



September 26, 2012

Lennon Anderson P.E  
Department of Environmental Protection  
Southeast District Office, Air Section  
400 North Congress Ave, Suite 200  
West Palm Beach, Fl. 33416

RECEIVED

SEP 27 2012

FL DEP  
WEST PALM BEACH

**Re: FPL Martin Plant 3A CT**

Dear Mr. Anderson:

Martin Unit 3A is currently scheduled for an October 15<sup>th</sup> 2012 overhaul.

Upon returning from the major overhaul the combustion turbine will require DLN tuning. The overhaul will not increase unit MW output and unit efficiency remains the same. Tuning of the overhauled combustors will be required to minimize combustor dynamics at various operating modes and increase the starting and low load reliability of the unit. The operating modes for the test will include:

- Startup on Combined Cycle Curve including hold points in primary mode and piloted premix mode.
- Startup on Simple Cycle Curve including hold points in primary mode and piloted premix mode.
- Transfer into and out of Premix mode on both Combined and Simple Cycle Curves to tune for optimum transfer point.

The testing/tuning for unit 3A should take approximately 12 hours to complete; therefore we are requesting a permit modification to exceed the 177 pounds per hour NOx limit for the 12 hour test duration. The testing is scheduled to begin no sooner than Saturday, October 20, 2012. Every effort will be taken to minimize emissions during the testing/tuning.

After receipt and initial review of this letter I would appreciate your time and the opportunity to discuss this matter and answer any questions you might have. Please call John Hampp at 561-691-2894.

**RESPONSIBLE OFFICIAL CERTIFICATION**

I, the undersigned, am a responsible official (Title V air permit application or responsible official notification form on file with the Department) of the Title V source for which this document is being submitted. With respect to all matters other than Acid Rain program requirements, I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Best regards,

A handwritten signature in blue ink, appearing to read 'Brad Williams', is written over a horizontal line.

Brad Williams  
Regional Plant General Manager (Responsible Official)

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FL DEP  
WEST PALM BEACH

Florida Power & Light Company  
Martin Plant, 21900 SW Warfield Blvd, Indiantown, FL 34956  
TUNING SCHEDULE (Attachment A)

Unit #3A						
Step	Activity	Duration	Load Change	Time	Load	Time (hrs)
1	Startup to FSNL	30	0	0	0	0.0
				30	0	0.5
2	Synch & Load to 40% Load (TTRF1=2200)	270	70	30	0	0.5
				300	70	5.0
3	Tune Splits	45	0	300	70	5.0
				345	70	5.8
4	Increase to TTRF1=2230	5	10	345	70	5.8
				350	80	5.8
5	Tune Splits	45	0	350	80	5.8
				395	80	6.6
6	Increase to TTRF1=2260	5	15	395	80	6.6
				400	95	6.7
7	Tune Splits	45	0	400	95	6.7
				445	95	7.4
8	Increase to TTRF1=2300	5	20	445	95	7.4
				450	115	7.5
9	Tune Splits	45	0	450	115	7.5
				495	115	8.3
10	Increase to TTRF1=2330	5	20	495	115	8.3
				500	135	8.3
11	Tune Splits	45	0	500	135	8.3
				545	135	9.1
12	Increase to TTRF1=2380	5	25	545	135	9.1
				550	160	9.2
13	Tune Splits	45	0	550	160	9.2
				595	160	9.9
14	Increase to Base	5	15	595	160	9.9
				600	175	10.0
15	Tune Base Load	240	0	600	175	10.0
				840	175	14.0
16	Record Perf, Dyno's, Emissions	30	0	840	175	14.0
				870	175	14.5
17	Record Perf, Dyno's, Emissions	30	0	870	175	14.5
				900	175	15.0
18	Increase to Peak Slowly	15	5	900	175	15.0
				915	180	15.3
19	Tune Peak Load	60	0	915	180	15.3
				975	180	16.3
20	Record Perf, Dyno's, Emissions	30	0	975	180	16.3
				1005	180	16.8
21	Record Perf, Dyno's, Emissions	30	0	1005	180	16.8
				1035	180	17.3
22	Return to Base	5	-5	1035	180	17.3
				1040	175	17.3
23	Check Tuning	5	0	1040	175	17.3
				1045	175	17.4
24	Decrease to TTRF1=2380	10	-15	1045	175	17.4
				1055	160	17.6
25	Check Tuning	5	0	1055	160	17.6

