period April 1995 through September 1995
- (7) Col (5) / (6)

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Low NOx Burner Technology (Project No. 2)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No.
1.	Investment		498,343	2,522,000	550,000	70,000	5,000	40,000	3,685,343	1.
2.	Depreciation Base		17,006,541	19,528,541	20,078,541	20,148,541	20,153,541	20,193,541	n/a	2.
(1) 3.	Depreciation Expense		66,888	72,574	78,462	79,650	79,794	79,880	457,247	3.
4.	Cumulative Investment (Line 2)	16,508,198	17,006,541	19,528,541	20,078,541	20,148,541	20,153,541	20,193,541	n/a	4.
5.	Less: Accumulated Depreciation	451,040	517,928	590,502	668,963	748,613	828,407	908,287	n/a	5.
6.	Net Investment (Line 4 - 5)	16,057,157	16,488,612	18,938,039	19,409,577	19,399,927	19,325,133	19,285,254	n/a	6.
7.	Average Net Investment		16,272,885	17,713,326	19,173,808	19,404,752	19,362,530	19,305,193		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7721% /12)		64,778	70,441	76,249	77,168	77,000	76,772	442,409	8a.
(2) b.	Equity Component grossed up for taxes		105,459	114,679	124,134	125,629	125,356	124,985	720,242	8b.
c.	Debt Component (Line 7 * 3.4082% /12)		47,271	50,309	54,457	55,113	54,993	54,830	316,972	8c.
9.	Total Return Requirements (Line 8b + 8c)		152,731	164,988	178,591	180,742	180,349	179,815	1,037,215	9.
10.	Total Depreciation & Return (Line 3 + 9)		219,618	237,561	257,053	260,392	260,143	259,695	1,494,462	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Continuous Emissions Monitoring (Project No. 3)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No.
1.	Investment		110,000	26,600	32,100	20,000	19,000	13,100	220,800	1
2.	Depreciation Base		13,639,216	13,665,816	13,697,916	13,717,916	13,736,916	13,750,016	n/a	2.
(1) 3.	Depreciation Expense		47,456	47,701	47,802	47,890	47,957	48,011	286,817	3
4.	Cumulative Investment (Line 2)	13,529,216	13,639,216	13,665,816	13,697,916	13,717,916	13,736,916	13,750,016	n/a	4.
5.	Less: Accumulated Depreciation	182,638	230,094	277,795	325,597	373,487	421,444	469,455	n/a	5.
6.	Net Investment (Line 4 - 5)	13,346,578	13,409,122	13,388,021	13,372,319	13,344,429	13,315,472	13,280,560	n/a	6.
7.	Average Net Investment		13,377,850	13,398,572	13,380,170	13,358,374	13,329,950	13,298,016		7
8.	Return on Average Net Investment									8
(3) a.	Equity Component (Line 7 * 4.7721% /12)		53,254	53,283	53,210	53,123	53,010	52,883	318,762	8a
(2) b.	Equity Component grossed up for taxes		86,697	86,744	86,625	86,484	86,300	86,093	518,945	8b
c.	Debt Component (Line 7 * 3.4082% /12)		38,862	38,054	38,002	37,940	37,859	37,769	228,485	8c
9.	Total Return Requirements (Line 8b + 8c)		125,559	124,799	124,627	124,424	124,159	123,862	747,430	9
10.	Total Depreciation & Return (Line 3 + 9)		173,015	172,499	172,429	172,315	172,116	171,873	1,034,247	10

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Clean Closure Equivalency (Project No. 4)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No.
1.	Investment		0	0	0	0	0	0	0	1
2.	Depreciation Base		111,067	111,067	111,067	111,067	111,067	111,067	n/a	2.
(1) 3.	Depreciation Expense		320	320	320	320	320	320	1,920	3.
4.	Cumulative Investment (Line 2)	111,067	111,067	111,067	111,067	111,067	111,067	111,067	n/a	4.
5.	Less: Accumulated Depreciation	2,130	2,450	2,770	3,090	3,410	3,730	4,050	n/a	5.
6.	Net Investment (Line 4 - 5)	108,937	108,617	108,297	107,977	107,657	107,337	107,017	n/a	6.
7.	Average Net Investment		108,777	108,457	108,137	107,817	107,497	107,177		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7721% /12)		433	431	430	429	427	426	2,577	8a
(2) b.	Equity Component grossed up for taxes		705	702	700	698	696	694	4,195	8b
c.	Debt Component (Line 7 * 3.4082% /12)		316	308	307	306	305	304	1,847	8c
9.	Total Return Requirements (Line 8b + 8c)		1,021	1,010	1,007	1,004	1,001	998	6,042	9.
10.	Total Depreciation & Return (Line 3 + 9)		1,341	1,330	1,327	1,324	1,321	1,318	7,961	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Maintenance of Above Ground Storage Tanks (Project No. 5)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No.
1.	Investment		400,000	0	0	350,000	0	150,000	900,000	1.
2.	Depreciation Base		3,092,960	3,092,960	3,092,960	3,442,960	3,442,960	3,592,960	n/a	2.
(1) 3.	Depreciation Expense		9,714	10,270	10,270	10,795	11,320	11,532	63,901	3.
4.	Cumulative Investment (Line 2)	2,692,960	3,092,960	3,092,960	3,092,960	3,442,960	3,442,960	3,592,960	n/a	4.
5.	Less: Accumulated Depreciation	26,136	35,849	46,119	56,389	67,184	78,504	90,036	n/a	5.
6.	Net Investment (Line 4 - 5)	2,666,824	3,057,111	3,046,841	3,036,571	3,375,776	3,364,456	3,502,924	n/a	6.
7.	Average Net Investment		2,861,967	3,051,976	3,041,706	3,206,173	3,370,116	3,433,690		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7721% /12)		11,393	12,137	12,096	12,750	13,402	13,655	75,433	8a.
(2) b.	Equity Component grossed up for taxes		18,547	19,759	19,692	20,757	21,819	22,230	122,805	8b.
c.	Debt Component (Line 7 * 3.4082% /12)		8,314	8,668	8,639	9,106	9,572	9,752	54,051	8c.
9.	Total Return Requirements (Line 8b + 8c)		26,861	28,427	28,331	29,863	31,390	31,982	176,856	9.
10.	Total Depreciation & Return (Line 3 + 9)		36,575	38,697	38,601	40,658	42,710	43,514	240,755	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Relocate Turbine Oil Underground Piping (Project No. 7)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No.
1.	Investment		0	0	0	0	0	0	0	1
2.	Depreciation Base		31,030	31,030	31,030	31,030	31,030	31,030	n/a	2
(1) 3.	Depreciation Expense		88	88	88	88	88	88	528	3
4.	Cumulative Investment (Line 2)	31,030	31,030	31,030	31,030	31,030	31,030	31,030	n/a	4
5.	Less: Accumulated Depreciation	1,774	1,862	1,950	2,038	2,126	2,214	2,302	n/a	5
6.	Net Investment (Line 4 - 5)	29,256	29,168	29,080	28,992	28,904	28,816	28,728	n/a	6
7.	Average Net Investment		29,212	29,124	29,036	28,948	28,860	28,772		7
8.	Return on Average Net Investment									8
(3) a.	Equity Component (Line 7 * 4.7721% /12)		116	116	115	115	115	114	692	8a
(2) b.	Equity Component grossed up for taxes		189	189	188	187	187	186	1,126	8b
c.	Debt Component (Line 7 * 3.4082% /12)		85	83	82	82	82	82	496	8c
9.	Total Return Requirements (Line 8b + 8c)		274	271	270	270	269	268	1,622	9
10.	Total Depreciation & Return (Line 3 + 9)		362	359	358	358	357	356	2,150	10

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Oil Spill Cleanup/Response Equipment (Project No. 8)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No
1.	Investment		20,000	0	0	0	0	0	20,000	1.
2.	Depreciation Base		547,612	547,612	547,612	547,612	547,612	547,612	n/a	2.
(1) 3.	Depreciation Expense		6,676	6,676	6,676	6,676	6,676	6,676	40,055	3
4.	Cumulative Investment (Line 2)	527,612	547,612	547,612	547,612	547,612	547,612	547,612	n/a	4
5.	Less: Accumulated Depreciation	120,998	127,674	134,350	141,026	147,702	154,377	161,053	n/a	5
6.	Net Investment (Line 4 - 5)	406,614	419,938	413,262	406,586	399,910	393,235	386,559	n/a	6
7.	Average Net Investment		413,276	416,600	409,924	403,248	396,573	389,897		7
8.	Return on Average Net Investment									8
(3) a.	Equity Component (Line 7 * 4.7721% /12)		1,645	1,657	1,630	1,604	1,577	1,551	9,663	8a
(2) b.	Equity Component grossed up for taxes		2,678	2,697	2,654	2,611	2,567	2,524	15,732	8b
c.	Debt Component (Line 7 * 3.4082% /12)		1,201	1,183	1,164	1,145	1,126	1,107	6,927	8c
9.	Total Return Requirements (Line 8b + 8c)		3,879	3,880	3,818	3,756	3,694	3,632	22,659	9
10.	Total Depreciation & Return (Line 3 + 9)		10,555	10,556	10,494	10,432	10,370	10,308	62,715	10

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Relocate Storm Water Runoff (Project No. 10)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No.
1.	Investment		0	0	0	0	0	0	0	1.
2.	Depreciation Base		127,273	127,273	127,273	127,273	127,273	127,273	n/a	2
(1) 3.	Depreciation Expense		297	297	297	297	297	297	1,782	3
4.	Cumulative Investment (Line 2)	127,273	127,273	127,273	127,273	127,273	127,273	127,273	n/a	4
5.	Less: Accumulated Depreciation	3,307	3,604	3,901	4,198	4,495	4,792	5,089	n/a	5.
6.	Net Investment (Line 4 - 5)	123,966	123,669	123,372	123,075	122,778	122,481	122,184	n/a	6
7.	Average Net Investment		123,817	123,521	123,224	122,927	122,630	122,333		7
8.	Return on Average Net Investment									8
(3) a.	Equity Component (Line 7 * 4.7721% /12)		493	491	490	489	488	486	2,937	8a
(2) b.	Equity Component grossed up for taxes		802	800	798	796	794	792	4,782	8b
c.	Debt Component (Line 7 * 3.4082% /12)		360	351	350	349	348	347	2,105	8c
9.	Total Return Requirements (Line 8b + 8c)		1,162	1,151	1,148	1,145	1,142	1,139	6,887	9
10.	Total Depreciation & Return (Line 3 + 9)		1,459	1,447	1,445	1,442	1,439	1,436	8,668	10

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 34%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Projected Period April 1995 through September 1995

Scherer Discharge Pipeline (Project No. 12)

Line No.	Description	Beginning of Period	April 95 Projected	May 95 Projected	June 95 Projected	July 95 Projected	August 95 Projected	September 95 Projected	Total	Line No.
1.	Investment		0	0	0	0	0	0	0	1
2.	Depreciation Base		843,574	843,574	843,574	843,574	843,574	843,574	n/a	2
(1) 3.	Depreciation Expense		2,162	2,162	2,162	2,162	2,162	2,162	12,973	3
4.	Cumulative Investment (Line 2)	853,511	853,511	853,511	853,511	853,511	853,511	853,511	n/a	4
5.	Less: Accumulated Depreciation	22,180	24,342	26,504	28,666	30,829	32,991	35,153	n/a	5
6.	Net Investment (Line 4 - 5)	831,330	829,168	827,006	824,844	822,682	820,520	818,358	n/a	6
7.	Average Net Investment		830,249	828,087	825,925	823,763	821,601	819,439		7
8.	Return on Average Net Investment									8
(3) a.	Equity Component (Line 7 * 4.7721% /12)		3,305	3,293	3,284	3,276	3,267	3,259	19,685	8a
(2) b.	Equity Component grossed up for taxes		5,381	5,361	5,347	5,333	5,319	5,305	32,046	8b
c.	Debt Component (Line 7 * 3.4082% /12)		2,412	2,352	2,346	2,340	2,333	2,327	14,110	8c
9.	Total Return Requirements (Line 8b + 8c)		7,792	7,713	7,693	7,673	7,653	7,633	46,156	9
10.	Total Depreciation & Return (Line 3 + 9)		9,954	9,875	9,855	9,835	9,815	9,795	59,129	10

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7721% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Negative Return on
 Deferred Gains on Sales of Emission Allowances
 For the Projected Period April 1995 through September 1995

Line No.	Description	Beginning of Period	Projected April	Projected May	Projected June	Projected July	Projected August	Projected September	Total	Line No.
1	Additions		\$0	0	0	\$0	0	0		
2	Net Investment	(\$682,020)	(\$682,020)	(\$682,020)	(\$682,020)	(\$682,020)	(\$682,020)	(\$682,020)		1
3	Average Net Investment		(\$682,020)	(\$682,020)	(\$682,020)	(\$682,020)	(\$682,020)	(\$682,020)	n/a	2
4	Return on Average Net Investment (a)									3
	a. Equity Component (Line 3 x 4.7721% /12) *		(2,712)	(2,712)	(2,712)	(2,712)	(2,712)	(2,712)	(16,273)	4
	b. Equity Comp. grossed up for taxes (Line 4a / 61425)		(4,416)	(4,416)	(4,416)	(4,416)	(4,416)	(4,416)	(26,493)	
	c. Debt Component (Line 3 x 3.4082% /12) *		(1,937)	(1,937)	(1,937)	(1,937)	(1,937)	(1,937)	(11,622)	
5	Total Return Requirements (Line 4b + 4c)		(6,353)	(6,353)	(6,353)	(6,353)	(6,353)	(6,353)	(38,116)	

* The Equity and Debt Component have been updated to reflect September 30, 1994 cost rates as filed in the Monthly Rate of Return Surveillance Report.

FLORIDA POWER & LIGHT COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 CALCULATION OF ESTIMATED/ACTUAL VARIANCE
 OCTOBER 1994 THROUGH MARCH 1995

ENVIRONMENTAL COSTS	ESTIMATED/ACTUAL	ESTIMATED	VARIANCE
1. Air Operating Permit Fees - O & M	\$1,671,288	\$1,604,961	\$66,327
2. Low NOx Burner Technology - Capital	\$933,490	\$850,182	\$83,308
3. Continuous Emission Monitoring Systems - Capital	\$650,415	\$640,673	\$9,742
4a. Clean Closure Equivalency - O & M	\$181,852	\$436,500	(\$254,648)
4b. Clean Closure Equivalency - Capital	\$3,808	\$4,526	(\$718)
5a. Maintenance of Stationary Above Ground Fuel Storage Tanks - O & M	\$314,962	\$217,002	\$97,960
5b. Maintenance of Stationary Above Ground Fuel Storage Tanks - Capital	\$176,394	\$176,050	\$344
7. Relocate Turbine Lube Oil Underground Piping to Above Ground - Capital	\$2,196	\$2,184	\$12
8a. Oil Spill Cleanup/Response Equipment - O & M	\$108,110	\$78,000	\$30,110
8b. Oil Spill Cleanup/Response Equipment - Capital	\$61,970	\$60,865	\$1,105
8c. Oil Spill Cleanup/Response Equipment - Revenue	(\$359,463)	\$0	(\$359,463)
9. Low-Level Radioactive Waste Access Fees - O & M	\$55,295	\$95,607	(\$40,312)
10. Relocate Storm Water Runoff - Capital	\$8,835	\$8,860	(\$25)
11. SO2 Allowances - Negative Return on Investment	(\$27,758)	(\$23,646)	(\$4,112)
12. Scherer Discharge Pipeline - Capital	\$60,202	\$60,428	(\$226)
13. Continuous Emission Monitoring Systems - O & M	\$125,050	\$0	\$125,050
14. RCRA Corrective Action - O & M	\$55,000	\$0	\$55,000
15. TOTAL (Lines 1 through 14)	<u>\$4,021,646</u>	<u>\$4,212,192</u>	<u>(\$190,546)</u>
16. Jurisdictional Environmental Costs	\$3,936,208	\$4,122,706	(\$186,498)
17. Jurisdictional Environmental Revenues, Net of Revenue Taxes	<u>\$4,241,381</u>	<u>\$4,122,706</u>	<u>\$118,675</u>
18. True-up Provision (lines 17-16)	\$305,173	\$0	\$305,173
19. Interest Provision	\$46,206	\$0	\$46,206
20. Deferred True-up Beginning of Period	<u>\$111,561</u>	<u>\$0</u>	<u>\$111,561</u>
21. End of Period Net True-up Amount (lines 18+19+20)	<u>\$462,940</u>	<u>\$0</u>	<u>\$462,940</u>

FLORIDA POWER & LIGHT COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 OCTOBER THROUGH NOVEMBER 1994 ACTUAL
 DECEMBER 1994 THROUGH MARCH 1995 ESTIMATED

