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U. S. Nuclear Regulatory Commission
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SUBJECT: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
**10 CFR 50.46 Annual Report - Errors in
Emergency Core Cooling System (ECCS) Evaluation Models**

References: 1. Entergy letter, M. Kansler to USNRC dated August 15, 2001 (JPN-01-014)
regarding the same subject.

Dear Sir:

The attached report summarizes changes and errors in emergency core cooling system (ECCS) evaluation models in accordance with 10 CFR 50.46(a)(3)(ii) for the period from July 1, 2001 to June 30, 2002 for Entergy's James A. FitzPatrick Nuclear Power Plant.

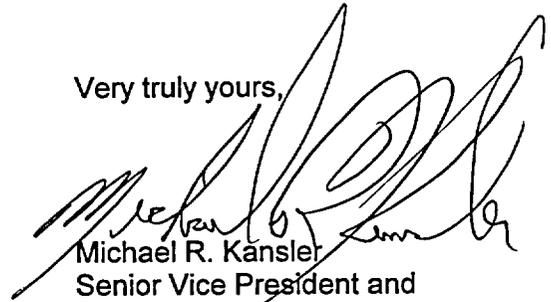
A total of two changes or errors to the FitzPatrick model have been identified since the last annual report (Reference 1). Thirty-day reports were not submitted for these errors because they do not qualify as a significant change (a peak cladding temperature change of greater than 50°F) according to 10 CFR 50.46(a)(3)(i).

Corrected for these errors, estimated peak cladding temperatures (PCTs) remain below the 2200°F requirement of 10 CFR 50.46(b)(1).

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No new commitments are contained in this letter. If you have any questions, please contact Ms. Charlene Faison at 914-272-3378.

Very truly yours,



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Attachment: Annual 10 CFR 50.46(a)(3)(ii) Report on Changes or Errors in Emergency Core Cooling System (ECCS) Evaluation Models for the period from July 1, 2001 to June 30, 2002

Annual 10 CFR 50.46(a)(3)(ii) Report on Changes or Errors in Emergency Core Cooling System (ECCS) Evaluation Models for the period from July 1, 2001 to June 30, 2002

Entergy Nuclear Operations Inc.
James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333

INTRODUCTION

This report summarizes changes and errors in emergency core cooling system (ECCS) evaluation models in accordance with 10 CFR 50.46(a)(3)(ii) for the period from July 1, 2001 to June 30, 2002 for Entergy's James A. FitzPatrick Nuclear Power Plant.

A total of 2 (two) changes or errors to the FitzPatrick model have been identified since the last annual report (Reference 1). Thirty-day reports were not submitted for these errors because they do not qualify as a significant change (a peak cladding temperature [PCT] change of greater than 50°F) according to 10 CFR 50.46(a)(3)(i).

Table 1 summarizes the errors or changes to the current FitzPatrick ECCS evaluation models. The last two entries represent ECCS evaluation changes or errors identified during the period July 1, 2001 to June 30, 2002.

Additional information on the changes or errors identified during the reporting period is provided below.

DISCUSSION OF CHANGES OR ERRORS IDENTIFIED DURING REPORTING PERIOD

SAFER Core Spray Injection Elevation Error

In 10 CFR 50.46 Notification Letter 2002-01 (Reference 16), General Electric reported an error in the automation code that prepares the input basedecks for the SAFER analysis. This error resulted in too low a value being calculated for the core spray injection elevation for the lower core spray sparger. As a result of this error, the licensing basis PCT for all fuel types at FitzPatrick increased by 5 degrees F.

This error changed PCT by less than 50°F. Consequently it did not qualify as a significant change according to 10 CFR 50.46(a)(3)(i) and no 30-dayreport was submitted.

Impact of SAFER Bulk Water Level Error on the Peak Clad Temperature

In 10 CFR 50.46 Notification Letter 2002-02 (Reference 17), General Electric reported an error in the initial water level used in some SAFE/REFLOOD and SAFER LOCA analyses. Initial water levels did not properly account for the effect of steam dryer pressure drop. When corrected for dryer pressure drop, the initial bulk water temperature in the vessel is lower than that used in the original SAFE or SAFER analyses. As a result of this error, licensing basis PCT for all fuel types increased by 10 degrees F.

This error changed PCT by less than 50°F. Consequently it did not qualify as a significant change according to 10 CFR 50.46(a)(3)(i) and no 30-dayreport was submitted.

SUMMARY

Since the last annual 10 CFR 50.46 report (Reference 1), estimated FitzPatrick PCT increased by 15 degrees F. Estimated PCTs, corrected for these errors, remain well below the 2200°F requirement of 10 CFR 50.46(b)(1).