				1060	160	17.7
26	Decrease to TTRF1=2330	5	-25	1060	160	17.7
				1065	135	17.8
27	Check Tuning	5	0	1065	135	17.8
				1070	135	17.8
28	Decrease to TTRF1=2300	5	-20	1070	135	17.8
				1075	115	17.9
29	Check Tuning	5	0	1075	115	17.9
				1080	115	18.0
30	Decrease to TTRF1=2260	5	-20	1080	115	18.0
				1085	95	18.1
31	Check Tuning	5	0	1085	95	18.1
				1090	95	18.2
32	Decrease to TTRF1=2230	5	-15	1090	95	18.2
				1095	80	18.3
33	Check Tuning	5	0	1095	80	18.3
				1100	80	18.3
34	Decrease to TTRF1=2200	5	-10	1100	80	18.3
				1105	70	18.4
35	Check Tuning	5	0	1105	70	18.4
				1110	70	18.5
36	Decrease to TTRF1=2170	5	-5	1110	70	18.5
				1115	65	18.6
37	Tune Splits	45	0	1115	65	18.6
				1160	65	19.3
38	Decrease to TTRF1=2130	5	-5	1160	65	19.3
				1165	60	19.4
39	Tune Splits	45	0	1165	60	19.4
				1210	60	20.2
40	Increase to TTRF=2150	5	0	1210	60	20.2
				1215	60	20.3
41	Transfer Out of M6 to M4	10	-5	1215	60	20.3
				1225	55	20.4
42	Transfer In To M6 from M4	10	5	1225	55	20.4
				1235	60	20.6
43	Increase Load to TTRF1=2200	10	10	1235	60	20.6
				1245	70	20.8
52	Return Unit to Dispatch as Needed	5	0	1245	70	20.8



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WEST PALM BEACH

**Re: FPL Martin Plant 3B CT**

Dear Mr. Anderson

Martin Unit 3B is currently scheduled for a October 15<sup>th</sup> 2012 Combustor Turbine Inspection overhaul.

Upon returning from the major overhaul the combustion turbine will require DLN tuning. The overhaul will not increase unit MW output and unit efficiency remains the same. Tuning of the overhauled combustors will be required to minimize combustor dynamics at various operating modes and increase the starting and low load reliability of the unit. The operating modes for the test will include:

- Startup on Combined Cycle Curve including hold points in primary mode and piloted premix mode.
- Startup on Simple Cycle Curve including hold points in primary mode and piloted premix mode.
- Transfer into and out of Premix mode on both Combined and Simple Cycle Curves to tune for optimum transfer point.

The testing/tuning for unit 3B should take approximately 12 hours to complete, therefore we are requesting a permit modification to exceed the 177 pounds per hour NOx limit for the 12 hour test duration. The testing is scheduled to begin no sooner than Saturday, October 20, 2012. Every effort will be taken to minimize emissions during the testing/tuning.

After receipt and initial review of this letter I would appreciate your time and the opportunity to discuss this matter and answer any questions you might have. Please call John Hampp at 561-691-2894.

**RESPONSIBLE OFFICIAL CERTIFICATION**

I, the undersigned, am a responsible official (Title V air permit application or responsible official notification form on file with the Department) of the Title V source for which this document is being submitted. With respect to all matters other than Acid Rain program requirements, I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

Best regards,

A handwritten signature in blue ink, appearing to read 'Brad Williams', is written over a horizontal line.