ENVIRONMENTAL COSTS	ACTUALS					ESTIMATED					TOTAL
	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH					
1. Air Operating Permit Fees - O & M	\$4,108	\$4,108	\$4,108	\$4,108	\$1,650,748	\$4,108	\$4,108	\$4,108	\$4,108	\$4,108	\$1,671,288
2. Low NOx Burner Technology - Capital	\$122,601	\$121,546	\$126,071	\$156,506	\$196,576	\$208,190	\$208,190	\$208,190	\$208,190	\$208,190	\$931,490
3. Continuous Emission Monitoring Systems - Capital	\$32,615	\$62,663	\$83,737	\$129,946	\$169,679	\$171,775	\$171,775	\$171,775	\$171,775	\$171,775	\$650,415
4a. Clean Closure Equivalency - O & M	\$12,669	\$32,183	\$0	\$46,000	\$61,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$181,832
4b. Clean Closure Equivalency - Capital	\$481	\$473	\$471	\$605	\$738	\$1,040	\$1,040	\$1,040	\$1,040	\$1,040	\$1,808
5a. Maintenance of Stationary Above Ground Fuel Storage Tanks - O & M	\$18,767	\$1,696	\$55,000	\$79,833	\$79,833	\$79,833	\$79,833	\$79,833	\$79,833	\$79,833	\$314,962
5b. Maintenance of Stationary Above Ground Fuel Storage Tanks - Capital	\$21,704	\$31,366	\$27,060	\$29,205	\$32,829	\$34,230	\$34,230	\$34,230	\$34,230	\$34,230	\$176,394
7. Relocate Turbine Lube Oil Underground Piping to Above Ground - Capital	\$373	\$366	\$365	\$363	\$364	\$363	\$363	\$363	\$363	\$363	\$2,196
8a. Oil Spill Cleanup/Response Equipment - O & M	\$1,615	\$39,996	\$23,000	\$13,833	\$13,833	\$13,833	\$13,833	\$13,833	\$13,833	\$13,833	\$108,110
8b. Oil Spill Cleanup/Response Equipment - Capital	\$10,552	\$10,403	\$10,343	\$10,283	\$10,224	\$10,165	\$10,165	\$10,165	\$10,165	\$10,165	\$61,970
8c. Oil Spill Cleanup/Response Equipment - Revenue	(\$246,963)	\$0	(\$112,500)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$359,463)
9. Low-Level Radioactive Waste Access Fees - O & M	\$0	\$0	\$9,070	\$0	\$0	(\$3,775)	(\$3,775)	(\$3,775)	(\$3,775)	(\$3,775)	\$5,295
10. Relocate Storm Water Runoff - Capital	\$1,498	\$1,473	\$1,470	\$1,467	\$1,465	\$1,462	\$1,462	\$1,462	\$1,462	\$1,462	\$4,835
11. SO2 Allowances - Negative Return on Investment	(\$4,199)	(\$4,524)	(\$4,524)	(\$4,524)	(\$4,524)	(\$4,524)	(\$4,524)	(\$4,524)	(\$4,524)	(\$4,524)	(\$27,738)
12. Scherer Discharge Pipeline - Capital	\$10,147	\$10,034	\$10,036	\$10,015	\$9,995	\$9,975	\$9,975	\$9,975	\$9,975	\$9,975	\$60,202
13. Continuous Emission Monitoring Systems - O & M	\$0	\$0	\$0	\$17,600	\$87,350	\$30,100	\$30,100	\$30,100	\$30,100	\$30,100	\$125,050
14. RCRA Corrective Action - O & M	\$0	\$0	\$0	\$5,000	\$10,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$55,000
15. TOTAL (Lines 1 through 14)	(\$12,032)	\$313,783	\$283,707	\$500,342	\$0	\$2,320,110	\$0	\$2,320,110	\$0	\$615,836	\$4,021,646

FLORIDA POWER & LIGHT COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 CALCULATION OF OVER/(UNDER) RECOVERY
 FOR THE ESTIMATED/ACTUAL PERIOD OCTOBER 1994 THROUGH MARCH 1995

	ACTUAL OCTOBER	ACTUAL NOVEMBER	ESTIMATED DECEMBER	ESTIMATED JANUARY	ESTIMATED FEBRUARY	ESTIMATED MARCH	PERIOD TOTALS
B. 1 ENVIRONMENTAL CLAUSE REVENUES (NET OF REVENUE TAXES)	\$625,318	\$580,574	\$481,573	\$496,634	\$483,174	\$480,106	\$3,147,379
2 ADJUSTMENT NOT APPLICABLE TO PERIOD - PRIOR TRUE-UP	182,334	182,334	182,334	182,334	182,334	182,334	1,094,002
3 ENVIRONMENTAL REVENUES APPLICABLE TO PERIOD (Line B1 + B2)	807,652	762,908	663,907	678,968	665,508	662,440	4,241,381
4 JURISDICTIONAL ENVIRONMENTAL EXPENSES (11,777)	(11,777)	307,117	277,680	489,615	2,270,820	602,753	3,936,208
5 TRUE-UP THIS PERIOD (Line B3 - Line B4)	819,429	455,791	386,227	189,353	(1,605,312)	59,687	305,173
6 INTEREST PROVISION FOR THE MONTH: (From DOCUMENT NO. 1, Page 3, Line C10)	6,376	8,820	10,534	11,081	6,934	2,461	46,206
7 TRUE-UP & INTEREST PROVISION BEGINNING OF MONTH (EST/ACT in factor)	1,094,002	1,737,473	2,019,750	2,234,177	2,252,277	471,565	1,094,002
a. DEFERRED TRUE-UP BEGINNING OF PERIOD (Final less EST/ACT)	111,561	111,561	111,561	111,561	111,561	111,561	111,561
8 PRIOR TRUE-UP COLLECTED (REFUNDED)	(182,334)	(182,334)	(182,334)	(182,334)	(182,334)	(182,334)	(1,094,002)
11. END OF PERIOD - TOTAL NET TRUE-UP RECOVERY (Line B5 + B6 + B7 + B7a + B8)	\$1,849,034	\$2,131,311	\$2,345,738	\$2,363,838	\$583,126	\$462,940	\$462,940

NOTES: () Reflects Underrecovery

FLORIDA POWER & LIGHT COMPANY
 ENVIRONMENTAL COST RECOVERY CLAUSE
 CALCULATION OF INTEREST PROVISION
 FOR THE ESTIMATED/ACTUAL PERIOD OCTOBER 1994 THROUGH MARCH 1995

	ACTUAL OCTOBER	ACTUAL NOVEMBER	ESTIMATED DECEMBER	ESTIMATED JANUARY	ESTIMATED FEBRUARY	ESTIMATED MARCH	PERIOD TOTALS
C INTEREST PROVISION							
1 BEGINNING TRUE-UP AMOUNT (Line B7+B7a)	\$1,205,563	\$1,849,034	\$2,131,311	\$2,345,738	\$2,363,838	\$583,126	\$10,478,610
2 ENDING TRUE-UP AMOUNT BEFORE INTEREST (Line B5+B7+B7a+B8)	1,842,658	2,122,491	2,335,204	2,352,757	576,192	460,479	9,689,781
3 TOTAL OF BEGINNING & ENDING TRUE-UP (Line C1+C2)	\$3,048,221	\$3,971,525	\$4,466,515	\$4,698,495	\$2,940,030	\$1,043,605	\$20,168,391
4 AVERAGE TRUE-UP AMOUNT (50% of Line C3)	\$1,524,111	\$1,985,763	\$2,233,258	\$2,349,248	\$1,470,015	\$521,803	\$10,084,196
5 INTEREST RATE - FIRST DAY OF REPORTING BUSINESS MONTH	5.04000%	5.00000%	5.66000%	5.66000%	5.66000%	5.66000%	N/A
6 INTEREST RATE - FIRST DAY OF SUBSEQUENT BUSINESS MONTH	5.00000%	5.66000%	5.66000%	5.66000%	5.66000%	5.66000%	N/A
7 TOTAL (Line C5+C6)	10.04000%	10.66000%	11.32000%	11.32000%	11.32000%	11.32000%	N/A
AVERAGE INTEREST RATE 8 (50% of Line C7)	5.02000%	5.33000%	5.66000%	5.66000%	5.66000%	5.66000%	N/A
9 MONTHLY AVERAGE INTEREST RATE (Line C8 / 12)	0.41833%	0.44417%	0.47167%	0.47167%	0.47167%	0.47167%	N/A
10 INTEREST PROVISION FOR THE MONTH (Line C4 x C9)	\$6,376	\$8,820	\$10,534	\$11,081	\$6,934	\$2,461	\$46,206

() REFLECTS UNDERRECOVERY.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Low NO_x Burner Technology (Project No. 2)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No
1.	Investment		1,979	463,413	(550,132)	5,733,937	513,342	1,340,722	7,503,261	1.
2.	Depreciation Base		9,006,916	9,470,329	8,920,197	14,654,134	15,167,476	16,508,198	n/a	2.
(1) 3.	Depreciation Expense		38,154	38,876	42,188	48,723	59,986	63,478	291,404	3.
4.	Cumulative Investment (Line 2)	9,004,937	9,006,916	9,470,329	8,920,197	14,654,134	15,167,476	16,508,198	n/a	4.
5.	Less: Accumulated Depreciation	159,734	197,863	236,667	278,854	327,577	387,563	451,040	n/a	5.
6.	Net Investment (Line 4 - 5)	8,845,203	8,809,053	9,233,662	8,641,342	14,326,557	14,779,913	16,057,157	n/a	6.
7.	Average Net Investment		8,827,128	9,021,358	8,937,502	11,483,950	14,553,235	15,418,535		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7769% /12)		35,284	35,912	35,578	45,715	57,933	61,377	271,799	8a.
(2) b.	Equity Component grossed up for taxes		57,443	58,464	57,921	74,424	94,315	99,922	442,489	8b.
c.	Debt Component (Line 7 * 3.4859% /12)		27,004	26,206	25,963	33,360	42,276	44,790	199,598	8c.
9.	Total Return Requirements (Line 8b + 8c)		84,446	84,671	83,884	107,784	136,591	144,712	642,087	9.
10.	Total Depreciation & Return (Line 3 + 9)		122,601	123,546	126,071	156,506	196,576	208,190	933,490	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-POF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Continuous Emissions Monitoring (Project No. 3)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No.
1.	Investment		2,421,329	2,238,208	1,166,753	6,022,163	245,000	150,000	12,243,453	1.
2.	Depreciation Base		3,707,092	5,945,300	7,112,052	13,134,216	13,379,216	13,529,216	n/a	2.
(1) 3.	Depreciation Expense		8,817	17,573	22,859	35,606	46,313	46,993	178,160	3.
4.	Cumulative Investment (Line 2)	1,285,763	3,707,092	5,945,300	7,112,052	13,134,216	13,379,216	13,529,216	n/a	4.
5.	Less: Accumulated Depreciation	4,478	13,295	30,868	53,727	89,332	135,645	182,638	n/a	5.
6.	Net Investment (Line 4 - 5)	1,281,285	3,693,797	5,914,432	7,058,326	13,044,883	13,243,571	13,346,578	n/a	6.
7.	Average Net Investment		2,487,541	4,804,114	6,486,379	10,051,604	13,144,227	13,295,074		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7769% /12)		9,943	19,124	25,821	40,013	52,324	52,924	200,149	8a.
(2) b.	Equity Component grossed up for taxes		16,188	31,134	42,036	65,141	85,183	86,161	325,843	8b.
c.	Debt Component (Line 7 * 3.4859% /12)		7,610	13,956	18,842	29,199	38,183	38,621	146,411	8c.
9.	Total Return Requirements (Line 8b + 8c)		23,798	45,089	60,878	94,340	123,366	124,782	472,254	9.
10.	Total Depreciation & Return (Line 3 + 9)		32,615	62,663	83,737	129,946	169,679	171,775	650,415	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Clean Closure Equivalency (Project No. 4)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No
1.	Investment		0	0	0	23,000	0	51,000	74,000	1.
2.	Depreciation Base		37,067	37,067	37,067	60,067	60,067	111,067	n/a	2.
(1) 3.	Depreciation Expense		137	137	137	164	191	255	1,021	3.
4.	Cumulative Investment (Line 2)	37,067	37,067	37,067	37,067	60,067	60,067	111,067	n/a	4.
5.	Less: Accumulated Depreciation	1,109	1,246	1,383	1,520	1,684	1,874	2,130	n/a	5.
6.	Net Investment (Line 4 - 5)	35,958	35,821	35,684	35,547	58,383	58,192	108,937	n/a	6.
7.	Average Net Investment		35,889	35,752	35,615	46,145	58,288	83,565		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7769% /12)		143	142	142	117	232	333	1,179	8a.
(2) b.	Equity Component grossed up for taxes		234	232	231	204	378	542	1,920	8b.
c.	Debt Component (Line 7 * 3.4859% /12)		110	104	103	136	169	243	866	8c.
9.	Total Return Requirements (Line 8b + 8c)		343	336	334	441	547	784	2,785	9.
10.	Total Depreciation & Return (Line 3 + 9)		481	473	471	605	738	1,040	3,808	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-91-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Maintenance of Above Ground Storage Tanks (Project No. 5)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No.
1.	Investment		225,399	289,294	0	360,000	250,000	0	1,124,692	1.
2.	Depreciation Base		1,793,666	2,082,960	2,082,960	2,442,960	2,692,960	2,692,960	n/a	2.
(1) 3.	Depreciation Expense		5,970	13,324	7,476	8,004	8,845	9,157	52,776	3.
4.	Cumulative Investment (Line 2)	1,568,268	1,793,666	2,082,960	2,082,960	2,442,960	2,692,960	2,692,960	n/a	4.
5.	Less: Accumulated Depreciation	33,254	39,224	(7,347)	129	8,133	16,978	26,136	n/a	5.
6.	Net Investment (Line 4 - 5)	1,535,013	1,754,442	2,090,307	2,082,831	2,434,827	2,675,982	2,666,824	n/a	6.
7.	Average Net Investment		1,644,728	1,922,375	2,086,569	2,258,829	2,555,404	2,671,403		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7769% /12)		6,574	7,652	8,306	8,992	10,172	10,634	52,331	8a.
(2) b.	Equity Component grossed up for taxes		10,703	12,458	13,522	14,639	16,561	17,312	85,196	8b.
c.	Debt Component (Line 7 * 3.4859% /12)		5,031	5,584	6,061	6,562	7,423	7,760	38,422	8c.
9.	Total Return Requirements (Line 8b + 8c)		15,735	18,043	19,584	21,200	23,984	25,073	123,618	9.
10.	Total Depreciation & Return (Line 3 + 9)		21,704	31,366	27,060	29,205	32,829	34,230	176,394	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Relocate Turbine Oil Underground Piping (Project No. 7)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No.
1.	Investment		0	0	0	0	0	0	0	1.
2.	Depreciation Base		31,030	31,030	31,030	31,030	31,030	31,030	n/a	2.
(1) 3.	Depreciation Expense		88	88	88	88	88	88	528	3
4.	Cumulative Investment (Line 2)	31,030	31,030	31,030	31,030	31,030	31,030	31,030	n/a	4
5.	Less: Accumulated Depreciation	1,247	1,335	1,423	1,510	1,598	1,686	1,774	n/a	5.
6.	Net Investment (Line 4 - 5)	29,783	29,695	29,607	29,520	29,432	29,344	29,256	n/a	6.
7.	Average Net Investment		29,739	29,651	29,564	29,476	29,388	29,300		7
8.	Return on Average Net Investment									8
(3) a.	Equity Component (Line 7 * 4.7769% /12)		119	118	118	117	117	117	706	8a
(2) b.	Equity Component grossed up for taxes		194	192	192	191	190	190	1,149	8b
c.	Debt Component (Line 7 * 3.4859% /12)		91	86	86	86	85	85	519	8c
9.	Total Return Requirements (Line 8b + 8c)		285	278	277	277	276	275	1,668	9
10.	Total Depreciation & Return (Line 3 + 9)		373	366	365	365	364	363	2,196	10

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Oil Spill Cleanup/Response Equipment (Project No. 8)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No
1.	Investment		128	(178)	0	0	0	0	(50)	1.
2.	Depreciation Base		527,790	527,612	527,612	527,612	527,612	527,612	n/a	2.
(1) 3.	Depreciation Expense		6,322	6,319	6,319	6,319	6,319	6,319	37,916	3.
4.	Cumulative Investment (Line 2)	527,662	527,790	527,612	527,612	527,612	527,612	527,612	n/a	4.
5.	Less: Accumulated Depreciation	83,082	89,404	95,723	102,042	108,360	114,679	120,998	n/a	5.
6.	Net Investment (Line 4 - 5)	444,580	438,386	431,889	425,570	419,252	412,933	406,614	n/a	6.
7.	Average Net Investment		441,483	435,137	428,730	422,411	416,092	409,773		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7769% /12)		1,768	1,732	1,707	1,682	1,656	1,631	10,176	8a.
(2) b.	Equity Component grossed up for taxes		2,879	2,820	2,778	2,738	2,697	2,656	16,567	8b.
c.	Debt Component (Line 7 * 3.4859% /12)		1,351	1,264	1,245	1,227	1,209	1,190	7,486	8c.
9.	Total Return Requirements (Line 8b + 8c)		4,229	4,084	4,024	3,965	3,905	3,846	24,053	9.
10.	Total Depreciation & Return (Line 3 + 9)		10,552	10,403	10,343	10,283	10,224	10,165	61,970	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Relocate Storm Water Runoff (Project No. 10)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No.
1.	Investment		0	0	0	0	0	0	0	1.
2.	Depreciation Base		127,273	127,273	127,273	127,273	127,273	127,273	n/a	2
(1) 3.	Depreciation Expense		297	297	297	297	297	297	1,782	3
4.	Cumulative Investment (Line 2)	127,273	127,273	127,273	127,273	127,273	127,273	127,273	n/a	4
5.	Less: Accumulated Depreciation	1,525	1,822	2,119	2,416	2,713	3,010	3,307	n/a	5
6.	Net Investment (Line 4 - 5)	125,748	125,451	125,154	124,857	124,560	124,263	123,966	n/a	6
7.	Average Net Investment		125,599	125,302	125,005	124,708	124,411	124,114		7
8.	Return on Average Net Investment									8
(3) a.	Equity Component (Line 7 * 4.7769% /12)		502	499	498	496	495	494	2,984	8a
(2) b.	Equity Component grossed up for taxes		817	812	810	808	806	804	4,858	8b
c.	Debt Component (Line 7 * 3.4859% /12)		384	364	363	362	361	361	2,196	8c
9.	Total Return Requirements (Line 8b + 8c)		1,202	1,176	1,173	1,170	1,168	1,165	7,054	9
10.	Total Depreciation & Return (Line 3 + 9)		1,498	1,473	1,470	1,467	1,465	1,462	8,835	10

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Capital Investment Depreciation and Return
 For the Estimated/Actual Period October 1994 through March 1995

Scherer Discharge Pipeline (Project No. 12)

Line No.	Description	Beginning of Period	October 94 Actual	November 94 Actual	December 94 Estimated	January 95 Estimated	February 95 Estimated	March 95 Estimated	Total	Line No.
1.	Investment		1,693	3,649	0	0	0	0	5,343	1.
2.	Depreciation Base (Excludes Land of \$9,937)		839,925	843,574	843,574	843,574	843,574	843,574	n/a	2.
(1) 3.	Depreciation Expense		2,123	2,157	2,162	2,162	2,162	2,162	12,929	3.
4.	Cumulative Investment (Line 2)	848,168	849,861	853,511	853,511	853,511	853,511	853,511	n/a	4.
5.	Less: Accumulated Depreciation	9,251	11,374	13,532	15,694	17,856	20,018	22,180	n/a	5.
6.	Net Investment (Line 4 - 5)	838,917	838,487	839,979	837,817	835,655	833,493	831,330	n/a	6.
7.	Average Net Investment		838,702	839,233	838,898	836,736	834,574	832,412		7.
8.	Return on Average Net Investment									8.
(3) a.	Equity Component (Line 7 * 4.7769% /12)		3,353	3,341	3,339	3,331	3,322	3,314	19,999	8a.
(2) b.	Equity Component grossed up for taxes		5,458	5,439	5,437	5,423	5,409	5,395	32,559	8b.
c.	Debt Component (Line 7 * 3.4859% /12)		2,566	2,438	2,437	2,431	2,424	2,418	14,714	8c.
9.	Total Return Requirements (Line 8b + 8c)		8,024	7,877	7,874	7,853	7,833	7,813	47,273	9.
10.	Total Depreciation & Return (Line 3 + 9)		10,147	10,034	10,036	10,015	9,995	9,975	60,202	10.