**TABLE 1 - ACCOUNTING OF LICENSING BASIS
PEAK CLAD TEMPERATURES FOR FITZPATRICK**
For the period from July 1, 2001 to June 30, 2002

Report Period	ECCS Evaluation	Estimated PCT Change		Updated PCT	
		GE11 Fuel	GE12 Fuel	GE11	GE12 Fuel
Baseline Evals.	1993 Fitzpatrick LOCA Analysis (Ref. 7)	Baseline	N/A	1570°F	N/A
	Fitzpatrick Reload 12 Supplemental Report (Ref. 8)	N/A	Baseline	N/A	1370°F
	Fitzpatrick Reload 13 Supplemental Report (Ref. 9).	Baseline		1570°F	1370°F
Prior to July 1, 2000	10 CFR 50.46 Notification Regarding Sensitivity To Small Input Parameter Changes (Ref. 10)	+50°F		1620°F	1420°F
	10 CFR 50.46 Notification Regarding Minor Code Corrections (Ref. 10)	+5°F		1625°F	1425°F
	10 CFR 50.46 Notification Regarding Bottom Head Drain (Ref. 11)	+10°F		1635°F	1435°F
July 1, 2000 - June 30, 2001	10 CFR 50.46 Notification Regarding Time Step Size (Ref. 3)	-5°F		1630°F	1430°F
	Estimated Effect Of Condensation Error On PCT (Ref. 12)	+90°F		1720°F	1520°F
	Estimated Effect Of Pressure Rate Inconsistency Error On PCT (Ref. 13)	+10°F		1730°F	1530°F
	Estimated Effect Of Accounting Error On PCT (Ref. 14)	N/A	-5°F	1730°F	1525°F
July 1, 2001 - June 30, 2002	SAFER Core Spray Injection Elevation Error (Ref. 16.)	+5°F		1735°F	1530°F
	Impact of SAFER Bulk Water Level Error on the Peak Clad Temperature (Ref. 17.).	+10°F		1745°F	1540°F

REFERENCES

1. NYPA letter, M. J. Colomb to USNRC (JAFP-00-0164), dated July 21, 2000, regarding reporting of changes and errors in ECCS evaluation models.
2. Entergy Nuclear Operations, Inc. letter, M Kansler to USNRC, (JPN-01-010) dated June 4, 2001, regarding 10 CFR 50.46(a)(3)(ii) 30-day report, two errors in ECCS evaluation models.
3. Global Nuclear Fuel letter, A. Alzaben (GNF) to C. Franklin (NYPA), (AFA-00-N061 dated November 20, 2000) regarding 10 CFR 50.46 error report - impact of SAFER time step size on the peak clad temperature (PCT) for jet pump plant analyses. Includes General Electric/Global Nuclear Fuel 10 CFR 50.46 Notification Letter 2000-04 dated November 8, 2000 regarding "Impact of SAFER Time Step Size on the Peak Clad Temperature (PCT) for Jet Pump Plant Analyses." (Proprietary)
4. NEDC-23785-1-PA Rev. 1, "The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-Of-Coolant Accident Volume II, SAFER - Long Term Inventory Model for BWR Loss-Of-Coolant Analysis," October 1984.
5. NEDC-23785-1-PA Rev. 1, "The GESTR-LOCA and SAFER Models for the Evaluation of the Loss-Of-Coolant Accident Volume III, SAFER/GESTR Application Methodology," October 1984.
6. General Electric Nuclear Energy Report, J11-03757SRL, August 2000, "Supplemental Reload Licensing Report for James A. FitzPatrick, Reload 14, Cycle 15."
7. General Electric Nuclear Energy, "James A. FitzPatrick Nuclear Power Plant SAFER/GESTER-LOCA, Loss-of-Coolant Analysis," Licensing Topical Report NEDC-31317P, Class III (proprietary), Revision 2, April 1993.
8. General Electric Nuclear Energy Report, J11-02914SRL, Revision 0, August 1996, "Supplemental Reload Licensing Report for James A. FitzPatrick, Reload 12, Cycle 13."
9. General Electric Nuclear Energy Report, J11-03359SRL, Revision 1, Class I, October 1998, "Supplemental Reload Licensing Report for James A. FitzPatrick, Reload 13, Cycle 14."
10. General Electric Nuclear Energy, MFN-090-93, June 30, 1993, "Reporting of Changes and Errors in ECCS Evaluation Models."
11. General Electric Nuclear Energy, MFN-020-96, February 20, 1996, "Reporting of Changes and Errors in ECCS Evaluation Models."
12. General Electric/Global Nuclear Fuel 10 CFR 50.46 Notification Letter 2001-01 dated May 8, 2001 (via E-mail) regarding "Impact of SAFER Condensation Error on the Peak Clad Temperature (PCT)." (Proprietary)

13. General Electric/Global Nuclear Fuel 10 CFR 50.46 Notification Letter 2001-02 dated May 10, 2001 (via E-mail) regarding "Impact of SAFER Pressure Rate Inconsistency Error on the Peak Clad Temperature (PCT)." (Proprietary)
14. Global Nuclear Fuel letter, A. Alzaben (GNF) to J. Head (Entergy Nuclear Operations, Inc.), (AFA-01-E004, June 29, 2001) regarding GE12 Upper Bound PCT for FitzPatrick, (Proprietary).
15. Entergy letter, M. Kansler to USNRC, dated August 15, 2001 (JPN-01-0014) regarding "10 CFR 50.46 Annual Report – Errors in Emergency Core Cooling System (ECCS) Evaluation Models."
16. General Electric/Global Nuclear Fuel 10 CFR 50.46 Notification Letter 2002-01 regarding "SAFER Core Spray Injection Elevation Error." (Proprietary)
17. General Electric/Global Nuclear Fuel 10 CFR 50.46 Notification Letter 2002-02 regarding "Impact of SAFER Bulk Water Level Error on the Peak Clad Temperature (PCT)." (Proprietary)