Brad Williams  
Regional Plant General Manager (Responsible Official)

Florida Power & Light Company  
Martin Plant, 21900 SW Warfield Blvd, Indiantown, FL 34956  
**TUNING SCHEDULE (Attachment A)**

<b>Unit #3B</b>						
<b>Step</b>	<b>Activity</b>	<b>Duration</b>	<b>Load Change</b>	<b>Time</b>	<b>Load</b>	<b>Time (hrs)</b>
1	Startup to FSNL	30	0	0	0	0.0
				30	0	0.5
2	Synch & Load to 40% Load (TTRF1=2200)	270	70	30	0	0.5
				300	70	5.0
3	Tune Splits	45	0	300	70	5.0
				345	70	5.8
4	Increase to TTRF1=2230	5	10	345	70	5.8
				350	80	5.8
5	Tune Splits	45	0	350	80	5.8
				395	80	6.6
6	Increase to TTRF1=2260	5	15	395	80	6.6
				400	95	6.7
7	Tune Splits	45	0	400	95	6.7
				445	95	7.4
8	Increase to TTRF1=2300	5	20	445	95	7.4
				450	115	7.5
9	Tune Splits	45	0	450	115	7.5
				495	115	8.3
10	Increase to TTRF1=2330	5	20	495	115	8.3
				500	135	8.3
11	Tune Splits	45	0	500	135	8.3
				545	135	9.1
12	Increase to TTRF1=2380	5	25	545	135	9.1
				550	160	9.2
13	Tune Splits	45	0	550	160	9.2
				595	160	9.9
14	Increase to Base	5	15	595	160	9.9
				600	175	10.0
15	Tune Base Load	240	0	600	175	10.0
				840	175	14.0
16	Record Perf, Dyno's, Emissions	30	0	840	175	14.0
				870	175	14.5
17	Record Perf, Dyno's, Emissions	30	0	870	175	14.5
				900	175	15.0
18	Increase to Peak Slowly	15	5	900	175	15.0
				915	180	15.3
19	Tune Peak Load	60	0	915	180	15.3
				975	180	16.3
20	Record Perf, Dyno's, Emissions	30	0	975	180	16.3
				1005	180	16.8
21	Record Perf, Dyno's, Emissions	30	0	1005	180	16.8
				1035	180	17.3
22	Return to Base	5	-5	1035	180	17.3
				1040	175	17.3
23	Check Tuning	5	0	1040	175	17.3
				1045	175	17.4
24	Decrease to TTRF1=2380	10	-15	1045	175	17.4
				1055	160	17.6
25	Check Tuning	5	0	1055	160	17.6

				1060	160	17.7
26	Decrease to TTRF1=2330	5	-25	1060	160	17.7
				1065	135	17.8
27	Check Tuning	5	0	1065	135	17.8
				1070	135	17.8
28	Decrease to TTRF1=2300	5	-20	1070	135	17.8
				1075	115	17.9
29	Check Tuning	5	0	1075	115	17.9
				1080	115	18.0
30	Decrease to TTRF1=2260	5	-20	1080	115	18.0
				1085	95	18.1
31	Check Tuning	5	0	1085	95	18.1
				1090	95	18.2
32	Decrease to TTRF1=2230	5	-15	1090	95	18.2
				1095	80	18.3
33	Check Tuning	5	0	1095	80	18.3
				1100	80	18.3
34	Decrease to TTRF1=2200	5	-10	1100	80	18.3
				1105	70	18.4
35	Check Tuning	5	0	1105	70	18.4
				1110	70	18.5
36	Decrease to TTRF1=2170	5	-5	1110	70	18.5
				1115	65	18.6
37	Tune Splits	45	0	1115	65	18.6
				1160	65	19.3
38	Decrease to TTRF1=2130	5	-5	1160	65	19.3
				1165	60	19.4
39	Tune Splits	45	0	1165	60	19.4
				1210	60	20.2
40	Increase to TTRF=2150	5	0	1210	60	20.2
				1215	60	20.3
41	Transfer Out of M6 to M4	10	-5	1215	60	20.3
				1225	55	20.4
42	Transfer In To M6 from M4	10	5	1225	55	20.4
				1235	60	20.6
43	Increase Load to TTRF1=2200	10	10	1235	60	20.6
				1245	70	20.8
52	Return Unit to Dispatch as Needed	5	0	1245	70	20.8