(1) Depreciation expense is calculated using the appropriate site and account rates. Half month depreciation is calculated on additions closing to Plant In Service during the month.

(2) The gross-up factor (Line 8b) used for this schedule uses 0.61425 which reflects the Federal Income Tax Rate of 35%.

(3) The monthly Equity Component of 4.7769% reflects a 12% return on equity and is in accordance with FPSC Order No. PSC-93-1580-FOF-EI.

Note - Depreciation and return are calculated and recorded on a one month lag due to the timing of the month end closing. The amounts recorded and shown above apply to the prior month.

Florida Power & Light Company
 Schedule of Negative Return on
 Deferred Gain on Sales of Emission Allowances
 For the Estimated/Actual Period October 1994 through March 1995

Line No.	Description	Beginning of Period	Actual October	Actual November	Estimated December	Estimated January	Estimated February	Estimated March	Total	Line No.
1	Additions		(\$69,227)	0	0	\$0	0	(200,000)		
2	Net Investment	(\$412,793)	(\$482,020)	(\$482,020)	(\$482,020)	(\$482,020)	(\$482,020)	(\$682,020)		1
3	Average Net Investment		(\$447,407)	(\$482,020)	(\$482,020)	(\$482,020)	(\$482,020)	(\$582,020)	n/a	2
4	Return on Average Net Investment (a)									3
	a. Equity Component (Line 3 x 4.7769% /12) *		(1,781)	(1,919)	(1,919)	(1,919)	(1,919)	(2,317)	(11,773)	4
	b. Equity Comp. grossed up for taxes (Line 4a/.61425)		(2,899)	(3,124)	(3,124)	(3,124)	(3,124)	(3,772)	(19,167)	
	c. Debt Component (Line 3 x 3.4859% /12) *		(1,300)	(1,400)	(1,400)	(1,400)	(1,400)	(1,691)	(8,591)	
5	Total Return Requirements (Line 4b + 4c)		(4,199)	(4,524)	(4,524)	(4,524)	(4,524)	(5,463)	(27,759)	

* The Equity and Debt Component have been updated to reflect June 30, 1994 cost rates as filed in the Monthly Rate of Return Surveillance Report.

W. H. REICHEL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER & LIGHT COMPANY

TESTIMONY OF W. M. REICHEL

DOCKET NO. 950007-EI

JANUARY 17, 1995

1 Q. Please state your name.

2 A. My name is William M. Reichel and my business address is 700
3 Universe Boulevard, Juno Beach, Florida 33408.

4

5 Q. By whom are you employed and in what capacity?

6 A. I am employed by Florida Power & Light Company (FPL) as the
7 Manager of Operations Services in the Power Generation Business
8 Unit.

9

10 Q. Please summarize your educational background and professional
11 experience.

12 A. I received my Bachelor of Science degrees in Aerospace
13 Engineering and Mechanical Engineering from the University of
14 Florida in 1970 and 1971, respectively. From January 1973 to date
15 I have been employed by FPL in the Power Generation area. I
16 started as Plant Engineer at the Lauderdale Power Plant and have

1 held various supervisory positions in plant operations including
2 Plant Manager of the Riviera Power Plant. I am now Manager of
3 Operations Services with responsibility for supporting all fossil
4 power plants in the areas of thermal performance testing, chemistry,
5 operational support and emissions testing. Included in my duties is
6 support for Clean Air Act implementation activities and other air
7 regulatory issues.

8

9 **Q. What is the purpose of your testimony?**

10 A. The purpose of my testimony is to submit for Commission Review
11 and approval a description of two new environmental compliance
12 actions and the rationale for the alternative selected. In addition, I
13 am providing a project description and progress status for each
14 environmental compliance activity.

15

16 **Q. What are the new environmental regulatory compliance activities?**

17 A. FPL is seeking recovery of the compliance costs associated with the
18 operation and maintenance (O&M) of Continuous Emission
19 Monitoring Systems and for the Corrective Action Program under
20 the Hazardous and Solid Waste Amendments of 1984 (HSWA)
21 which revised the Resource Conservation and Recovery Act
22 (RCRA).

1 **CONTINUOUS EMISSION MONITORING SYSTEMS - O&M**

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Q. Please generally describe the scope of this project.

A. Continuous Emission Monitoring Systems (CEMS) were installed on all 27 FPL fossil units and recovery was approved by the Commission in Order No. PSC-93-1580-FOF-EI. This project encompasses all the additional expenses (excluding payroll) necessary to operate and maintain these new Continuous Emission Monitoring Systems, after the expiration of the warranty period, as required by the Clean Air Act Amendments of 1990. The operation and maintenance of these systems includes the following: quality assurance activities, spare parts, software updates and electronic reporting activities.

Q. Describe the regulations that address the need for these expenditures.

A. The Clean Air Act Amendments of 1990 (Title IV) and Public Law 101-549 established requirements for monitoring, recordkeeping and reporting of emissions, see Document No. 1. The same laws that required the installation of CEMS (40 CFR Part 75.10, see Document No. 2) require their maintenance and operation. Quality Assurance requirements for CEMS are described in 40 CFR Part

1 75, Appendix B, see Document No. 3.

2

3 Q. What are the anticipated expenditures for this project for the
4 October 1994 through March 1995 and April 1995 through
5 September 1995 periods?

6 A. There are no expenditures before January 1995. Below are the
7 estimated expenditures for the two periods.

8		October 1994	April 1995 to
9	<u>Activity</u>	<u>to March 1995</u>	<u>September 1995</u>
10	Quality Assurance	\$ 46,300	\$124,200
11	Spare Parts	0	30,000
12	Software	69,750	139,500
13	Electronic Reporting	<u>9,000</u>	<u>29,000</u>
14	Total	\$125,050	\$322,700

15

16 Q. Please describe each activity and indicate if it is a one-time or a
17 perpetual expenditure.

18 A. Quality Assurance

19 Expenditures in this category are for the following:

20 (1) Protocol 1 calibration gases which are used at the power
21 plants for the 27 CEMS and by the emission test crews
22 when testing the CEMS. Expenditures are expected to be
23 \$31,800 for January 1995 through March 1995 and \$55,200

1 for April 1995 through September 1995. This is an on-
2 going expense.

3 (2) Materials, supplies and mobilization costs for emission test
4 crews, (excluding payroll) to perform Relative Accuracy
5 Test Audits, Linearity Checks and any recertification that
6 may be required. FPL has found significant cost savings by
7 performing its own emission testing rather than contracting
8 the work. Expenditures are expected to be \$14,500 for
9 January 1995 through March 1995 and \$29,000 for April
10 1995 through September 1995. This is an on-going expense.

11 (3) Training materials and supplies, including the cost of
12 bringing in vendors to train FPL personnel on how to repair
13 various CEMS components, perform preventative
14 maintenance and operate the data acquisition and handling
15 systems. This training will transfer technological knowledge
16 to allow FPL to do future training on its own. There are no
17 expenditures forecast in the January through March period.
18 Approximately \$40,000 is expected in the April 1995
19 through September 1995 period. This is not a recurring
20 expenditure.

21 Spare Parts

22 FPL has no history on these continuous emission monitoring

1 systems, therefore projections on spare parts usage is based on
2 vendor information and engineering estimates. A levelized \$5,000
3 per month for all 27 systems is projected. It is anticipated that
4 failures requiring spare parts will not occur evenly throughout the
5 year, but the timing of the failures cannot be predicted at this time.
6 As data becomes available, FPL will adjust future projections of the
7 amount and timing of spare parts usage as this is an ongoing
8 expense. Expenditures are expected to be zero for January 1995
9 through March 1995 and \$30,000 for the April 1995 through
10 September 1995.

11 Software

12 The Environmental Protection Agency (EPA) has already published
13 draft rule changes of 40 CFR Part 75 for 1995. These rule changes
14 will require significant computer software changes. FPL has joined
15 with four other utilities that have the same software vendor to share
16 expenses for the EPA rule change re-write. The total cost of the re-
17 write is \$615,000. FPL's proportionate share, based on the number
18 of CEMS each utility has, is \$279,000. FPL and the other four
19 utilities have validated the basis for the quoted total cost, since
20 selecting a different vendor is not possible because of the
21 proprietary software code. It is anticipated that this re-write will be
22 completed and paid for in 1995. Expenditures are expected to be

1 \$69,750 for January 1995 through March 1995 and \$139,500 for
2 April 1995 through September 1995. This is a one-time
3 expenditure, however, future EPA rule changes could require further
4 changes to the CEMS software.

5 Electronic Reporting

6 Reporting of all emissions and operating data must be in electronic
7 format and is submitted quarterly. The expenditures being
8 requested for recovery are for consultants to develop the
9 methodology for centralized reporting for all 27 CEM systems,
10 producing the first and second quarter reports and training FPL
11 personnel. Expenditures are expected to be \$9,000 for January
12 through March 1995 and \$29,000 for April 1995 through September
13 1995. This is a one-time expenditure, as FPL personnel will
14 assume this function after the second quarter 1995.

15
16 **Q. Are all these expenditures required to operate and maintain the**
17 **CEMS?**

18 **A. Yes. The Clean Air Act Amendments of 1990 identifies, in 40**
19 **CFR Part 75, the requirements for operating and maintaining the**
20 **CEMS with quality assurance being highlighted. There are**
21 **emission penalties for operating CEMS below a 95% reliability. 40**
22 **CFR Part 75 goes beyond most other environmental regulations in**

1 spelling out operating and maintenance practices including the issue
2 of spare parts. Electronic reporting is also very specifically
3 required. In addition, as long as the regulations continue to change,
4 the computer software must be updated to be able to meet the
5 quality assurance requirements for software and to meet the
6 reporting requirement.

7
8 FPL will operate, maintain and quality assure its CEM systems.
9 Some of these expenditures, as specified above, are one-time costs
10 to enable our personnel to perform these functions and ultimately
11 reduce the cost impact of operating and maintaining these new
12 systems to our customers.

13
14 **CORRECTIVE ACTION REQUIREMENTS**

15 **Q. What is Corrective Action?**

16 **A.** "Corrective Action" is the name given to a program established
17 under the Hazardous and Solid Waste Amendments of 1984
18 (HSWA), revising the Resource Conservation and Recovery Act
19 (RCRA). RCRA is the federal statute establishing the national
20 requirements for the environmentally sound management of solid
21 waste, but dealing with hazardous waste in particular. The
22 Corrective Action program expands the scope of the U.S.

1 Environmental Protection Agency's (EPA) regulatory authority
2 under RCRA beyond those facilities and regulated units which
3 generate, treat, store or dispose of hazardous waste to other non-
4 regulated solid waste management units (SWMU's) at a site, that
5 may have released hazardous waste or hazardous constituents to the
6 environment. Under this program, the owner/operator of a regulated
7 unit may be required to assess the nature and extent of
8 contamination at non-regulated units resulting from such releases,
9 both past and continuing, actual or potential, and to remediate any
10 contamination present at levels representing a threat to human
11 health or the environment.

12
13 **Q. Could you define some of the terms you have used, such as SWMU**
14 **and hazardous constituent?**

15 **A.** A SWMU is any discernible area of the plant site into which solid
16 wastes have been placed at any time, regardless of whether the area
17 was intended for such use. A hazardous constituent is one of
18 approximately 280 compounds identified by the U.S. EPA as being
19 toxic to human health in certain concentrations. Hazardous waste is
20 defined by the U.S. EPA as a solid waste which either possesses
21 certain defined measurable characteristics that cause the waste to
22 pose a hazard to human health or the environment or is of a waste

1 source, compound or commercial product specifically listed by the
2 U.S. EPA. Hazardous constituents may be classified as hazardous
3 waste if they can be shown to pose a hazard to human health or the
4 environment when their waste forms are improperly managed.

5
6 **Q. How are Corrective Action requirements imposed?**

7 A. The U.S. EPA presently has two mechanisms by which it usually
8 imposes Corrective Action requirements. One is established under
9 the provisions of RCRA Section 3004(u), see Document No. 4,
10 which is applied in conjunction with the issuance of a RCRA
11 operation permit for hazardous waste treatment, storage or disposal
12 or for post-closure care (e.g., long-term monitoring) of a facility
13 where hazardous waste or constituents remain in place after the
14 facility has been closed. The other mechanism is established under
15 the provisions of RCRA Section 3008(h), see Document No. 5,
16 which authorizes the issuance by the U.S. EPA of an administrative
17 order requiring Corrective Action at an "interim status" facility
18 when there has been a release of a hazardous waste or constituents
19 into th environment. Interim status refers to a mechanism
20 established under RCRA whereby a facility engaged in
21 treatment/storage/disposal of hazardous waste could continue to
22 operate without a permit until the U.S. EPA called for the

1 submittal of an application for an operation permit.

2

3 **Q. Can you describe how Corrective Action is implemented?**

4 **A. Corrective Action is implemented through a process comprised of**
5 **five discrete phases, as follows:**

- 6 1. The RCRA Facility Assessment (RFA)--The agency reviews
7 a facility to identify SWMU's or Areas of Concern (AOC) at
8 which actual or potential releases of hazardous waste or
9 constituents into the environment may have occurred. It
10 then makes a determination of the need for further action.
11 This determination is largely based upon the information on
12 risk to human health and the environment provided by the
13 facility. This information is submitted as part of a formal
14 response by the facility to a specific request(s) made by the
15 agency.
- 16 2. The Governing Agreement--This is a legal document which
17 directs and controls all subsequent Corrective Action
18 activities imposed upon the facility owner/operator. This
19 document may consist of the operation permit containing the
20 Corrective Action conditions established pursuant to RCRA
21 Section 3004(u) or the administrative order issued pursuant
22 to RCRA Section 3008(h).

- 1 3. The RCRA Facility Investigation (RFI)--The facility
2 owner/operator must investigate all SWMU's and AOC's
3 identified in the Governing Agreement to define the
4 horizontal and vertical extent of contamination of
5 environmental media by hazardous waste or constituents.
6 The cost of conducting an RFI at just one SWMU is
7 estimated to be approximately \$100,000.
- 8 4. The Corrective Measures Study (CMS)--For contamination
9 which is present in an SWMU or AOC at levels which
10 represent a threat to human health or the environment, the
11 owner/operator of the facility must propose alternatives for
12 restoring the impacted environmental media to a quality that
13 removes the threat.
- 14 5. Corrective Measures Implementation (CMI)--The U.S. EPA
15 selects the appropriate remediation alternative from among
16 those proposed in the CMS, and the owner/operator
17 implements that remedy and monitors the affected media to
18 determine the effectiveness of the restoration actions. The
19 cost of clean-up will depend upon the nature and extent of
20 contamination, but could be considerable.

21
22 **Q. Does FPL have any facilities with regulated units?**

1 A. Yes. From at least 1980 (when the U.S. EPA promulgated the
2 regulations implementing RCRA) until 1986, FPL operated
3 neutralization basins to treat RCRA hazardous corrosive waste at
4 nine of its power plants. FPL operated these basins during this
5 period under the interim status provisions of RCRA. In 1987, the
6 use of these basins for this purpose was terminated when treatment
7 tanks, which are exempt from the RCRA regulations, were installed.

8

9 **Q. How is Corrective Action related to the Clean Closure Equivalency**
10 **Demonstration program which is an activity that the Commission**
11 **has already approved?**

12 A. Corrective Action deals with the non-regulated units at a RCRA
13 facility site, while a Clean Closure Equivalency Demonstration
14 deals only with the regulated unit i.e., the former hazardous waste
15 treatment, storage or disposal facility. FPL is currently engaged in
16 a program to demonstrate to the U.S. EPA that the former
17 hazardous waste treatment (neutralization) basins at its power plant
18 sites have been "clean-closed"; i.e., there are no hazardous wastes
19 or constituents remaining from the prior operation above levels
20 representing a threat to human health or the environment. If FPL is
21 unable to make this demonstration, it would be required to apply
22 for an operation permit to impose post-closure care requirements

1 (e.g., long-term monitoring) upon the regulated unit. Pursuant to
2 RCRA Section 3004(u), HSWA provides that any hazardous waste
3 permit issued after HSWA's date of enactment must include
4 requirements for Corrective Action applicable to the non-regulated
5 units at the RCRA facility site. This permit would be the
6 "Governing Agreement" noted earlier in my testimony.

