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Fax: 440-280-8029August 8, 2005
PY-CEI/NRR-2895LUnited States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001Perry Nuclear Power Plant
Docket No. 50-440
Report of Changes Pursuant to 10 CFR 50.46

Ladies and Gentlemen:

In March 2001, during the 8th Refueling Outage at the Perry Nuclear Power Plant (PNPP), GE14 fuel was loaded into the core. The PNPP-specific Loss of Coolant Accident (LOCA) analysis was revised to include use of this fuel type. The change in Peak Clad Temperature (PCT) was larger than the 10 CFR 50.46(a)(3)(i) and (ii) threshold value of "greater than 50° F" for submitting a 30-day report. Since GE14 fuel was designed in accordance with NRC-approved topical reports and its use within the PNPP core was analyzed using NRC-approved methodologies, the PNPP staff did not believe the 30-day reporting criteria was applicable. The change was reported in the annual 10 CFR 50.46 report (reference PNPP letter PY-CEI/NRR-2613L, dated February 27, 2002).

On July 7, 2005, a teleconference was conducted between the Nuclear Regulatory Commission (NRC) and PNPP staffs to discuss the requirements contained within 10 CFR 50.46. Based upon this teleconference, the PNPP staff determined that in 2001, the NRC should have been notified of the use of GE14 fuel using the 30-day reporting criteria instead of the annual reporting criteria. Furthermore, subsequent changes or errors to the LOCA analysis reported in the annual 10 CFR 50.46 reports since that time should have been communicated via 30-day reports, since the original change (use of GE14 fuel) was not properly resolved.

This submittal is considered a 30-day report for the purposes of notifying the NRC of the use of GE14 fuel at PNPP and of other changes or errors to the LOCA analysis. Attachment 1 contains a tabulation of each change, its impact upon PCT with a cross-reference the respective annual 10 CFR 50.46 submittal, which initially reported the change or error. Attachment 2 contains, for reference, the changes in the core composition that have occurred since 2001.

In accordance with 10 CFR 50.46(a)(3)(ii), the 30-day report will include a schedule for providing a reanalysis or taking other actions that show compliance with the 10 CFR 50.46 requirements. The PNPP staff has concluded that the use of GE14 fuel is in compliance with the requirements of 10 CFR 50.46 and a reanalysis is not required. GE14 fuel was

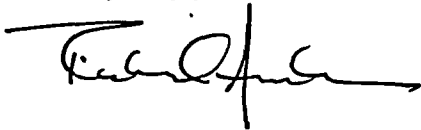
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designed in accordance with the NRC-approved General Electric Topical Report titled, "General Electric Standard Application for Reactor Fuel". The NRC-approved General Electric Topical Report, "GESTR-LOCA and SAFER Models for the Evaluation of the Loss-of-Coolant Accident" (SAFER-GESTR), was used to develop the PNPP-specific LOCA analysis. As shown in Attachment 1, the PCT for the GE14 is 1540° F, which satisfies the 10 CFR 50.46(b)(1) criteria of < 2200° F. This PCT value is also below the 1600° F analysis limit of the SAFER-GESTR model. The maximum local oxidation is 1.0% and the metal-water reaction is 0.1% which are both below the 10 CFR 50.46(b) acceptance criteria of 17% and 1.0%, respectively.

Based upon the July 7 teleconference, the PNPP staff understands that the NRC intends to issue a Regulatory Issue Summary (RIS) regarding the appropriate interpretations of the requirements of 10 CFR 50.46. The PNPP staff also understands that some of these interpretations may impact previous 10 CFR 50.46 reports that have been made. Once the RIS is received and reviewed by the PNPP staff, any necessary actions will be documented and processed in accordance with the FirstEnergy Nuclear Operating Company Corrective Action Program.

There are no regulatory commitments included in this letter or its attachments. If you have any questions or require additional information, please contact Mr. Henry L. Hegrat, FirstEnergy Nuclear Operating Company, Fleet Licensing Supervisor, at (330) 315-6944.

Very truly yours,



Attachments

1. Summary of Annual 10 CFR 50.46 Reporting
2. Changes in Core Composition

cc: NRC Region III
NRC Resident Inspector
NRC Project Manager

Summary of Annual 10 CFR 50.46 Reporting

Reason for Change/Error	Peak Clad Temperature (PCT) Impact	Date Licensee Notified of Change/Error	Submittal Date and Reference
Power Uprate Analysis related to Amendment 112	GE11 PCT is 1370° F	June 1, 2000	February 23, 2001 PY-CEI/NRR-2548
SAF time step size on PCT for jet pump plants.	PCT decrease for GE10, GE11, and GE12 of -5° F	November 20, 2000	February 23, 2001 PY-CEI/NRR-2548
Incorporation of GE14 Fuel.	GE12 PCT is 1320° F GE14 PCT is 1540° F	December 2000 Fuel loaded in March 2001 outage	February 27, 2002 PY-CEI/NRR-2613L
SAFER pressure rate inconsistency error.	PCT increase for both GE12 and GE14 of 5° F	May 10, 2001	February 27, 2002 PY-CEI/NRR-2613L
SAFER/GESTR error in core spray elevation.	PCT increase for both GE12 and GE14 of 15° F	June 15, 2002	February 28, 2003 PY-CEI/NRR-2695L
SAFER bulk water level error.	PCT increase for both GE12 and GE14 of 0° F	June 15, 2002	February 28, 2003 PY-CEI/NRR-2695L
GESTR input file interpolation error.	PCT increase for GE12 Of 0° F No impact on GE14	June 15, 2002	February 28, 2003 PY-CEI/NRR-2695L
SAFER Computer platform change.	PCT increase for both GE12 and GE14 of 0° F	August 26, 2002	February 28, 2003 PY-CEI/NRR-2695L
Error in WEVOL calculation of down-comer free volume.	PCT increase for both GE12 and GE14 of 0° F	August 26, 2002	February 28, 2003 PY-CEI/NRR-2695L
Issue with SAFER/GESTR level/volume input table setup.	PCT increase for both GE12 and GE14 of 5° F	May 6, 2003	March 1, 2004 PY-CEI/NRR-2774L
Issue with steam separator pressure drop assumption used by SAFER.	PCT increase for both GE12 and GE14 of 0° F	May 6, 2003	March 1, 2004 PY-CEI/NRR-2774L
Issue with SAFER/GESTR assumptions on post-LOCA recombination of oxygen and hydrogen.	PCT increase for both GE12 and GE14 of 0° F	November 28, 2003	March 1, 2004 PY-CEI/NRR-2774L

Changes in Core Composition

Refueling Outage 08	Spring 2001	Discharged remaining GE10 and GE11 fuel. Loaded first reload batch of GE14 fuel. Cycle 9 core contains GE12 and GE14 fuel.
Refueling Outage 09	Spring 2003	Discharged one reload batch of GE12 fuel. Loaded a reload batch of GE14 fuel. Cycle 10 core contains GE12 and GE14 fuel.
Refueling Outage 10	Spring 2005	Discharged remaining GE12 fuel. Loaded a reload batch of GE14 fuel. Cycle 11 core contains only GE14 fuel.