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**Re: FPL Martin Plant 4A CT**

Dear Mr. Anderson:

Martin Unit 4A is currently scheduled for an October 25<sup>th</sup> 2012 overhaul.

Upon returning from the major overhaul the combustion turbine will require DLN tuning. The overhaul will not increase unit MW output and unit efficiency remains the same. Tuning of the overhauled combustors will be required to minimize combustor dynamics at various operating modes and increase the starting and low load reliability of the unit. The operating modes for the test will include:

- Startup on Combined Cycle Curve including hold points in primary mode and piloted premix mode.
- Startup on Simple Cycle Curve including hold points in primary mode and piloted premix mode.
- Transfer into and out of Premix mode on both Combined and Simple Cycle Curves to tune for optimum transfer point.

The testing/tuning for unit 4B should take approximately 12 hours to complete, therefore we are requesting a permit modification to exceed the 177 pounds per hour NOx limit for the 12 hour test duration. The testing is scheduled to begin no sooner than Tuesday, October 30, 2012. Every effort will be taken to minimize emissions during the testing/tuning.

After receipt and initial review of this letter I would appreciate your time and the opportunity to discuss this matter and answer any questions you might have. Please call John Hampp at 561-691-2894.

**RESPONSIBLE OFFICIAL CERTIFICATION**

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Best regards,

A handwritten signature in blue ink, appearing to read 'Brad Williams'.

Brad Williams  
Regional Plant General Manager (Responsible Official)

Florida Power & Light Company  
 Martin Plant, 21900 SW Warfield Blvd, Indiantown, FL 34956

**TUNING SCHEDULE (Attachment A)**

<b>Unit #4A</b>						
<b>Step</b>	<b>Activity</b>	<b>Duration</b>	<b>Load Change</b>	<b>Time</b>	<b>Load</b>	<b>Time (hrs)</b>
1	Startup to FSNL	30	0	0	0	0.0
				30	0	0.5
2	Synch & Load to 40% Load (TTRF1=2200)	270	70	30	0	0.5
				300	70	5.0
3	Tune Splits	45	0	300	70	5.0
				345	70	5.8
4	Increase to TTRF1=2230	5	10	345	70	5.8
				350	80	5.8
5	Tune Splits	45	0	350	80	5.8
				395	80	6.6
6	Increase to TTRF1=2260	5	15	395	80	6.6
				400	95	6.7
7	Tune Splits	45	0	400	95	6.7
				445	95	7.4
8	Increase to TTRF1=2300	5	20	445	95	7.4
				450	115	7.5
9	Tune Splits	45	0	450	115	7.5
				495	115	8.3
10	Increase to TTRF1=2330	5	20	495	115	8.3
				500	135	8.3
11	Tune Splits	45	0	500	135	8.3
				545	135	9.1
12	Increase to TTRF1=2380	5	25	545	135	9.1
				550	160	9.2
13	Tune Splits	45	0	550	160	9.2
				595	160	9.9
14	Increase to Base	5	15	595	160	9.9
				600	175	10.0
15	Tune Base Load	240	0	600	175	10.0
				840	175	14.0
16	Record Perf, Dyno's, Emissions	30	0	840	175	14.0
				870	175	14.5
17	Record Perf, Dyno's, Emissions	30	0	870	175	14.5
				900	175	15.0
18	Increase to Peak Slowly	15	5	900	175	15.0
				915	180	15.3
19	Tune Peak Load	60	0	915	180	15.3
				975	180	16.3
20	Record Perf, Dyno's, Emissions	30	0	975	180	16.3
				1005	180	16.8
21	Record Perf, Dyno's, Emissions	30	0	1005	180	16.8
				1035	180	17.3
22	Return to Base	5	-5	1035	180	17.3
				1040	175	17.3
23	Check Tuning	5	0	1040	175	17.3
				1045	175	17.4
24	Decrease to TTRF1=2380	10	-15	1045	175	17.4
				1055	160	17.6
25	Check Tuning	5	0	1055	160	17.6
				1060	160	17.7