7

8 **Q. What happens in regard to Corrective Action if FPL can**
9 **successfully demonstrate clean-closure at a particular site?**

10 **A.** A successful demonstration of clean closure equivalency will allow
11 the former hazardous waste treatment facility (neutralization basin)
12 to exit RCRA as a regulated unit. The U.S. EPA's authority to
13 implement Corrective Action via RCRA Section 3004(u) in
14 conjunction with a RCRA operation permit would therefore be
15 absent.

16

17 However, the U.S. EPA believes that it has residual authority under
18 RCRA Section 3008(h) to require Corrective Action even at
19 facilities which formerly had interim status, including ones which
20 have clean-closed. It has already begun a program to identify all of
21 the interim status facilities at which Corrective Action may be
22 required, even those which are conducting a Clean Closure

1 Equivalency Demonstration. In April 1994, FPL was advised that
2 the EPA intended to conduct RFA's at each of the nine FPL power
3 plants which had operated hazardous waste treatment facilities
4 under interim status.

5
6 Pursuant to a letter from the U.S. EPA, see Document No. 6, in
7 October 1994, agency personnel conducted an RCRA Facility
8 Assessment (RFA) at FPL's Martin Plant. Site visits for the other
9 eight power plants remains to be scheduled. If, as a result of the
10 RFA, the U.S. EPA were to determine that actual or potential
11 releases of hazardous waste or constituents into the environment
12 had occurred from SWMU's at any clean-closed FPL facility, it is
13 likely that it would seek to impose Corrective Action requirements
14 upon that facility via its RCRA Section 3008(h) authority, i.e.,
15 through the issuance of an administrative order.

16
17 **Q. What will FPL be doing to respond to the potential imposition of**
18 **Corrective Action?**

19 **A. At a minimum, FPL's response to the conduct of the RFA's is to**
20 **comply with the U.S. EPA's requests for information concerning the**
21 **operation of the power plant, the plant's waste streams, the former**
22 **hazardous waste treatment facility and all of the SWMU's at the**

1 plant. In that regard, FPL will need to provide information to the
2 U.S. EPA demonstrating either that specific SWMU's did not
3 manage hazardous waste or constituents or, if they did, that releases
4 of these to the environment did not occur. As a matter of
5 prudence, it may also be appropriate for FPL to conduct
6 assessments of the human health risk resulting from possible
7 releases in order to demonstrate that any residual contamination
8 does not represent an undue threat to human health or the
9 environment. These response actions will be necessary not only to
10 be responsive to the agency but also to confirm that no further
11 action is required. Although FPL will endeavor to utilize in-house
12 resources to the maximum extent possible, each of these initial
13 response actions may require the use environmental services
14 contractors, as well as some outside legal support.

15
16 If FPL does find that it must follow the full Corrective Action
17 process at a particular power plant, it may be appropriate for the
18 company to undertake a voluntary clean-up of various SWMU's,
19 i.e., in the absence of a Governing Agreement. The chief benefits
20 are flexibility and the potential for reduced cost. As presently
21 structured, the U.S. EPA's Corrective Action program is extremely
22 cumbersome and requires long periods of time for the agency's

1 approval of plans and response actions. FPL would be precluded
2 from undertaking prudent operating decisions involving any SWMU
3 subject to Corrective Action until the U.S. EPA gave its approval.
4 If through a voluntary clean-up of one or more SWMU's at a
5 particular plant the imposition of Corrective Action can be avoided,
6 the company could potentially reduce its costs, while also
7 maintaining control of its assets.

8
9 It is possible that the company would nonetheless be required to
10 apply for a RCRA permit or enter into a administrative order with
11 the agency, either of which would impose the full gamut of
12 Corrective Action requirements at one or more of our power plants.
13 If this occurs, FPL will endeavor to work with the agency to ensure
14 that its response actions are reasonable and cost-effective.

15
16 **Q. What costs are anticipated?**

17 **A.** Costs are very difficult to project at this time, since the number of
18 SWMU's which the agency believes may pose a problem and the
19 nature and extent of contamination, if any, are currently unknown.
20 Costs of \$500,000 have been estimated for 1995, essentially to
21 support the RFA's which the agency will be conducting, as well as
22 to document through data or risk assessment that no further action

1 is warranted with regard to particular SWMU's. As noted earlier in
2 my testimony, it may be appropriate for FPL to undertake voluntary
3 clean-up of contamination at specific SWMU's in order to expedite
4 the Corrective Action process, and thereby reduce its impacts. We
5 have estimated that approximately \$1,500,000 may be necessary to
6 support Corrective Action activities in 1996. The entire Corrective
7 Action process, if FPL is required to follow it, is quite lengthy,
8 with the time from conduct of the RFA at a particular facility to
9 completion of the CMI taking as long as ten years. The substantial
10 portion of possible costs are associated with the CMI, which
11 involves the actual clean-up and occurs towards the end of the
12 Corrective Action process. Costs could be as high as several
13 million dollars per year during this time frame.

14
15 **Q. What alternatives has FPL considered?**

16 **A.** FPL has no alternative but to comply with Corrective Action
17 requirements, if it is necessary for FPL to address them.
18 Alternatives may be available in the study approaches, scope of
19 study and clean-up and disposal methods but they are dependent
20 upon the site, the specific SWMU involved and the contamination
21 present. It will be necessary for FPL to develop cost-effective
22 alternatives and to work with the agency to ensure that these are

1 accepted in a timely manner and that other required activities are
2 reasonable. It may be necessary to undertake legal action against
3 the EPA if its requirements appear to be unreasonable or are not
4 based upon proper authority. In any case, FPL is committed to
5 undertaking response actions that both are cost-effective and will
6 protect human health and the environment.

7

8 **Q. Has FPL been responsible and prudent in fulfilling the**
9 **environmental requirements relating to the hazardous waste sites?**

10

11 **A. Yes. The imposition of Corrective Action requirements upon any**
12 **FPL facility does not suggest that FPL has failed to comply with**
13 **any of its obligations. FPL has operated its facilities in ways that**
14 **fully complied with the environmental laws, regulations and**
15 **standards in effect at the time and that were the most cost-effective**
16 **for its customers. The SWMU's at FPL's power plants, which**
17 **would be the subject of the RFA and possible Corrective Action,**
18 **have been designed and operated according to acceptable industry**
19 **practice then in effect. FPL has adhered to appropriate standards of**
20 **due diligence and prudence. Since the 1970's, the United States has**
21 **seen an explosion of environmental laws and regulations**
22 **establishing standards for protection of human health and the**

1 environment and revising those standards to make them more
2 stringent or adding new ones as research on human health effects
3 provides new information and environmental detection and
4 measurement capabilities improve. FPL's SWMU's are operating in
5 accordance with environmental permits required under various laws
6 and regulations, and FPL believes it has been in full compliance
7 with all of these requirements. It should be recognized that
8 environmental performance standards and expectations have
9 changed over the past 25 years, and they are continuing to change.
10 The U.S. EPA's Corrective Action program does not consider these
11 changes to be of any relevance in its application. Its focus is on
12 correcting any present problems that may have arisen as a result of
13 past events or practices.

14
15 **Q. Are you sponsoring any additional exhibits?**

16 **A.** Yes, I am sponsoring Document No. 7 which provides detailed
17 information concerning all the projects.

18
19 **Q. Does this conclude your testimony?**

20 **A.** Yes, it does.

requirements of this subsection if the Administrator finds that compliance with such requirements is impracticable, infeasible, or unnecessarily burdensome on such categories, except that the Administrator may not exempt any major source from such requirements.

"(b) REGULATIONS.—The Administrator shall promulgate within 12 months after the date of the enactment of the Clean Air Act Amendments of 1990 regulations establishing the minimum elements of a permit program to be administered by any air pollution control agency. These elements shall include each of the following:

"(1) Requirements for permit applications, including a standard application form and criteria for determining in a timely fashion the completeness of applications.

"(2) Monitoring and reporting requirements.

"(3)(A) A requirement under State or local law or interstate compact that the owner or operator of all sources subject to the requirement to obtain a permit under this title pay an annual fee, or the equivalent over some other period, sufficient to cover all reasonable (direct and indirect) costs required to develop and administer the permit program requirements of this title, including section 507, including the reasonable costs of—

"(i) reviewing and acting upon any application for such a permit,

"(ii) if the owner or operator receives a permit for such source, whether before or after the date of the enactment of the Clean Air Act Amendments of 1990, implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action),

"(iii) emissions and ambient monitoring,

"(iv) preparing generally applicable regulations, or guidance,

"(v) modeling, analyses, and demonstrations, and

"(vi) preparing inventories and tracking emissions.

"(B) The total amount of fees collected by the permitting authority shall conform to the following requirements:

"(i) The Administrator shall not approve a program as meeting the requirements of this paragraph unless the State demonstrates that, except as otherwise provided in subparagraphs (ii) through (v) of this subparagraph, the program will result in the collection, in the aggregate, from all sources subject to subparagraph (A), of an amount not less than \$25 per ton of each regulated pollutant, or such other amount as the Administrator may determine adequately reflects the reasonable costs of the permit program.

"(ii) As used in this subparagraph, the term 'regulated pollutant' shall mean (I) a volatile organic compound; (II) each pollutant regulated under section 111 or 112; and (III) each pollutant for which a national primary ambient air quality standard has been promulgated (except that carbon monoxide shall be excluded from this reference).

"(iii) In determining the amount under clause (i), the permitting authority is not required to include any amount of regulated pollutant emitted by any source in excess of 4,000 tons per year of that regulated pollutant.

"(iv) The requirements of clause (i) shall not apply if the permitting authority demonstrates that collecting an

Petroleum and Petroleum Products, for appendix D of this part.

(30) ASTM D4177-82 (Reapproved 1990), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, for appendix D of this part.

(31) ASTM D4239-85, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, for appendix A of this part.

(32) ASTM D4294-90, Standard Test Method for Sulfur in Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectroscopy, for appendices A and D of this part.

(b) The following materials are available for purchase from the American Society of Mechanical Engineers (ASME), 22 Law Drive, Box 2350, Fairfield, NJ 07007-2350.

(1) ASME MFC-3M-1988 with September 1990 Errata, Measurement of Fluid Flow in Pipes Using Orifice, Nozzle, and Venturi, for § 75.20 and appendices D and E of this part.

(2) ASME MFC-4M-1986 (Reaffirmed 1990), Measurement of Gas Flow by Turbine Meters, for § 75.20 and appendix E of this part.

(3) ASME MFC-5M-1985, Measurement of Liquid Flow in Closed Conduits Using Transit-Time Ultrasonic Flowmeters, for § 75.20 and appendices D and E of this part.

(4) ASME MFC-6M-1987 with June 1987 Errata, Measurement of Fluid Flow in Pipes Using Vortex Flow Meters, for § 75.20 and appendices D and E of this part.

(5) ASME MFC-7M-1967 (Reaffirmed 1992), Measurement of Gas Flow by Means of Critical Flow Venturi Nozzles, for § 75.20 and appendix E of this part.

(6) ASME MFC-9M-1988 with December 1989 Errata, Measurement of Liquid Flow in Closed Conduits by Weighing Method, for § 75.20 and appendices D and E of this part.

(7) ASME Power Test Code 4.1-1964 (Reaffirmed 1991), Steam Generating Units, for appendix E of this part.

(8) ASME Performance Test Code 17-1973 (Reaffirmed 1991), Reciprocating Internal Combustion Engines, for appendix E of this part.

(9) ASME Performance Test Code 22-1985, Gas Turbine Power Plants, for appendix E of this part.

§ 75.7 ERA Study.

The Agency will initiate rulemaking to adjust the equations in the bias test by an amount sufficient to compensate for reference monitor variance based on a study, which EPA shall complete by October 31, 1993, unless the Administrator determines that adjustments are technically unnecessary or infeasible to properly determine bias.

§ 75.8 (Reserved)

Subpart B—Monitoring Provisions

§ 75.10 General operating requirements.

(a) Primary Measurement

Requirement. The owner or operator shall measure opacity, and all SO₂, NO_x, and CO₂ emissions for each affected unit as follows:

(1) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a SO₂ continuous emission monitoring system (consisting of an SO₂ pollutant concentration monitor and a flow monitor) with the automated data acquisition and handling system for measuring and recording SO₂ concentration (in ppm), volumetric gas flow (in scfh), and SO₂ mass emissions (in lb/hr) discharged to the atmosphere, except as provided in §§ 75.11 and 75.16 and subpart E;

(2) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a NO_x continuous emission monitoring system (consisting of a NO_x pollutant concentration monitor and an O₂ or CO₂ diluent gas monitor) with the automated data acquisition and handling system for measuring and recording NO_x concentration (in ppm) and NO_x emission rate (in lb/mmBtu) discharged to the atmosphere, except as provided in §§ 75.12 and 75.17 and subpart E;

(3) The owner or operator shall determine CO₂ emissions by using one of the following options:

(i) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, a CO₂ continuous emission monitoring system (consisting of a CO₂ pollutant concentration monitor and a flow monitor) with the automated data acquisition and handling system for measuring and recording CO₂ concentration (in ppm or percent), volumetric gas flow (in scfh), and CO₂ mass emissions (in tons/hr) discharged to the atmosphere;

(ii) The owner or operator shall determine CO₂ emissions based on the measured carbon content of the fuel and the procedures in Appendix G of this part to estimate CO₂ emissions (in ton/day) discharged to the atmosphere; or

(iii) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements of this part, an O₂ concentration monitor in order to determine CO₂ emissions using the procedures in appendix F of this part to measure CO₂ emissions (in tons/hr) and to estimate CO₂ emissions

(in ton/day) discharged to the atmosphere; and

(4) The owner or operator shall install, certify, operate, and maintain, in accordance with all the requirements in this part, a continuous opacity monitoring system with the automated data acquisition and handling system for measuring and recording the opacity of emissions (in percent opacity) discharged to the atmosphere, except as provided in §§ 75.14 and 75.18.

(b) *Primary Equipment Performance Requirements.* The owner or operator shall ensure that each continuous emission monitoring system required by this part meets the equipment, installation, and performance specifications in Appendix A to this part; and is maintained according to the quality assurance and quality control procedures in Appendix B to this part; and shall record SO₂ and NO_x emissions in the appropriate units of measurement (i.e., lb/hr for SO₂ and lb/mmBtu for NO_x).

(c) *Heat Input Measurement Requirement.* The owner or operator shall determine and record the heat input to each affected unit for every hour or part of an hour any fuel is combusted following the procedures in Appendix F to this part.

(d) *Primary Equipment Hourly Operating Requirements.* The owner or operator shall ensure that all continuous emission or opacity monitoring systems required by this part are in operation at all times that the affected unit combusts any fuel and that the following requirements are met:

(1) The owner or operator shall ensure that each continuous emission monitoring system and component thereof is capable of completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-min interval. The owner or operator shall reduce all SO₂ concentrations, volumetric flow, SO₂ mass emissions, SO₂ emission rate in lb/mmBtu (if applicable), CO₂ concentration, O₂ concentration, CO₂ mass emissions (if applicable), NO_x concentration, and NO_x emission rate data to 1-hr averages. The owner or operator shall compute these averages from four or more data points equally spaced over each 1-hr period, except during periods when calibration, quality assurance, or maintenance activities pursuant to § 75.21 and appendix B of this part are being performed. During these periods, a valid hour shall consist of at least two data points separated by a minimum of 15 minutes. For combined monitoring systems (NO_x-diluent and SO₂-diluent), the hourly average emission rate is valid

only if the hourly average concentration from each of the component monitors is valid.

(2) The owner or operator shall ensure that each continuous opacity monitoring system is capable of completing a minimum of one cycle of sampling and analyzing for each successive 10-sec period and one cycle of data recording for each successive 6-min period. The owner or operator shall reduce all opacity data to 6-min averages calculated from 36 or more data points equally spaced over each 6-min period, except where the applicable State implementation plan (pursuant to part 51, Appendix M of this chapter) or operating permit requires a different averaging period, in which case the State requirement shall satisfy this Acid Rain Program requirement.

(3) Failure of an SO₂ pollutant concentration monitor, flow monitor, or NO_x continuous emission monitoring system to acquire the minimum number of data points comprising a valid hour, as specified in paragraph (d) of this section shall result in the loss of such component data for the entire hour. The owner or operator shall estimate and record emission or flow data for the missing hour by means of the automated data acquisition and handling system, in accordance with the applicable procedure for missing data substitution in subpart D of this part.

(e) **Optional Backup Monitor Requirements.** If the owner or operator chooses to certify two or more continuous emission monitors or NO_x continuous emission monitoring systems that are each capable of monitoring a specific affected unit, or group of units using a common stack, then the owner or operator shall designate one such monitor or monitoring system as the primary monitor or monitoring system, and shall record this information in the monitoring plan, as provided for in § 75.53. The owner or operator shall designate the other certified monitor(s) or monitoring system(s) as the backup monitor(s) or monitoring system(s) in the monitoring plan. When the certified primary monitor or certified primary monitoring system is operating and not out-of-control as defined in § 75.24, only data from the certified primary monitor or certified primary monitoring system shall be reported as valid, quality-assured data. Thus, data from the certified backup monitor or certified backup monitoring system may be reported as valid, quality-assured data only when the backup is operating and not out-of-control as defined in § 75.24 and when the certified primary monitor or certified primary monitoring system

is not operating (or is operating but out-of-control). A particular monitor may be designated both as a certified primary monitor for one unit and as a certified backup monitor for another unit.

(f) **Minimum Measurement Capability Requirement.** The owner or operator shall ensure that each continuous emission or opacity monitoring system and component thereof is capable of accurately measuring, recording, and reporting data, and shall not incur a full scale exceedance.

(g) **Minimum Recording and Reporting Requirements.** The owner or operator shall record and the designated representative shall report the hourly, daily, quarterly, and annual information collected under the requirements of this part as specified in subparts F and G of this part.

§ 75.11 Specific provisions for monitoring SO₂ emissions (SO₂ and flow monitors).

