

Tom:



October 14, 2011

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

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OCT 17 2011

FL DEP
WEST PALM BEACH

Re: FPL Martin Plant 3B CT

Project # 0850001 -028 -AC

Dear Mr. Anderson

Martin Unit 3B is currently scheduled for a October 2011 Major 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 Monday, November 14, 2011. 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.

Sincerely,

Brad Williams

Brad Williams

Regional Plant General Manager (Responsible Official)

Martin Plant, 21900 SW Warfield Blvd, Indiantown, FL 34956
 TUNING SCHEDULE (Attachment A)

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| Unit #3B | | | | | | |
|----------|---------------------------------------|----------|-------------|------|------|------------|
| 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 |