26	Decrease to TTRF1=2330	5	-25	1060	160	17.7
				1065	135	17.8
27	Check Tuning	5	0	1065	135	17.8
				1070	135	17.8
28	Decrease to TTRF1=2300	5	-20	1070	135	17.8
				1075	115	17.9
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				1090	95	18.2
32	Decrease to TTRF1=2230	5	-15	1090	95	18.2
				1095	80	18.3
33	Check Tuning	5	0	1095	80	18.3
				1100	80	18.3
34	Decrease to TTRF1=2200	5	-10	1100	80	18.3
				1105	70	18.4
35	Check Tuning	5	0	1105	70	18.4
				1110	70	18.5
36	Decrease to TTRF1=2170	5	-5	1110	70	18.5
				1115	65	18.6
37	Tune Splits	45	0	1115	65	18.6
				1160	65	19.3
38	Decrease to TTRF1=2130	5	-5	1160	65	19.3
				1165	60	19.4
39	Tune Splits	45	0	1165	60	19.4
				1210	60	20.2
40	Increase to TTRF=2150	5	0	1210	60	20.2
				1215	60	20.3
41	Transfer Out of M6 to M4	10	-5	1215	60	20.3
				1225	55	20.4
42	Transfer In To M6 from M4	10	5	1225	55	20.4
				1235	60	20.6
43	Increase Load to TTRF1=2200	10	10	1235	60	20.6
				1245	70	20.8
52	Return Unit to Dispatch as Needed	5	0	1245	70	20.8



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WEST PALM BEACH

**Re: FPL Martin Plant 4B CT**

Dear Mr. Anderson:

Martin Unit 4B is currently scheduled for an October 2012 maintenance outage depending on system conditions.

Upon returning from the maintenance outage the combustion turbine will require DLN tuning. The overhaul will not increase unit MW output and unit efficiency remains the same. Tuning of the overhauled combustors will be required to minimize combustor dynamics at various operating modes and increase the starting and low load reliability of the unit. The operating modes for the test will include:

- Startup on Combined Cycle Curve including hold points in primary mode and piloted premix mode.
- Startup on Simple Cycle Curve including hold points in primary mode and piloted premix mode.
- Transfer into and out of Premix mode on both Combined and Simple Cycle Curves to tune for optimum transfer point.

The testing/tuning for unit 4B should take approximately 12 hours to complete, therefore we are requesting a permit modification to exceed the 177 pounds per hour NOx limit for the 12 hour test duration. The testing is scheduled to begin after the outage is complete. The outage is dependent on system load conditions. The load could be favorable for this activity during the window of October 1<sup>st</sup> through October 31<sup>st</sup> 2012. Every effort will be taken to minimize emissions during the testing/tuning.

After receipt and initial review of this letter I would appreciate your time and the opportunity to discuss this matter and answer any questions you might have. Please call John Hampp at 561-691-2894.