(a) **Coal-fired units.** The owner or operator shall meet the general operating requirements in § 75.10 for an SO₂ continuous emission monitoring system for each affected coal-fired unit, except as provided in § 75.16 and in subpart E of this part.

(b) **Moisture correction.** Where SO₂ concentration is measured on a dry basis, the owner or operator shall either:

- (1) Install, operate, and maintain a continuous moisture monitor for measuring and recording the moisture content of the flue gases; or
- (2) Determine the moisture content of the flue gases continuously (or on an hourly basis) and correct the measured hourly volumetric flow rates for moisture when calculating SO₂ mass emissions (in lb/hr) using the procedures in appendix F of this part.

(c) **Unit with no appropriate location for a flow monitor.** Where no location exists that satisfies the minimum physical siting criteria in appendix A to this part for installation of a flow monitor in either the stack or the ducts serving an affected unit or installation of a flow monitor in either the stack or ducts is demonstrated to the satisfaction of the Administrator to be technically infeasible, the owner or operator must either:

- (1) Petition the Administrator for an alternative flow monitor location or alternative method for monitoring volumetric flow; or
- (2) Construct a new stack or modify existing ductwork to accommodate the installation of a flow monitor, and petition the Administrator for an extension to the required certification date given in § 75.4 of this part. Phase I affected units may be granted an extension to January 1, 1995, for the

submission of the certification application for the purpose of constructing a new stack or making substantial modifications to ductwork for installation of a flow monitor.

(d) **Gas-fired units and oil-fired units.** The owner or operator of an affected gas-fired or oil-fired unit shall measure and record SO₂ emissions using one of the following methods:

(1) Meet the general operating requirements in § 75.10 of this part for an SO₂ continuous emission monitoring system. When the owner or operator uses an SO₂ continuous emission monitoring system to monitor SO₂ mass emissions from an affected unit, the owner or operator shall comply with applicable monitoring provisions in paragraph (a) of this section; or

(2) Provide other information satisfactory to the Administrator using the procedure specified in appendix D to this part for estimating hourly SO₂ mass emissions.

(e) **Other units.** The owner or operator of an affected unit that combusts wood, refuse, or other material in addition to oil or gas shall comply with the monitoring provisions for coal-fired units specified in paragraph (a) of this section.

§ 75.12 Specific provisions for monitoring NO_x emissions (NO_x and diluent gas monitors).

(a) **Coal-fired units, gas-fired nonpeaking units or oil-fired nonpeaking units.** The owner or operator shall meet the general operating requirements in § 75.10 of this part for a NO_x continuous emission monitoring system for each affected coal-fired unit, gas-fired nonpeaking unit, or oil-fired nonpeaking unit, except as provided in paragraph (c) of this section, § 75.17, and in subpart E of this part. The diluent gas monitor in the NO_x continuous emission monitoring system may measure either O₂ or CO₂ concentration in the flue gases.

(b) **Determination of NO_x emission rate.** The owner or operator shall calculate hourly, quarterly, and annual NO_x emission rates (in lb/mmBtu) by combining the NO_x concentration (in ppm) and diluent concentration (in percent O₂ or CO₂) measurements according to the procedures in appendix F of this part.

(c) **Gas-fired peaking units or oil-fired peaking units.** The owner or operator of an affected gas-fired peaking unit or oil-fired peaking unit shall comply with the following:

- (1) If a unit's operations in the previous three calendar years are no more than a capacity factor of 20 percent in each calendar year and no

FIGURE 4:—RELATIVE ACCURACY DETERMINATION (NO_x/diluent combined system)—Continued

Run No.	Date and time	Reference method data		NO _x system (lb/mmBtu)		
		NO _x (%)	O ₂ /CO ₂ %	RM	M	Difference
Confidence Coefficient (eq. A-9).						
Relative Accuracy (eq. A-10).						
* Specify units: ppm, lb/dm ³ , mg/hom.						

Appendix B to Part 75—Quality Assurance and Quality Control Procedures

1. Quality Control Program

Develop and implement a quality control program for the continuous emission monitoring systems and their components. As a minimum, include in each quality control program a written plan that describes in detail complete, step-by-step procedures and operations for each of the following activities.

1.1 Calibration Error Test and Linearity Check Procedures

Identify calibration error test and linearity check procedures specific to the continuous emission monitoring system that may require variance from the procedures in Appendix A to this part (e.g., how gases are to be injected, adjustments of flow rates and pressures, introduction of reference values, length of time for injection of calibration gases, steps for obtaining calibration error or error in linearity, determination of interferences, and when calibration adjustments should be made).

1.2 Calibration and Linearity Adjustments

Explain how each component of the continuous emission monitoring system will be adjusted to provide correct responses to calibration gases, reference values, and/or indications of interference both initially and after repairs or corrective action. Identify equations, conversion factors, assumed moisture content, and other factors affecting calibration of each continuous emission monitoring system.

1.3 Preventive Maintenance

Keep a written record of procedures, including those specified by the manufacturers, needed to maintain the continuous emission monitoring system in proper operating condition and a schedule for those procedures. Include provisions for maintaining an inventory of spare parts.

1.4 Audit Procedures

Keep a written record of procedures and details peculiar to the installed continuous emission monitoring system that are to be used for relative accuracy test audits, such as sampling and analysis methods.

1.5 Recordkeeping and Reporting

Keep a written record describing procedures that will be used to implement the recordkeeping and reporting requirements in subparts F and G of this part.

2. Frequency of Testing

A summary chart showing each quality assurance test and the frequency at which each test is required is located at the end of this appendix in Figure 1.

2.1 Daily Assessments

For each monitor or continuous emission monitoring system, perform the following assessments during each day in which the unit combusts any fuel (hereafter referred to as a "unit operating day"), or for a monitor or continuous emission monitoring system on a bypass stack/duct, during each day that emissions pass through the by-pass stack or duct. These requirements are effective as of the date when the monitor or continuous emission monitoring system completes certification testing.

2.1.1 Calibration Error Test for Pollutant Concentration and CO₂ or O₂ Monitors

Test, record, and compute the calibration error of each SO₂ or NO_x pollutant concentration and CO₂ or O₂ monitor at least once on each unit operating day, or for monitors or monitoring systems on bypass ducts/stacks, on each day that emissions pass through the by-pass stack or duct. Conduct calibration error checks, to the extent practicable, approximately 24 hours apart. Perform the daily calibration error test according to the procedure in Appendix A, section 6.3.1 of this part.

For units with add-on emission controls and dual span or auto-ranging monitors, and other units that use maximum expected concentration value to determine calibration gas values, perform the daily calibration error test on each scale that has been used since the previous calibration error test. For example, if the emissions concentration has not exceeded the low-scale span value, (based on the maximum expected concentration) since the calibration test during the previous calendar day, the calibration error test may be performed on the low-scale only. If, however, the emissions concentration has exceeded the low-scale span value for one hour or longer since the previous calibration error test, perform the calibration error on both the low- and high-scale.

2.1.2 Calibration Error Test for Flow Monitors

Test, compute, and record the calibration error of each flow monitor at least once on each unit operating day, or for monitors or monitoring systems on bypass ducts/stacks, on each day that emissions pass through the by-pass stack or duct. Introduce the reference values (specified in section 2.2.2.1 of Appendix A to this part) to the probe tip (or equivalent) or to the transducer. Record flow monitor output from the data acquisition and handling system before and after any adjustments to the flow monitor. Keep a record of all maintenance and adjustments. Calculate the calibration error using Equation A-6 in Appendix A of this part.

2.1.3 Interference Check

Perform the daily flow monitor interference checks specified in section 2.2.2.2 of Appendix A to this part at least once per operating day (when the unit(s) operate for any part of the day).

2.1.4 Recalibration

Adjust the calibration, at a minimum, whenever the daily calibration error exceeds the limits of the applicable performance specification for the pollutant concentration monitor, CO₂, or O₂ monitor, or flow monitor in Appendix A of this part. Repeat the calibration error test procedure following the adjustment or repair to demonstrate that the corrective actions were effective.

2.1.5 Out-of-Control Period

An out-of-control period occurs when the calibration error of an SO₂ or NO_x pollutant concentration monitor exceeds 5.0 percent based upon the span value (or exceeds 10 ppm, for span values <200 ppm), when the calibration error of a diluent gas monitor exceeds 1.0 percent O₂ or CO₂, or when the calibration error of a flow monitor exceeds 6.0 percent based upon the span value, which is twice the applicable specification of Appendix A of this part. The out-of-control period begins with the hour of completion of the failed calibration error test and ends with the hour of completion following an effective recalibration. Whenever the failed calibration, corrective action, and effective recalibration occur within the same hour, the hour is not out of control if 2 or more valid readings are obtained during that hour as required by § 75.10 of this part. A NO_x continuous emission monitoring system is considered out-of-control if either component monitor exceeds twice the applicable specification in Appendix A of this part.

An out-of-control period also occurs whenever interference of a flow monitor is identified. The out-of-control period begins with the hour of completion of the failed interference check and ends with the hour of completion of an interference check that is passed.

2.1.6 Data Recording

Record and tabulate all calibration error test data according to month, day, clock-hour, and magnitude in either ppm, percent volume, or scfh. Program monitors that automatically adjust data to the corrected

calibration values (e.g., microprocessor control) to record either: (1) The unadjusted concentration or flow rate measured in the calibration error test prior to resetting the calibration, or (2) the magnitude of any adjustment. Record the following applicable flow monitor interference check data: (1) Sample line/sensing port pluggage, and (2) malfunction of each RTD, transceiver, or equivalent.

2.2 Quarterly Assessments

For each monitor or continuous emission monitoring system, perform the following assessments during each calendar quarter in which the unit combusts any fuel (hereafter referred to as a "unit operating quarter"), or for monitors or monitoring systems on bypass ducts/stacks, during each calendar quarter that emissions pass through the by-pass stack or duct (hereafter referred to as a "bypass operating quarter"). This requirement is effective as of the calendar quarter following the calendar quarter in which the monitor or continuous emission monitoring system is provisionally certified.

2.2.1 Linearity Check

Perform a linearity check for each SO₂ and NO_x pollutant concentration monitor and each CO₂ or O₂ monitor at least once during each unit operating quarter or each bypass operating quarter, in accordance with the procedures in Appendix A, section 6.2 of this part. For units using emission controls and other units using a low-scale span value to determine calibration gases, perform a linearity check on both the low- and high-scales. For the linearity check, use calibration gas cylinders that are different cylinders from the ones used in the daily calibration error tests. Conduct the linearity checks no less than 2 months apart.

2.2.2 Leak Check

For differential pressure flow monitors, perform a leak check of all sample lines (a manual check is acceptable) at least once during each unit operating quarter or each bypass operating quarter. Conduct the leak checks no less than 2 months apart.

2.2.3 Out-of-Control Period

An out-of-control period occurs when the error in linearity at any of the three concentrations (six for dual range monitors) in the quarterly linearity check exceeds the applicable specification in Appendix A, section 3.2 of this part. The out-of-control period begins with the hour of the failed linearity check and ends with the hour of a satisfactory linearity check following corrective action and/or monitor repair. For the NO_x continuous emission monitoring system, the system is considered out-of-control if either of the component monitors exceed the applicable specification in Appendix A, section 3.2 of this part. An out-of-control period occurs when a flow monitor sample line leak is detected. The out-of-control period begins with the hour of the failed leak check and ends with the hour of a satisfactory leak check following corrective action.

2.3 Semiannual and Annual Assessments

For each monitor or continuous emission monitoring system, perform the following

assessments once semiannually or once annually after the calendar quarter in which the monitor or monitoring system was last tested, as specified below for the type of test and the performance achieved. For monitors or continuous emission monitoring systems on bypass ducts/stacks, the assessments are to be performed once every two successive bypass operating quarters or once every four successive operating quarters after the calendar quarter in which the monitor or monitoring system was last tested, as specified below for the type of test and the performance achieved. This requirement is effective as of the calendar quarter or bypass operating quarter following the calendar quarter in which the monitor or continuous emission monitoring system is provisionally certified. A summary chart showing the frequency with which a relative accuracy test audit must be performed, depending on the accuracy achieved, is located at the end of this appendix in Figure 2.

2.3.1 Relative Accuracy Test Audit

Perform relative accuracy test audits semiannually and no less than 4 months apart for each SO₂ or CO₂ pollutant concentration monitor, flow monitor, NO_x continuous emission monitoring system, for SO₂-diluent continuous emission monitoring systems used by units with a Phase I Qualifying technology for the period during which the units are required to monitor SO₂ emission removal efficiency, from January 1, 1997 through December 31, 1999, in accordance with the procedures in section 6.5 of Appendix A of this part. For monitors on bypass stacks/ducts, perform relative accuracy test audits once every two successive bypass operating quarters in accordance with the procedures in section 6.5 of Appendix A of this part. Successive audits shall be no less than 4 months apart. The audit frequency may be reduced, as specified below for monitors or monitoring systems which qualify for less frequent testing.

For flow monitors, one-level and three-level relative accuracy test audits shall be performed alternately (when a flow RATA is conducted semiannually), such that the three-level relative accuracy test audit is performed at least once annually. The three-level audit shall be performed at the three different operating or load levels specified in Appendix A, section 6.5.2 of this part, and the one-level audit shall be performed at the normal operating or load level. Relative accuracy test audits need only be performed once every two successive unit or bypass operating quarters at the normal operating or load level for monitors and continuous emission monitoring systems on peaking units and bypass stacks/ducts.

Relative accuracy test audits may be performed on an annual basis rather than on a semiannual basis under any of the following conditions (or for monitors on peaking units and bypass ducts/stacks, once every four successive unit or bypass operating quarters): (1) The relative accuracy during the previous audit for an SO₂ or CO₂ pollutant concentration monitor, or NO_x or SO₂ continuous emissions monitoring system is 7.5 percent or less; (2) prior to January 1, 2000, the relative accuracy during the

previous audit for a flow monitor is 10.0 percent or less at each operating level tested; (3) on and after January 1, 2000, the relative accuracy during the previous audit for a flow monitor is 7.5 percent or less at each operating level tested; (4) on low flow (≤ 10.0 fps) stacks/ducts, when the monitor mean, calculated using Equation A-7 in Appendix A of this part is within ± 1.5 fps of the reference method mean or achieves a relative accuracy of 7.5 percent (10 percent if prior to January 1, 2000) or less during the previous audit; (5) on low SO₂ emitting units (SO₂ concentrations ≤ 250.0 ppm), when the monitor mean is within ± 8.0 ppm (or equivalent in lb/mmBTU for SO₂-diluent monitors) of the reference method mean or achieves a relative accuracy of 7.5 percent or less (or equivalent lb/mmBTU value for SO₂-diluent monitors) during the previous audit; or (6) on low NO_x emitting units (NO_x emission rate ≤ 0.20 lb/mmBTU), when the NO_x continuous emission monitoring system achieves a relative accuracy of 7.5 percent or less.

A maximum of two relative accuracy test audit trials may be performed for the purpose of achieving the results required to qualify for less frequent relative accuracy test audits. Whenever two trials are performed, the results of the second (later) trial must be used in calculating both the relative accuracy and bias.

2.3.2 Out-of-Control Period

An out-of-control period occurs under any of the following conditions: (1) The relative accuracy of an SO₂ pollutant concentration monitor or a NO_x or SO₂ continuous emission monitoring system exceeds 10.0 percent; (2) prior to January 1, 2000, the relative accuracy of a flow monitor exceeds 15.0 percent; (3) on and after January 1, 2000, the relative accuracy of a flow monitor exceeds 10.0 percent; (4) for low flow situations (≤ 10.0 fps), the flow monitor mean value (if applicable) exceeds ± 2.0 fps of the reference method mean whenever the relative accuracy is greater than 15.0 percent for Phase I or 10 percent for Phase II; (5) for low SO₂ emitter situations, the monitor mean values exceeds ± 15.0 ppm of the reference method mean whenever the relative accuracy is greater than 10.0 percent; or (6) for low NO_x emitting units (NO_x emission rate ≤ 0.2 lb/mmBTU), the NO_x continuous emission monitoring system mean values exceed ± 0.02 lb/mmBTU of the reference method mean whenever the relative accuracy is greater than 10.0 percent. For SO₂, NO_x emission rate, and flow relative accuracy test audits performed at only one level, the out-of-control period begins with the hour of completion of the failed relative accuracy test audit and ends with the hour of completion of a satisfactory relative accuracy test audit. For a flow relative accuracy test audit at 3 operating levels, the out-of-control period begins with the hour of completion of the first failed relative accuracy test audit at any of the three operating levels, and ends with the hour of completion of a satisfactory three-level relative accuracy test audit.

Failure of the bias test does not result in the system or monitor being out-of-control.

the bias adjustment factor given in Equations A-11 and A-12 of Appendix A to this part to adjust the monitored data.

2.4 Other Audits

Affected units may be subject to relative accuracy test audits at any time. If a monitor or continuous emission monitoring system fails the relative accuracy test during the audit, the monitor or continuous emission monitoring system shall be considered to be out-of-control beginning with the date and time of completion of the audit, and continuing until a successful audit test is completed following corrective action. If a monitor or monitoring system fails the bias test during an audit, use the bias adjustment factor given by Equations A-11 and A-12 in Appendix A to this part to adjust the monitored data. Apply this adjustment factor from the date and time of completion of the

audit until the date and time of completion of a relative accuracy test audit that does not show bias.

FIGURE 1.—QUALITY ASSURANCE TEST REQUIREMENTS

Test	QA test frequency requirements		
	Daily*	Quarterly*	Semiannual*
Calibration Error (2 pt.)	✓		
Interference (flow)	✓	✓	
Linearity (3 pt.)		✓	

FIGURE 2.—RELATIVE ACCURACY TEST FREQUENCY INCENTIVE SYSTEM

RATA	Annual*	
	Semiannually*	Annual*
SO ₂	RA ≤ 10%	RA ≤ 7.7% or ± 8ppm**
NO _x	RA ≤ 10%	RA ≤ 7.5%
Flow (Phase I) ³	RA ≤ 15%	RA ≤ 10% or ± 1.5 fps**
Flow (Phase II) ³	RA ≤ 10%	RA ≤ 7.5% or ± 1.5 fps**

*For monitors on bypass stack/duct, bypass operating quarters, only.
 **The difference between monitor and reference method mean values; low emitters or low flow, only.
³Conduct 3-load RATA annually, if requirements to qualify for less frequent testing are met.

