



Brian V. Powers
Station Manager, Crystal River
North Plant & Fuel Operations

January 30, 2015

Submitted via electronic mail

Mr. Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Re: Crystal River Units 4 and 5 – MATS Extension Request
Response to Request for Additional Information

Dear Mr. Koerner:

Duke Energy Florida, Inc. (DEF) is in receipt of the Request for Additional Information dated January 14, 2015 related to the MATS extension request for the DEF Crystal River Plant Units 4 and 5. The two items for which additional information was requested are noted below, along with DEF's response.

Item 1: *"The Department believes this request is too broad in scope. Please indicate the specific sections and conditions in the MATS rule to which your extension request applies."*

Response: DEF is limiting the extension request to the mercury related requirements of the MATS rule applicable to Units 4 and 5. This includes compliance with the mercury standards imposed on these units, as well as the associated monitoring, reporting, recordkeeping and "work practice standards" associated with the mercury standard. An extension of these provisions of the MATS rule to April 16, 2016 is necessary to fully support the mercury emissions control project activities further described in Item 2 below.

Item 2: *"With regard to the Operation Testing and Analysis for both the trial and installation phases of the proposed schedule, please provide additional details of the work that justifies the durations."*

Response: Following the installation of the permanent mercury re-emission control systems on Crystal River Units 4 and 5, the activities below are required for DEF to mitigate mercury re-emissions from the wet flue gas desulfurization (FGD) systems in a consistent and reasonably efficient manner. These activities are represented as a group in the implementation schedule as "operational testing & analysis".

- Operational checkout (verification of equipment tie-ins and functionality)
- Training for operation and maintenance
- Development and testing of control algorithm
- Development and communication of system protocol

The duration of these activities can be estimated, but the conditions necessary for some of the activities to proceed (i.e., a re-emission event on at least one of the units) remain an uncertainty out of the control of DEF. Therefore, the projected duration of this phase requires a degree of contingency. While there is no way to predict whether a re-emission event will occur within the projected duration, DEF is reasonably confident that the timeframe reflected will be sufficient based on historical trends.

With respect to the mercury re-emission control trial, the “operational testing & analysis” phase includes the following activities:

- Operational checkout (verification of equipment tie-ins and functionality)
- Operation of the temporary system to mitigate potential re-emission events as effectively as possible
- Confirmation of reagent effectiveness
- Verification of negligible or manageable impacts of the reagent on related FGD equipment, water quality, and gypsum quality
- Preliminary development of control relationships through trending analysis of dosage rates, sorbent trap mercury emission results, and relevant unit parameters

This phase will continue until the permanent system has been installed and verified operational, at which point the temporary system will be decommissioned and returned.

An updated implementation schedule is attached.

For additional context, the preliminary results of the mercury characterization study (conducted in November and December 2014) suggest that re-emission from the FGDs is the primary cause of elevated mercury emissions events on these units. Another potential mechanism for elevated emissions is under-oxidation from the selective catalytic reduction (SCR) systems; however, preliminary results suggest sufficient oxidation from the SCRs under various configurations. These results align with DEF's initial assumptions and provide support for the strategy moving forward, focused on mercury re-emission control.

Thank you for your continued consideration of this important request for extension of time. Please contact Mike Kennedy at (727) 820-5567, Jamie Hunter at (727) 820-5764 or me at (352) 337-6904 if you have any questions.

Sincerely,



Brian V. Powers
Station Manager/Responsible Official

Enclosure

Crystal River North MATS Compliance Project Schedule Overview

Initial Project Scope and Schedule (Under Review & Subject to Change) Rev 01/19/15