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Best regards,

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Brad Williams  
Regional Plant General Manager (Responsible Official)

Florida Power & Light Company  
 Martin Plant, 21900 SW Warfield Blvd, Indiantown, FL 34956  
**TUNING SCHEDULE (Attachment A)**

<b>Unit #4B</b>						
<b>Step</b>	<b>Activity</b>	<b>Duration</b>	<b>Load Change</b>	<b>Time</b>	<b>Load</b>	<b>Time (hrs)</b>
1	Startup to FSNL	30	0	0	0	0.0
				30	0	0.5
2	Synch & Load to 40% Load (TTRF1=2200)	270	70	30	0	0.5
				300	70	5.0
3	Tune Splits	45	0	300	70	5.0
				345	70	5.8
4	Increase to TTRF1=2230	5	10	345	70	5.8
				350	80	5.8
5	Tune Splits	45	0	350	80	5.8
				395	80	6.6
6	Increase to TTRF1=2260	5	15	395	80	6.6
				400	95	6.7
7	Tune Splits	45	0	400	95	6.7
				445	95	7.4
8	Increase to TTRF1=2300	5	20	445	95	7.4
				450	115	7.5
9	Tune Splits	45	0	450	115	7.5
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10	Increase to TTRF1=2330	5	20	495	115	8.3
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11	Tune Splits	45	0	500	135	8.3
				545	135	9.1
12	Increase to TTRF1=2380	5	25	545	135	9.1
				550	160	9.2
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				595	160	9.9
14	Increase to Base	5	15	595	160	9.9
				600	175	10.0
15	Tune Base Load	240	0	600	175	10.0
				840	175	14.0
16	Record Perf, Dyno's, Emissions	30	0	840	175	14.0
				870	175	14.5
17	Record Perf, Dyno's, Emissions	30	0	870	175	14.5
				900	175	15.0
18	Increase to Peak Slowly	15	5	900	175	15.0
				915	180	15.3
19	Tune Peak Load	60	0	915	180	15.3
				975	180	16.3
20	Record Perf, Dyno's, Emissions	30	0	975	180	16.3
				1005	180	16.8
21	Record Perf, Dyno's, Emissions	30	0	1005	180	16.8
				1035	180	17.3
22	Return to Base	5	-5	1035	180	17.3
				1040	175	17.3
23	Check Tuning	5	0	1040	175	17.3
				1045	175	17.4
24	Decrease to TTRF1=2380	10	-15	1045	175	17.4
				1055	160	17.6
25	Check Tuning	5	0	1055	160	17.6

				1060	160	17.7
26	Decrease to TTRF1=2330	5	-25	1060	160	17.7
				1065	135	17.8
27	Check Tuning	5	0	1065	135	17.8
				1070	135	17.8
28	Decrease to TTRF1=2300	5	-20	1070	135	17.8
				1075	115	17.9
29	Check Tuning	5	0	1075	115	17.9
				1080	115	18.0
30	Decrease to TTRF1=2260	5	-20	1080	115	18.0
				1085	95	18.1
31	Check Tuning	5	0	1085	95	18.1
				1090	95	18.2
32	Decrease to TTRF1=2230	5	-15	1090	95	18.2
				1095	80	18.3
33	Check Tuning	5	0	1095	80	18.3
				1100	80	18.3
34	Decrease to TTRF1=2200	5	-10	1100	80	18.3
				1105	70	18.4
35	Check Tuning	5	0	1105	70	18.4
				1110	70	18.5
36	Decrease to TTRF1=2170	5	-5	1110	70	18.5
				1115	65	18.6
37	Tune Splits	45	0	1115	65	18.6
				1160	65	19.3
38	Decrease to TTRF1=2130	5	-5	1160	65	19.3
				1165	60	19.4
39	Tune Splits	45	0	1165	60	19.4
				1210	60	20.2
40	Increase to TTRF=2150	5	0	1210	60	20.2
				1215	60	20.3
41	Transfer Out of M6 to M4	10	-5	1215	60	20.3
				1225	55	20.4
42	Transfer In To M6 from M4	10	5	1225	55	20.4
				1235	60	20.6
43	Increase Load to TTRF1=2200	10	10	1235	60	20.6
				1245	70	20.8
52	Return Unit to Dispatch as Needed	5	0	1245	70	20.8