FIGURE 1.—QUALITY ASSURANCE TEST REQUIREMENTS—Continued

Test	QA test frequency requirements		
	Daily*	Quarterly*	Semiannual*
RATA (SO ₂ , NO _x , CO ₂) ¹			✓
RATA (flow, alternating 1-load and 3-load) ²			✓

*For monitors on bypass stack/duct, bypass operating days or quarters, only.
¹Conduct annually, if monitor meets accuracy requirements to qualify for less frequent testing.
²Conduct 3-load RATA annually, if requirements to qualify for less frequent testing are met.

Appendix C to Part 75—Missing Data Estimation Procedures

1. Parametric Monitoring Procedure for Missing SO₂ Concentration or NO_x Emission Rate Data

1.1 Applicability

The owner or operator of any affected unit equipped with post-combustion SO₂ or NO_x emission controls and SO₂ pollutant concentration monitors and/or NO_x continuous emission monitoring systems at the inlet and outlet of the emission control system may apply to the Administrator for approval and certification of a parametric, empirical, or process simulation method or model for calculating substitute data for missing data periods. Such methods may be used to parametrically estimate the removal efficiency of the SO₂ of postcombustion NO_x emission controls which, with the monitored inlet concentration or emission rate data, may be used to estimate the average concentration of SO₂ emissions or average emission rate of NO_x discharged to the atmosphere. After approval by the Administrator, such method or model may be used to fill in missing SO₂ concentration or NO_x emission rate data when data from the outlet SO₂ pollutant concentration monitor or outlet NO_x continuous emission monitoring system have been reported with an annual monitor data availability of 90.0 percent or more.

Base the empirical and process simulation methods or models on the fundamental chemistry and engineering principles involved in the treatment of pollutant gas. On a case-by-case basis, the Administrator may pre-certify commercially available process simulation methods and models.

1.2 Demonstration Requirements

Continuously monitor, determine, and record hourly averages for the parameters specified below, at a minimum. The affected facility shall supply additional parametric information where appropriate. At least 4 evenly spaced data points are required for a valid hourly average, except during periods of calibration, maintenance, or quality assurance activities, during which 2 data points per hour are sufficient. The Administrator will review all applications on a case-by-case basis.

1.2.1 Parameters for Wet Flue Gas Desulfurization System

- 1.2.1.1 Number of scrubber modules in operation.
- 1.2.1.2 Total slurry rate to each scrubber module (gal per min).
- 1.2.1.3 In-line absorber pH of each scrubber module.
- 1.2.1.4 Pressure differential across each scrubber module (inches of water column).
- 1.2.1.5 Unit load (MWe).
- 1.2.1.6 Inlet and outlet SO₂ concentration as determined by the monitor or missing data substitution procedures.
- 1.2.1.7 Percent solids in slurry for each scrubber module.
- 1.2.1.8 Any other parameters necessary to verify scrubber removal efficiency, if the Administrator determines the parameters above are not sufficient.

1.2.2 Parameters for Dry Flue Gas Desulfurization System

- 1.2.2.1 Number of scrubber modules in operation.
- 1.2.2.2 Atomizer slurry flow rate to each scrubber module (gal per min).
- 1.2.2.3 Inlet and outlet temperature for each scrubber module (°F).

1.2.2.4 Pressure differential across each scrubber module (inches of water column).

1.2.2.5 Unit load (MWe).

1.2.2.6 Inlet and outlet SO₂ concentration as determined by the monitor or missing data substitution procedures.

1.2.2.7 Any other parameters necessary to verify scrubber removal efficiency, if the Administrator determines the parameters above are not sufficient.

1.2.3 Parameters for Other Flue Gas Desulfurization Systems

If SO₂ control technologies other than wet or dry lime or limestone scrubbing are selected for flue gas desulfurization, a corresponding empirical correlation or process simulation parametric method using appropriate parameters may be developed by the owner or operator of the affected unit, and then reviewed and approved or modified by the Administrator on a case-by-case basis.

1.2.4 Parameters for Post-Combustion NO_x Emission Controls

- 1.2.4.1 Inlet air flow rate to the unit (boiler) (mcf/hr).
- 1.2.4.2 Excess oxygen concentration of flue gas at stack outlet (percent).
- 1.2.4.3 Carbon monoxide concentration of flue gas at stack outlet (ppm).
- 1.2.4.4 Temperature of flue gas at outlet of the unit (°F).
- 1.2.4.5 Inlet and outlet NO_x emission rate as determined by the NO_x continuous emission monitoring system or missing data substitution procedures.
- 1.2.4.6 Any other parameters specific to the emission reduction process necessary to verify the NO_x control removal efficiency. (e.g., reagent feedrate in gal/mi).

mental Response, Compensation and Liability Act of 1980 or other applicable law.

(4) For the purpose of this subsection, the term "guarantor" means any person, other than the owner or operator, who provides evidence of financial responsibility for an owner or operator under this section.

[§3004(t) added by PL 98-616]

(u) Continuing Releases at Permitted Facilities.—Standards promulgated under this section shall require, and a permit issued after the date of enactment of the Hazardous and Solid Waste Amendments of 1984 by the Administrator or a State shall require, corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a permit under this subtitle, regardless of the time at which waste was placed in such unit. Permits issued under section 3005 shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.

[§3004(u) added by PL 98-616]

(v) Corrective Actions Beyond Facility Boundary.—As promptly as practicable after the date of the enactment of the Hazardous and Solid Waste Amendments of 1984, the Administrator shall amend the standards under this section regarding corrective action required at facilities for the treatment, storage, or disposal, of hazardous waste listed or identified under section 3001 to require that corrective action be taken beyond the facility boundary where necessary to protect human health and the environment unless the owner or operator of the facility concerned demonstrates to the satisfaction of the Administrator that, despite the owner or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. Such regulations shall take effect immediately upon promulgation, notwithstanding section 3010(b), and shall apply to—

(1) all facilities operating under permits issued under subsection (c), and

(2) all landfills, surface impoundments, and waste pile units (including any new units, replacements of existing units, or lateral expansions of existing units) which receive hazardous waste after July 26, 1982.

Pending promulgation of such regulations, the Administrator shall issue corrective action orders for facilities referred to in paragraphs (1) and (2), on a case-by-case basis, consistent with the purposes of this subsection.

[§3004(v) added by PL 98-616]

(w) Underground Tanks.—Not later than March 1, 1985, the Administrator shall promulgate final permitting standards under this section for underground tanks that cannot be entered for inspection. Within forty-eight months after the date of the enactment of the Hazardous and Solid Waste Amendments of 1984, such standards shall be modified, if necessary, to cover at a minimum all requirements and standards described in section 9003.

[§3004(w) added by PL 98-616]

(x) If (1) solid waste from the extraction, beneficiation or processing of ores and minerals, including phosphate rock and overburden from the mining of uranium, (2) fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, or (3) cement kiln dust waste, is subject to regulation under this subtitle, the Administrator is authorized to modify the requirements of subsections (c), (d), (e), (f), (g), (o), and (u) and section 3005(j), in the case of landfills or surface impoundments receiving such solid waste, to take into account the special characteristics of such wastes, the practical difficulties associated with implementation of such requirements, and site-specific characteristics, including but not limited to the climate, geology, hydrology and soil chemistry at the site, so long as such modified requirements assure protection of human health and the environment.

[§3004(x) added by PL 98-616]

(y) Munitions.—

(1) Not later than 6 months after the date of the enactment of the Federal Facility Compliance Act of 1992, the Administrator shall propose, after consulting with the Secretary of Defense and appropriate State officials, regulations identifying when military munitions become hazardous waste for purposes of this subtitle and providing for the safe transportation and storage of such waste. Not later than 24 months after such date, and after notice and opportunity for com-

ment, the Administrator shall promulgate such regulations. Any such regulations shall assure protection of human health and the environment.

(2) For purposes of this subsection, the term "military munitions" includes chemical and conventional munitions.

[§3004(y) added by PL 102-386]

§3005 [42 U.S.C. 6925] Permits for Treatment, Storage, or Disposal of Hazardous Waste

(a) Permit Requirements.—Not later than eighteen months after the date of the enactment of this section, the Administrator shall promulgate regulations requiring each person owning or operating an existing facility or planning to construct a new facility for the treatment, storage, or disposal of hazardous waste identified or listed under this subtitle to have a permit issued pursuant to this section. Such regulations shall take effect on the date provided in section 3010 and upon and after such date the treatment, storage, or disposal of any such hazardous waste and the construction of any new facility for the treatment, storage, or disposal of any such hazardous waste is prohibited except in accordance with such a permit. No permit shall be required under this section in order to construct a facility if such facility is constructed pursuant to an approval issued by the Administrator under section 6(e) of the Toxic Substances Control Act for the incineration of polychlorinated biphenyls and any person owning or operating such a facility may, at any time after operation or construction of such facility has begun, file an application for a permit pursuant to this section authorizing such facility to incinerate hazardous waste identified or listed under this subtitle.

[§3005(a) amended by PL 98-616]

(b) Requirements of Permit Application.—Each application for a permit under this section shall contain such information as may be required under regulations promulgated by the Administrator, including information respecting—

(1) estimates with respect to the composition, quantities, and concentrations of any hazardous waste identified or listed under this subtitle, or combinations of any such hazardous waste and any other solid waste, proposed to be disposed of, treated, transported, or stored, and the time, frequency, or rate of which such waste is

[Sec. 3005(b)(1)]

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fine of not more than \$50,000 for each day of violation, or imprisonment not to exceed two years (five years in the case of a violation of paragraph (1) or (2)), or both. If the conviction is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment under the respective paragraph shall be doubled with respect to both fine and imprisonment.

[§3008(d) revised by PL 96-482; PL 98-616; §3008(d)(7) added by PL 99-499]

(e) **Knowing Endangerment.** — Any person who knowingly transports, treats, stores, disposes of, or exports any hazardous waste identified or listed under this subtitle or used oil not identified or listed as a hazardous waste under this subtitle in violation of paragraph (1), (2), (3), (4), (5), (6), or (7) of subsection (d) of this section who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment for not more than fifteen years, or both. A defendant that is an organization shall, upon conviction of violating this subsection, be subject to a fine of not more than \$1,000,000.

[§3008(e) added by PL 96-482; amended by PL 98-616; PL 99-499]

(f) **Special Rules.** — For the purposes of subsection (e)—

(1) A person's state of mind is knowing with respect to—

(A) is conduct, if he is aware of the nature of his conduct;

(B) an existing circumstance, if he is aware or believes that the circumstance exists; or

(C) a result of his conduct, if he is aware or believes that his conduct is substantially certain to cause danger of death or serious bodily injury.

(2) In determining whether a defendant who is a natural person knew that his conduct placed another person in imminent danger of death or serious bodily injury—

(A) the person is responsible only for actual awareness or actual belief that he possessed; and

(B) knowledge possessed by a person other than the defendant but not by the defendant himself may not be attributed to the defendant: *Provided*, That in proving the defendant's possession of actual

knowledge, circumstantial evidence may be used, including evidence that the defendant took affirmative steps to shield himself from relevant information.

(3) It is an affirmative defense to a prosecution that the conduct charged was consented to by the person endangered and that the danger and conduct charged were reasonably foreseeable hazards of—

(A) an occupation, a business, or a profession; or

(B) medical treatment or medical or scientific experimentation conducted by professionally approved methods and such other person had been made aware of the risks involved prior to giving consent. The defendant may establish an affirmative defense under this subsection by a preponderance of the evidence.

(4) All general defenses, affirmative defenses, and bars to prosecution that may apply with respect to other Federal criminal offenses may apply under subsection (e) and shall be determined by the courts of the United States according to the principles of common law as they may be interpreted in the light of reason and experience. Concepts of justification and excuse applicable under this section may be developed in the light of reason and experience.

(5) The term "organization" means a legal entity, other than a government, established or organized for any purpose, and such term includes a corporation, company, association, firm, partnership, joint stock company, foundation, institution, trust, society, union, or any other association of persons.

(6) The term "serious bodily injury" means—

(A) bodily injury which involves a substantial risk of death;

(B) unconsciousness;

(C) extreme physical pain;

(D) protracted and obvious disfigurement; or

(E) protracted loss or impairment of the function of a bodily member, organ, or mental faculty.

(g) **Civil Penalty.** — Any person who violates any requirement of this subtitle shall be liable to the United States for a civil penalty in an amount not to exceed \$25,000 for each such violation. Each day of such violation shall, for purposes of this subsection, constitute a separate violation.

[§3008(g) added by PL 96-482]

(h) **Interim Status Corrective Action Orders.** —

(1) Whenever on the basis of any information the Administrator determines that there is or has been a release of hazardous waste into the environment from a facility authorized to operate under section 3005(e) of this subtitle, the Administrator may issue an order requiring corrective action or such other response measure as he deems necessary to protect human health or the environment or the Administrator may commence a civil action in the United States district court in the district in which the facility is located for appropriate relief, including a temporary or permanent injunction.

(2) Any order issued under this subsection may include a suspension or revocation of authorization to operate under section 3005(e) of this subtitle, shall state with reasonable specificity the nature of the required corrective action or other response measure, and shall specify a time for compliance. If any person named in an order fails to comply with the order, the Administrator may assess, and such person shall be liable to the United States for, a civil penalty in an amount not to exceed \$25,000 for each day of noncompliance with the order.

[§3008(h) added by PL 98-616]

§3009 [42 U.S.C. 6929] Retention of State Authority

Upon the effective date of regulations under this subtitle no State or political subdivision may impose any requirements less stringent than those authorized under this subtitle respecting the same matter as governed by such regulations, except that if application of a regulation with respect to any matter under this subtitle is postponed or enjoined by the action of any court, no State or political subdivision shall be prohibited from acting with respect to the same aspect of such matter until such time as such regulation takes effect. Nothing in this title shall be construed to prohibit any State or political subdivision thereof from imposing any requirements, including those for site selection, which are more stringent than those imposed by such regulations. Nothing in this title (or in any regulation adopted under this title) shall be construed to prohibit any State from requiring that the State be provided with a copy of each manifest used in connection with hazard-

[Sec. 3009]

Florida Power & Light Company
 FPSC Docket No. 950007-EI
 Exhibit No. _____
 Testimony of W. M. Reichel
 January 17, 1995
 Document No. 5
 Page 1 of 1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET N.E.
ATLANTA GEORGIA 30365

SEP 30 1994

Florida Power & Light Company
FPSC Docket No. 950007-EI
Exhibit No. _____
Testimony of W. M. Reichel
January 17, 1995
Document No. 6
Page 1 of 9

J. Brad Peebles, Ph.D., C.E.P.
Principal Specialist
Florida Power & Light Company
P.O. Box 088801
North Palm Beach, Florida 33408-8801

SUBJ: VSI Notification, Agenda, and Information Needs
Florida Power & Light Company - Martin Plant
EPA I.D. No. FLD 000 807 461

Dear Dr. Peebles:

The Hazardous and Solid Waste Amendments (HSWA) of 1984 provide the Environmental Protection Agency (EPA) authority under the Resource Conservation and Recovery Act (RCRA) Sections 3004(u), 3004(v) and/or 3008(h) to require comprehensive corrective actions, including assessment and remediation, to address releases of hazardous constituents to air, surface water, soil, and ground water at all facilities which manage hazardous waste. The Florida Power & Light Company (FPL) Martin Plant in Indiantown, Florida is such a facility, and EPA Region 4 is conducting a Visual Site Inspection (VSI) of it on October 19 and 20, 1994. The results of this VSI will be incorporated into a RCRA Facility Assessment (RFA) Report which is the initial step in the HSWA corrective action process.

The objectives of the VSI are to identify all Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) located at the facility and to determine their potential for past or ongoing releases of hazardous constituents. The VSI will be conducted by an EPA contractor, A.T. Kearney.

Attachment A is a tentative agenda and inspection plan for the VSI. The agenda also includes a list of the potential SWMUs and AOCs identified from the file material during the preliminary review (PR). Attachment B is a summary of information needed to fill in information gaps which have been identified to date.

Please develop a response to each of the questions in Attachment B. Our goal is to produce a RFA Report which reflects only accurate information regarding your facility; therefore it is requested that the responses be presented to the VSI team during the VSI. The attachments will be reviewed with facility personnel at the beginning of the VSI to facilitate the actual inspection. At that time, the VSI schedule will be adjusted as needed to allow a complete, thorough and expeditious inspection of all current and past SWMUs, and a review of current waste management practices at the facility. The inspection will

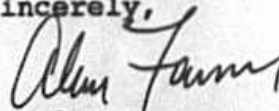
encompass all current and past waste handling, storage, treatment, staging, transfer, and disposal areas including both indoor and outdoor units. During the VSI, photographs will be taken to document the condition and location of all SWMUs and AOCs identified during the VSI, and facility waste management practices in general.

In preparation for the VSI, the contractor is required to identify any potentially hazardous conditions likely to be encountered during the VSI, and if necessary, prepare a safety plan to deal with anticipated hazards. The contractor will contact you prior to the VSI to obtain specific information concerning health and safety requirements and the materials handled at your facility.

The VSI team will consist of two technical representatives from A.T. Kearney and personnel from Region 4 and the Florida Department of Environmental Protection (FDEP).

If you have any questions concerning the VSI, please contact Davy Simonson of my staff, at 404/347-3555, extension 6348.

Sincerely,



G. Alan Farmer
Chief, RCRA Branch
Waste Management Division

Enclosures: 1) Agenda-Schedule-Potential SWMUs/AOCs (4 pages)
2) RFA Information Needs (3 pages)

cc: Satish Kastury, FDEP - Tallahassee
Bheem Kothur, FDEP - Tallahassee
Knox McKee, FDEP - West Palm Beach
Mark Heaney, A.T. Kearney
Molly O'Neill, A.T. Kearney

ATTACHMENT A

PROPOSED RCRA VISUAL SITE INSPECTION AGENDA

Facility: Florida Power & Light Company - Martin Plant

EPA ID No.: FLD 000 807 461

Facility Contact: Dr. J. Brad Peebles
P.O. Box 088801
North Palm Beach, FL 33408-8801

Date of Inspection: October 19 and 20, 1994

Inspection Team: Mark Heaney, A.T. Kearney
Michael McGeehan, A.T. Kearney
Davy Simonson, EPA Region 4
Bheem Kothur, FDEP - Tallahassee
Alex Owen-Wutaka, FDEP - Tallahassee
Knox McKee, FDEP - West Palm Beach

OBJECTIVES OF VISUAL SITE INSPECTION

The Hazardous and Solid Waste Amendments (HSWA) of 1984 broadened EPA's authority under RCRA to require corrective action for releases of hazardous wastes and solid wastes containing hazardous constituents at facilities which manage hazardous wastes. This corrective action authority extends to all Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) which are found at a facility. The first phase of the program is the preparation of a RCRA Facility Assessment (RFA) Report. The RFA process consists of a number of steps, including a Preliminary Review (PR) of all available file information, a Visual Site Inspection (VSI) of the facility, and if deemed necessary, a Sampling Visit. A PR of this facility has been conducted and it has been determined that a VSI is necessary. The purpose of the VSI is:

1. To collect all available, relevant information on solid waste management practices that have been used, or are currently in use at the facility;
2. To gain first-hand information with regard to the identification, location, construction, function and method of operation of each SWMU/AOC identified in the PR, and any other SWMUs/AOCs located during the course of the VSI;
3. To validate the information obtained during the PR phase;
4. To determine if additional SWMUs or AOCs are located on the site;
5. To identify potential sampling points for possible future sampling activities;
6. To review the site information and collect additional information, and to address the information needs found in Attachment B; and,

7. To make a photographic record of SWMUs, AOCs, and current waste management practices at the facility.

INSPECTION PLAN AND SCHEDULE

EPA's contractor, A.T. Kearney, will send a two-person field team to perform the VSI. Observers from EPA Region 4, and the Florida Department of Environmental Protection (FDEP) will also participate in the inspection. It is expected that the inspection will take two days to perform. However, the field team is prepared to extend the VSI through October 21, 1994, if necessary.

The field team will inspect all past and current SWMUs and AOCs, and all hazardous waste handling, storage, treatment, and disposal areas on the site. Both indoor and outdoor units will be inspected. Production and product storage areas will also be inspected to acquire a complete understanding of the facility processes, waste flow, and waste management practices. The team will also identify, inspect, and document potential pathways for the release of hazardous constituents or wastes to the environment. Facility staff will be interviewed to develop a better understanding of past and current waste management practices, and the local environment (particularly, geological and hydrogeological information requested in Attachment B). At this time the facility may present any additional data which they believe may be germane.

The rationale for the inspection is to allow the team to trace waste flow at the facility from the point(s) of generation to its ultimate disposal. In doing this, all SWMUs/AOCs will be identified, located, and described in sufficient detail to allow a determination to be made as to whether they are currently, or have in the past, released hazardous constituents or wastes to the environment.

The schedule on the next page is based on the initial PR and is intended to allow a thorough inspection of the facility. Further investigation during the VSI may reveal additional SWMUs/AOCs, or that some units previously identified are in fact not SWMUs/AOCs. Some adjustments to the agenda will likely be necessary to accommodate facility staff, geographical location of units, and/or operational constraints. The schedule will be reviewed during the introductory meeting, and adjusted at that time. The VSI team will make every reasonable effort to adjust to the facility's normal operating schedule.

PROPOSED VSI SCHEDULE

TIME

ACTIVITY

October 19, 1994

- 8:30 - 9:30 Conduct introductory meeting with facility representatives to discuss agenda, safety and health considerations, information needs, and transportation arrangements.
- 9:30 - 1:00 Conduct detailed discussion of information needs, past and present facility operations, waste streams, and waste management practices. Identify any SWMUs and AOCs not in tentative list, resolve any other problems with SWMUs and AOCs.
- 1:00 - 2:00 Lunch Break
- 2:00 - 5:00 Begin facility tour of SWMUs and AOCs.

October 20, 1994

- 9:00 - 12:00 Continue tour of facility SWMUs and AOCs.
- 12:00 - 1:00 Lunch Break
- 1:00 - 3:00 Continue tour of facility SWMUs and AOCs.
- 3:00 - 5:00 Closeout meeting with facility representatives. Discuss additional information needs generated by VSI. Obtain copies of any facility offered information.

October 21, 1994

Reserved, if additional time is needed. To be determined by VSI Team Leader.

TABLE 1
POTENTIAL SWMUs and AOCs

<u>SWMU NO.</u>	<u>SWMU NAME</u>
1.	Power Plant Waste Transfer Piping
2.	Boiler Dust Collection Hoppers
3.	Ash Water Sump
4.	Totally Enclosed Treatment Unit
5.	Acid Waste Lift Station
6.	Sludge Settling Basin A
7.	Sludge Settling Basin B
8.	Stabilized Ash Pad
9.	Precipitation Basin A
10.	Precipitation Basin B
11.	Sludge Drying Basin
12.	Neutralization Basin A
13.	Neutralization Basin B
14.	Storm Sewer System
15.	Equipment Cleaning Oil/Water Separator
16.	Stormwater Basin
17.	Stormwater Basin Oil/Water Separator
18.	Tank Farm Oil/Water Separator
19.	Fuel Oil Transfer Pump Area
20.	Fuel Oil Transfer Pump Oil/Water Separator
21.	Recovered Service Water Basin (Sump)
22.	Cooling Pond
23.	Hazardous Waste Holding Area (< 90 day)
24.	Power Block Waste Accumulation Area
25.	Laboratory Waste Accumulation Area
26.	Waste Paint/Lube Oil Accumulation Area
27.	Hazardous Waste Building Waste Accumulation Area
28.	Wastewater Treatment Plant Waste Accumulation Area
29.	Sanitary Sewer System
30.	Sanitary Wastewater Treatment Plant
31.	Facility Trash Dumpsters

<u>AOC LETTER</u>	<u>AOC NAME</u>
A.	Boiler Wash Collection Tank
B.	Fire Training Areas

ATTACHMENT B
RFA INFORMATION NEEDS

1. Provide a description of the operating process for the plant boilers.
2. Provide current process flow diagrams of any other facility activities, from the receipt of materials to shipment or disposal of spent materials.
3. Provide most recent biennial report.
4. Provide a list of suppliers of all chemicals used in site operations. Provide site map detailing all entrance and unloading areas of chemical shipments.
5. For each SWMU and AOC listed, please give:
 - Date unit began operating
 - Date operations ceased (if applicable)
 - Unit function/operating process
 - Physical description of unit (i.e. dimensions, secondary containment, materials of construction)
 - Location of unit in facility
 - Description of waste handled
 - Volume of waste handled
 - Source and destination of wastes managed
 - Inspection and maintenance procedures to assure unit integrity
 - Spill/release history
6. Identify past or present SWMUs and AOCs which have not been identified in the VSI Agenda. Provide same information as requested in No. 3 above. Units may include, but are not limited to the following:
 - Fire Training Areas
 - Solvent Recovery Stills
 - Aboveground and underground waste storage tanks
 - Abandoned storage tanks
 - Waste storage units for solid and hazardous wastes which fall under the 90-day exemption from RCRA
 - All waste handling areas and associated activities including loading zones, transfer areas, and waste accumulation areas
 - Runoff collection sumps or ditches
7. Provide information on any spills or accidental fires that have occurred, including:
 - Date(s) of spill(s) or fire(s)
 - Materials involved, volumes, etc.
 - Location
 - Notification report(s)
 - Description of clean-up activities, including any sampling results

8. Identify former location(s) of any process units that have since been moved, closed or abandoned. Provide any relevant information on these old units (e.g., materials managed, operating and design information, etc.).
9. Provide four copies of the most recent site map that can be used to show the locations of the SWMUs and AOCs on the property. The map should be of suitable scale to show boundaries of all contiguous property.
10. If available, provide an up-to-date large scale topographic map of the facility.
11. Provide any historical aerial photographs of the facility.
12. Estimate the population of Indiantown, Florida and identify any endangered species which may live in the area.
13. Provide surrounding land use information (e.g., agricultural, distance to residential areas, schools, names of industries or warehouses adjacent to and near the facility, etc.). Provide information regarding neighboring facilities' operations.
14. Provide sanitary sewer, stormwater sewer, and waste transfer piping maps.
15. Provide a copy of current Industrial Wastewater System Permit.
16. Provide inspection reports for all underground storage tanks (USTs), both former and present. If applicable, provide locations and dates of on-site backfilling activity of the area(s) where USTs have been removed, and provide any soil sampling data associated with the removal/backfilling operations.
17. Provide a list of any air pollution control devices utilized at the facility and provide the most recent permit and permit applications.
18. Explain the NPDES permit status of the facility. Provide location of all surface discharge drains on the property. Provide the results of the most recent compliance monitoring test results and documentation of violations, if any.
19. Identify sources of drinking water in the area. Where does the city of Indiantown get its drinking water? Where does the facility obtain its drinking water and process water? Provide the location of any ground water wells within a two-mile radius of the facility. Are there any existing streams, intermittent streams or surface water bodies within a one-mile radius of the facility?
20. How are domestic refuse and sanitary wastes handled at the facility?
21. Are any types of laboratory tests conducted at the facility? If so, how are generated lab wastes handled?
22. Provide most recent sampling results for:
 - Ground water
 - Soil
 - Waste streams

23. Provide a history of the facility property prior to the start-up date, including former owners, site property uses, processes used, waste generated, and existing buildings and/or structures.
24. Identify all oil/water separators on-site and describe what is done with the oil collected in these separators.
25. Provide a description of the boiler cleaning procedures. How are spent boiler cleaning solutions managed? Has a hazardous waste determination been made on this waste stream? If so, at what point is sampling for hazardous waste determination purposes made?
26. Describe the difference between ash and combustion residues recycled back into the boilers from sumps in the Power Block and ash residues sluiced to the Sludge Settling Basins from the sumps.
27. Are particulate materials collected in the dust collection hoppers sluiced directly to the Ash Water Sump, or are only residues of the particulates sluiced from the hoppers?
28. What is the status of the proposed Coal Gasification/Combined Cycle Project?
29. Provide copies of all current Federal and State permits granted to the facility that are not requested above.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Air Operating Permit Fees

Project Description:

The Clean Air Act Amendments of 1990, Public Law 101-549, and Florida Statutes 403.0872, require each major source of air pollution to pay an annual license fee. The amount of the fee is based on each source's previous year's emissions. It is calculated by multiplying the applicable annual operation license fee factor (\$10 per ton for 1993 in Florida, \$25 in Georgia) by the tons of each air pollutant emitted by the unit during the previous year and regulated in each unit's air operating permit, up to a total of 4,000 tons per pollutant. The major regulated pollutants at the present time are sulfur dioxide (SO₂), nitrogen oxides (NO_x) and particulate matter. The fee covers units in FPL's service area, as well as Unit 4 of Plant Scherer located in Juliette, Georgia, within the Georgia Power Company service area. Scherer Unit 4's annual air operating permit fee is currently \$300,000. FPL's share of ownership of that unit is currently 65.71%. The fees for FPL's units are paid to the Florida Department of Environmental Protection (FDEP) generally in February of each year, whereas FPL pays its share of the fees for Scherer Unit 4 to Georgia Power Company on a monthly basis.

Project Accomplishments:

The air operating permit fees for FPL for 1993 were paid in February and April 1994. FPL continues to pay \$4,108 monthly to Georgia Power Company for its share of the air operating fee for Scherer 4. Air operating permit fees for FPL for 1994 will be calculated in January 1995 utilizing 1994 operating information. They are scheduled to be paid by FPL in February 1995 to the Florida Department of Environmental Protection (FDEP).

Project Fiscal Expenditures:

The actual/estimated air operating permit fee expenditures for the period October 1994 through March 1995 are expected to be \$1,671,288, of which \$1,646,640 represents FPL's air operating permit fees, with \$24,648 representing payments to Georgia Power Company for FPL's share of Scherer 4. The projected expenditures were \$1,604,961, for a variance of +\$66,327. This variance is due to a revised estimate of FPL's emissions utilizing expected 1994 operating history, while the projection was based upon 1993 emissions.

Project Progress Summary:

The 1994 air operating permit fee for FPL's power plants was paid in February and April 1994. Beginning in June 1994, FPL began making payments to Georgia Power Company for its share of the air operating permit fee for Unit 4 of Plant Scherer. FPL will be making such payments on a monthly basis thereafter and will pay the air operating permit fee for its units to the State of Florida in February 1995.

Project Projections:

FPL will be paying \$4,108 per month over the period April through May 1995 for its share of the air operating permit fee for Scherer 4. In June the monthly payment to Georgia Power Company is expected to increase to \$4,773 due to an increase in FPL's share of ownership of Scherer 4. Total projected air operating fees for the period April through September 1995 are \$27,307.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Low NO_x Burner Technology (LNBT)

Project Description:

Under Title I of the Clean Air Act Amendments of 1990, Public Law 101-349, utilities with units located in areas designated as "non-attainment" for ozone will be required to reduce NO_x emissions. The Dade, Broward and Palm Beach County areas are classified as "moderate" non-attainment by the EPA. FPL has six units in this affected area.

LNBT meets the requirement to reduce NO_x emissions by delaying the mixing of the fuel and air at the burner, creating a staged combustion process along the length of the flame. NO_x formation is reduced because peak flame temperatures and availability of oxygen for combustion is reduced in the initial stages.

Project Accomplishments:

By December 1994 five of the six units will be in-service.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for the period October 1994 through March 1995 are expected to be \$933,490. Projected fiscal expenditures were expected to be \$850,182 for a variance of +\$83,308. This variance is due to a four-month acceleration in the scheduled in-service date for Riviera Unit 4. Riviera Unit 4 was previously planned to be done in the spring of 1995 and placed in-service in April 1995. However, the outage schedule was changed to the fall of 1994, and the unit is scheduled to be placed in-service December 1994.

Project Progress Summary:

Two more units will be placed in-service in December 1994 (Riviera Unit 4 and Turkey Point Unit 2). This means that five of the six units will be in-service with the remaining Turkey Point Unit 1 to be placed in-service by April 1995.

Project Projections:

Estimated project fiscal expenditures (depreciation and return) for the period April through September 1995 are expected to be \$1,494,462.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Continuous Emission Monitoring System (CEMS) - Capital

Project Description:

The Clean Air Act Amendments of 1990, Public Law 101-549, established requirements for the monitoring, recordkeeping and reporting of SO₂, NO_x and carbon dioxide (CO₂) emissions, as well as volumetric flow and opacity data from affected air pollution sources. FPL has 30 units which are affected and which must install CEMS to comply with these requirements.

40 CFR Part 75 includes the general requirements for the installation, certification, operation and maintenance of CEMS and specific requirements for the monitoring of pollutants, opacity and volumetric flow. These regulations are very comprehensive and specific as to the requirements for CEMS, and in essence, they define the components needed and their configuration. Periodically, these systems extract and analyze gaseous samples for each power plant stack and have automated data acquisition and reporting capability.

Project Accomplishments:

All 30 units will be placed in-service by December 1994.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for the period October 1994 through March 1995 are expected to be \$650,415. Projected fiscal expenditures were expected to be \$640,673, for a variance of +\$9,742. This variance of less than 1% is due to minor schedule changes between units.

Project Progress Summary:

All 30 units will be placed in-service by December 1994. As of December 15, 1994, FPL has received provisional certification on 16 units, with 11 EPA-approved certifications in process.

Project Projections:

Estimated project fiscal expenditures (depreciation and return) for the period April through September 1995 are \$1,034,247.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Clean Closure Equivalency Demonstration
(CCED) - O&M

Project Description:

In compliance with 40 CFR 270.1(c)(5) and (6), FPL is developing CCED's for nine FPL power plants to demonstrate to the U.S. EPA that no hazardous waste or hazardous constituents above levels which represent a threat to human health or the environment remain in the soil or water beneath the basins which had, in the past, been used to treat corrosive hazardous waste. The basins, which are still operational as part of the wastewater treatment systems at these plants, are no longer used to treat hazardous waste.

To demonstrate clean closure, soil sampling and ground water monitoring plans, implementation schedules and related reports and analytical data must be submitted to the EPA. The cost of complying are those associated with developing the plans and reports, installing monitoring wells, and sampling and analyzing soil samples and quarterly ground water samples.

Project Accomplishments:

Activities on the CCED's for the Putnam, Martin and Manatee Plants began prior to April 13, 1993. Preparation of the final CCED report for the Martin Plant will continue during the October 1994 through March 1995 period. The final CCED report for Martin Plant was submitted to the EPA in December 1994. Preparation of the final CCED reports for Manatee and Putnam is expected to continue during the October 1994 through March 1995 period. Additional sampling and analyses for these two sites may be necessary during this period.

Fourth quarter CCED sampling and analytical activities and report preparation for the Sanford, Cape Canaveral, Port Everglades and St. Lucie Plants will occur during the October 1994 through March 1995 period. Preparation of the final CCED reports for these four plants will begin during this period. Sampling and analytical activities and report preparation for the Fort Myers and Turkey Point Plants is expected to begin during this period as well.

Project Fiscal Expenditures:

Estimated/actual project fiscal expenditures for the period from October 1994 through March 1995 are expected to be \$181,852, or \$254,648 less than projected, due to delays in the schedule. These schedule delays were caused by resource constraints and additional time required for resolution of technical issues being negotiated with the EPA. Issues associated with RCRA Corrective Action and attendant potential implications relevant to CCED's also impacted the CCED schedule.

Project Progress Summary:

As of December 1994, three plants are approximately 95% through the CCED process, four plants are approximately 60% through the process and two plants are at the beginning of the process. These estimates assume that all sites will "clean close" without complications.

Project Projections:

Estimated project fiscal expenditures during the period April through September 1995 are expected to be \$176,000.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Clean Closure Equivalency Demonstration
(CCED) - Capital

Project Description:

In compliance with 40 CFR 270.1(c)(5) and (6), FPL is developing CCED's for nine FPL power plants to demonstrate to the U.S. EPA that no hazardous waste or hazardous constituents remain in the soil or water beneath the basins which had been used in the past to treat corrosive hazardous waste. The basins, which are still operational as part of the wastewater treatment systems at these plants, are no longer used to treat hazardous waste.

To demonstrate clean closure, soil sampling and ground water monitoring plans, implementation schedules, and related reports must be submitted to the EPA. Capital costs are for the installation of monitoring wells (typically four per site) necessary to collect ground water samples for analysis.

Project Accomplishments:

Expenditures for the monitoring wells for the Putnam, Martin, Manatee and Sanford Plants were made prior to April 13, 1993, and are therefore not included for recovery in the Environmental Cost Recovery Clause.

Monitoring wells for the Cape Canaveral, Port Everglades and St. Lucie Plants were completed during the October 1993 through March 1994 period.

Monitoring wells for the Fort Myers and Turkey Point Plants are scheduled to be completed during the October 1994 through March 1995 period.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for the period October 1994 through March 1995 are expected to be \$3,808, or \$718 less than estimated, due to delays in the schedule.

Project Progress Summary:

Monitoring wells have been completed and are in-service at seven of the plants. Wells at the Fort Myers and Turkey Point Plants are scheduled to be installed during the October 1994 through March 1995 period.

Project Projections:

Estimated project fiscal expenditures (depreciation and return) for the period April through September 1995 are expected to be \$7,961.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Maintenance of Stationary Above Ground Fuel
Storage Tanks - O&M

Project Description:

Florida Administrative Code (F.A.C.) Chapter 17-762, which became effective on March 12, 1991, provides standards for the maintenance of stationary above ground fuel storage tank systems. These standards impose various implementation schedules for inspections/repairs and upgrades to fuel storage tanks.

The O&M expenditures relate to required inspections and repairs of the tanks and maintenance of additional equipment.

Project Accomplishments:

Work continued on a number of individual projects involving the cleaning, inspection or testing and repair of above ground fuel storage tank and pipe systems.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures for the period October 1994 through March 1995 are expected to be \$314,962, or \$97,960 higher than previously projected. This higher level of expenditure, earlier than previously projected, will ensure that all project upgrades required by Chapter 17-762, F.A.C., are completed by the end of 1999.

Project Progress Summary:

FPL has completed the inspection and upgrade of approximately 50% of its tanks.

Project Projections:

Estimated project fiscal expenditures for the period April through September 1995 are expected to be \$478,998.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Maintenance of Stationary Above Ground
Fuel Storage Tanks - Capital

Project Description:

Florida Administrative Code (F.A.C.) Chapter 17-762, which became effective on March 12, 1991, provides standards for the maintenance of stationary above ground fuel storage tank systems. These standards impose various implementation schedules for inspections/repairs and upgrades to fuel storage tanks.

The capital project associated with complying with the new standards include the installation of items for each tank such as liners, cathodic protection systems and tank high-level alarms.

Project Accomplishments:

The following major projects were, or are expected to be, placed in-service during the period October 1994 through March 1995:

- Turkey Point Plant Metering Tank 2 Liner
- Martin Plant Metering Tank 1 Liner
- Riviera Plant Tank C Liner
- Fort Myers Plant Tank 2 Liner
- Sanford Plant High Level Tank Alarms
- Port Everglades Terminal Tank High Level Alarms
- Turkey Point Plant Tank Cathodic Protection
- Fort Myers Plant Tank Cathodic Protection

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for October 1994 through March 1995 are expected to be \$176,394, or \$344 less than projected.

Project Progress Summary:

FPL has completed inspection and upgrade of approximately 50% of its tanks.

Project Projections:

Estimated project fiscal expenditures (depreciation and return) for the period April through September 1995 are expected to be \$240,755.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Relocate Turbine Lube Oil Underground Piping to
Above Ground

Project Description:

In accordance with criteria contained in Chapter 17-762 of the Florida Administrative Code (F.A.C.) for storage of pollutants, FPL initiated the replacement of underground Turbine Lube Oil piping to above ground installations at the St. Lucie Nuclear Power Plant.

Project Accomplishments:

The piping relocation on Unit 1 was completed in May, 1993. Approximately 200 feet of small bore pipe was installed above ground. The Unit 2 piping relocation project was cancelled after a system review. The analysis identified the turbine lube oil piping system as piping associated with a flow through process storage tank system, rendering it exempt from Chapter 17-762 F.A.C. requirements.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for the period October 1994 through March 1995 are expected to be \$2,196 which is only \$12 higher than originally projected.

Project Progress Summary:

This project is complete.

Project Projections:

Estimated project fiscal expenditures (depreciation and return) for the period April through September 1995 are expected to be \$2,150.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Florida Power & Light Company
FPSC Docket No. 950007-EI
Exhibit No. _____
Testimony of W. M. Reichel
January 17, 1995
Document No. 7
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Project Title: Oil Spill Cleanup/Response Equipment - O&M

Project Description:

The Oil Pollution Act of 1990 (OPA '90) mandates that all liable parties in the petroleum handling industry file plans by August 18, 1993, identifying (among other items) its spill management team, organization, resources and training. Within this project, FPL developed the plans for 10 power plants, 5 fuel oil terminals, three pipelines, and one corporate plan. Additionally FPL purchased the mandated response resources and provided for mobilization to a worst case discharge at each site.

Project Accomplishments:

Plan development started in 1992 and continued through August 1993. Updates will continue to be filed for all sites as required. Future costs will be incurred to meet maintenance requirements of the equipment, training of site and corporate teams, site drills and equipment deployment exercises, corporate table top exercises, major equipment deployment drills and periodic updates to all plans.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures for the period October 1994 through March 1995 are expected to be \$108,110, or \$30,110 more than previously projected. The costs for the Oil Spill Contingency Plan updates at each site and the Corporate Oil Spill Drill were not originally planned to be incurred in the same period, as occurred. Some of these costs were expected to be incurred in prior periods.

Project Progress Summary:

Through December 1994, all deadlines, both state and federal, have been met. The plan updates have been completed and a corporate table-top oil spill drill was conducted in November 1994. Ongoing costs will be annual in nature and will consist of plan updates, drills, exercises and equipment upgrades/replacements.

Project Projections:

Estimated project fiscal expenditures for the period April through September 1995 are expected to be \$82,998.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Oil Spill Cleanup/Response Equipment - Capital

Project Description:

The Oil Pollution Act of 1990 (OPA '90) mandates that all liable parties in the petroleum handling industry file plans by August 18, 1993, identifying (among other items) its spill management team, organization, resources and training. Within this project, FPL developed the plans for 10 power plants, 5 fuel oil terminals, three pipelines, and one corporate plan. Additionally, FPL purchased the mandated response resources and provided for mobilization to a worst case discharge at each site.

Project Accomplishments:

Plan development started in 1992 and continued through August 1993. Updates will continue to be filed for all sites as required. Equipment to meet mandated response capability was originally going to be funded through a industry limited partnership by March 1993. However, prior to March 1993 the industry partnership was abandoned, and FPL determined the least-cost alternative to be ownership of its own equipment.

Appropriate response equipment has been purchased and placed in-service. Future costs may be incurred to replace or upgrade response resources.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for the period October 1994 through March 1995 are expected to be \$61,970, or \$1,105 more than projected.

Project Progress Summary:

Through December 1994, all deadlines, both state and federal, have been met. Ongoing costs will be annual in nature and will consist of plan updates, drills, exercises and equipment upgrades/replacements.

Project Projections:

Estimated project fiscal expenditures (depreciation and return) for the period April through September 1995 are expected to be \$62,715.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Oil Spill Cleanup/Response Equipment - Revenue

Project Description:

The oil spill cleanup/response equipment purchased by FPL to comply with the Oil Pollution Act of 1990 (OPA '90) was rented to a company called Maritrans which had a vessel involved in the August 10, 1993, Tampa Bay oil spill. Since the purchase of this equipment has been included in the Environmental Cost Recovery Clause, any proceeds received from the rental of the equipment, less FPL expenses, have been included as a credit under the clause.

Project Fiscal Expenditures:

Additional revenues of \$359,463 will be credited to the clause during the period October 1994 through March 1995.

Project Progress Summary:

FPL has negotiated a final settlement with Maritrans relating to the Tampa Bay oil spill clean-up, and all payments have been received and credited appropriately to the clause in December 1994.

Project Projections:

The final payment for use of FPL's equipment was received in December 1994. No future rental arrangements are anticipated, and this item will not be reported on in future filings.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Low-Level Waste Access Fees

Project Description:

Florida Power & Light Company is required to pay Low-Level Waste Access fees for the development of a second regional disposal facility in order to be able to dispose of its low-level radioactive waste at the Barnwell, South Carolina, Low-Level Waste Disposal Site. No other disposal sites are available to FPL for disposal of low-level radioactive waste.

The Low-Level Waste Access fees are invoiced and paid quarterly. The fees are calculated and assessed according to a fixed formula that is applied to all Southeast Compact low-level waste generators. The amount of the fee depends upon the volume of low-level waste that FPL disposes of at the Barnwell Low-Level Waste Disposal Facility vs. the volume of low-level waste disposed of at Barnwell by all Southeast Compact generators.

Project Accomplishments:

The Low-Level Waste Access Fees are currently authorized to be assessed and collected from Southeast LLW generators through 1995 under a resolution enacted by the Southeast Compact Commission. Consequently, FPL is projecting the continued payment of these fees on a quarterly basis.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures for the period October 1994 through March 1995 are expected to be \$55,295, or \$40,312 less than originally projected. This underrun can be attributed to significantly lower shipments of waste volumes than originally projected, as well as credits received from the St. Lucie Unit 2 participant owners, which were not included in the projections for the period.

Project Progress Summary:

Florida Power and Light expects to continue making quarterly Low Level Access Fees payments through 1995.

Project Projections:

Estimated project fiscal expenditures for the period April through September 1995 are expected to be \$196,082.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Relocate Storm Water Runoff

Project Description:

The new National Pollutant Discharge Elimination System (NPDES) permit, Permit No. FL0002206, for the St. Lucie Plant, issued by the United States Environmental Protection Agency contains new effluent discharge limitations for industrial-related storm water from the paint and land utilization building areas. The new requirements became effective on January 1, 1994. As a result of these new requirements, the effected areas were surveyed, graded, excavated and paved as necessary to clean and redirect the storm water runoff. The storm water runoff will be collected and discharged to existing water catch basins on site.

Project Accomplishments:

The rerouting of the storm water runoff was substantially completed and placed in-service in January 1994. The remaining elements of the project were completed in April 1994.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for the period October 1994 through March 1995 are expected to be \$8,835 which is only \$25 lower than originally projected.

Project Progress Summary:

The rerouting of the storm water runoff project is complete.

Project Projections:

Estimated project fiscal expenditures (depreciation and return) for the period April through September 1995 are expected to be \$8,668.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Sulfur Dioxide (SO₂) Allowances

Project Description:

The Clean Air Act Amendments of 1990, Public Law 101-549 Section 416, established a U.S. Environmental Protection Agency (EPA) tracking system for managing domestic air pollution sources emitting sulfur dioxide, a regulated pollutant. In brief, historical power plant operating data regarding fuel type and quantity burned are used to determine the tons of annual SO₂ emissions that may be emitted from a facility or generating system. Each ton of SO₂ to be emitted corresponds to one EPA SO₂ emissions "allowance". These allowances may be freely bought and sold, within certain constraints, to minimize the cost of environmental compliance using a free market-based approach. FPL was allocated allowances for its use beginning in the year 2000. However, the law established a mechanism for an annual auction to assure the availability of these required allowances to parties that had no historical emissions, or that needed to increase their total annual emissions now or in the future. To establish a "pool" of available allowances for the auction, EPA withheld a percentage of all allowances, with compensation for the original allowance holder to be made following their sale to the highest bidder at the annual auction.

Project Accomplishments:

Auctions of emission allowances were conducted by the U.S. EPA in March of 1993 and 1994. FPL has received the revenues for the allowances sold at these auctions and is recording the proceeds in accordance with the Commission's order dated April 6, 1994.

Project Fiscal Expenditures:

Actual/estimated negative return on investment for the period October 1994 through March 1995 is expected to be (\$27,758). This represents a variance of (\$4,112) which is attributable to earlier receipt and booking of these revenues than estimated.

Project Progress Summary:

Revenues from the first and second auctions of allowances have been received and are being recorded in accordance with the Commission's order.

Project Projections:

Projections of anticipated revenues from any future auctions are problematic due to the nature of the auction process. Based upon prior experience, however, FPL could expect to receive approximately \$200,000 from the auction of allowances which will occur in March 1995. Assuming this occurs, estimated negative return on investment for the period April through September 1995 is expected to be (\$38,118).

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: Scherer Discharge Pipeline - Capital

Project Description:

On March 16, 1992, pursuant to the provisions of the Georgia Water Quality control Act, as amended, the Federal Clean Water Act, as amended, and the rules and regulations promulgated thereunder, the Georgia Department of Natural Resources issued the National Pollutant Discharge Elimination System (NPDES) permit for Plant Scherer to Georgia Power Company. In addition to the permit, the Department issued Administrative Order EPD-WQ-1855 which provided a schedule for compliance by April 1, 1994 with new facility discharge limitations to Berry Creek. As a result of these new limitations, and pursuant to the order, Georgia Power Company was required to construct an alternate outfall to redirect certain wastewater discharges to the Ocmulgee River. Pursuant to the ownership agreement with Georgia Power Company for Scherer Unit 4, FPL is required to pay for its share of construction of the discharge pipeline which will constitute the alternate outfall.

Project Accomplishments:

The discharge pipeline was placed in-service in February 1994.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures (depreciation and return) for the period October 1994 through March 1995 are expected to be \$60,202, which is only \$226 lower than projected.

Project Progress Summary:

Installation of the discharge pipeline is complete, and it was placed in-service in February 1994.

Project Projections:

Estimated project expenditures (depreciation and return) for the period April through September 1995 are expected to be \$59,129, based upon FPL's current share of ownership of Scherer Unit 4.

FLORIDA POWER & LIGHT COMPANY PROJECT DESCRIPTION AND PROGRESS

Project Title: Continuous Emission Monitoring Systems - O & M

Project Description:

The Clean Air Act Amendments of 1990, Public Law 101-549, established requirements for the monitoring, recordkeeping and reporting of SO₂, NO_x and carbon dioxide (CO₂) emissions, as well as volumetric flow and opacity data from affected air pollution sources. FPL has 32 units which are affected and which must install CEMS to comply with these requirements.

40 CFR Part 75 includes the general requirements for the installation, certification, operation and maintenance of CEMS and specific requirements for the monitoring of pollutants, opacity and volumetric flow. Periodically, these systems extract and analyze gaseous samples for each power plant stack and have automated data acquisition and reporting capability. Operation and maintenance of these systems in accordance with the provisions of 40 CFR Part 75 will be an ongoing activity following their installation.

Project Accomplishments:

This is a new project, subject to Commission approval of its inclusion in the Environmental Cost Recovery Clause.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures for the period October 1994 through March 1995 (beginning in January 1995) are expected to be \$125,050. This is a new project under the Environmental Cost Recovery Clause, and its expenditures were therefore not projected in previous filings to the Commission.

Project Progress Summary:

This is a new project, subject to Commission approval of its inclusion in the Environmental Cost Recovery Clause.

Project Projections:

Estimated project fiscal expenditures for the period April through September 1995 are expected to be \$322,700.

**FLORIDA POWER & LIGHT COMPANY
PROJECT DESCRIPTION AND PROGRESS**

Project Title: RCRA Corrective Action - O & M

Project Description:

Under the Hazardous and Solid Waste Amendments of 1984 (amending the Resource Conservation and Recovery Act, or RCRA), the U.S. EPA has the authority; to require hazardous waste treatment facilities to investigate whether there have been releases of hazardous waste or constituents from non-regulated units on the facility site. If contamination is found to be present at levels that represent a threat to human health or the environment, the facility operator can be required to undertake "corrective action" to remediate the contamination. In April 1994, the U.S. EPA advised FPL that it intended to initiate RCRA Facility Assessments (RFA's) at FPL's nine former hazardous waste treatment facility sites. The RFA is the first step in the RCRA Corrective Action process. At a minimum, FPL will be responding to the agency's requests for information concerning the operation of these power plants, their waste streams, their former hazardous waste treatment facilities and their non-regulated Solid Waste Management Units (SWMU's). FPL may also conduct assessments of human health risk resulting from possible releases from the SWMU's in order to demonstrate that any residual contamination does not represent an undue threat to human health or the environment. Other response actions could include a voluntary clean-up or compliance with the agency's imposition of the full gamut of RCRA Corrective Action requirements, including RCRA Facility Investigation, Corrective Measures Study and Corrective Measures Implementation.

Project Accomplishments:

This is a new project, subject to Commission approval of its inclusion in the Environmental Cost Recovery Clause.

Project Fiscal Expenditures:

Actual/estimated project fiscal expenditures for the period October 1994 through March 1995 (beginning in January 1995) are expected to be \$55,000. This is a new project under the Environmental Cost Recovery Clause, and its expenditures were therefore not projected in previous filings to the Commission.

Project Progress Summary:

This is a new project, subject to Commission approval of its inclusion in the Environmental Cost Recovery Clause.

Project Projections:

Estimated project fiscal expenditures for the period April through September 1995 are expected to be \$295,000.