



**Nebraska Public Power District**

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NLS2014009

50.46(a)(3)(ii)

January 17, 2014

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

**Subject:** Annual Report of Changes and Errors in Emergency Core Cooling System  
Evaluation Models for 2013  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

- References:**
1. Letter from David Van Der Kamp, Nebraska Public Power District, to U.S. Nuclear Regulatory Commission, dated August 18, 2008, "Failure to Include Error in Emergency Core Cooling System Evaluation Model in Annual Report for 2006"
  2. Letter from David Van Der Kamp, Nebraska Public Power District, to U.S. Nuclear Regulatory Commission, dated September 21, 2011, "10 CFR 50.46(a)(3)(ii) Report"
  3. Letter from David Van Der Kamp, Nebraska Public Power District, to U.S. Nuclear Regulatory Commission, dated January 14, 2013, "Annual Report of Changes and Errors in Emergency Core Cooling System Evaluation Models for 2012"

Dear Sir or Madam:

The purpose of this letter is to submit the 2013 annual report of changes or errors in the Emergency Core Cooling System (ECCS) Evaluation Models pursuant to 10 CFR 50.46(a)(3)(ii) for Cooper Nuclear Station (CNS).

By reference letters 1 through 3, Nebraska Public Power District previously reported errors in the ECCS evaluation models for GE14 and GNF2 fuel. These errors continue to apply to the ECCS evaluation methodologies for 2013 and have a cumulative impact of 145°F on the Peak Cladding Temperature (PCT) for GE14 fuel and 30°F for GNF2 fuel. There were no errors reported for GE14 or GNF2 fuel in 2013. The errors/changes reported by General Electric Hitachi result in a PCT of 2185°F for GE14 fuel and 2170°F for GNF2 fuel.

All changes/errors are itemized in the attachment to this letter. CNS continues to comply with the PCT limit of 2200°F specified in 10 CFR 50.46(b)(1) for both GE14 and GNF2 fuel types.

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NLS2014009

Page 2 of 2

This letter makes no regulatory commitments.

If you have any questions regarding this report, please contact Jeremy Custer, Reactor and Fuels Engineering Supervisor, at (402) 825-5653.

Sincerely,



David W. Van Der Kamp  
Licensing Manager

/lb

Attachment - Changes/Errors in Emergency Core Cooling System Evaluation Models for 2013

cc: Regional Administrator w/attachment  
USNRC - Region IV

Cooper Project Manager w/attachment  
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/attachment  
USNRC - CNS

NPG Distribution w/attachment

CNS Records w/attachment

Changes/Errors in Emergency Core Cooling System Evaluation Models for 2013  
Nebraska Public Power District - Cooper Nuclear Station

GE14 Fuel

GE Hitachi 10 CFR 50.46 Notification Letter	Date	Subject	PCT Impact (°F)
2006-01	7/28/06	Impact of Top Peaked Power Shape for Small Break Loss of Coolant Accident Analysis	0°F
2011-02	9/2/11	Impact of Database Error for Heat Deposition on the Peak Cladding Temperature (PCT) for 10x10 Fuel Bundles	35°F
2011-03	9/2/11	Impact of Updated Formulation for Gamma Heat Deposition to Channel Wall for 9x9 and 10x10 Fuel Bundles	95°F
2012-01	11/29/12	PRIME Fuel Properties Implementation for Fuel Rod Thermal/Mechanical Performance, Replacing GESTR Fuel Properties	15°F
			Total = 145°F

PCT at beginning of 2013 = 2185°F

PCT at end of 2013 = 2185°F

GNF2 Fuel

GE Hitachi 10 CFR 50.46 Notification Letter	Date	Subject	PCT Impact (°F)
2012-01	11/29/12	PRIME Fuel Properties Implementation for Fuel Rod Thermal/Mechanical Performance, Replacing GESTR Fuel Properties	30°F
			Total = 30°F

PCT at beginning of 2013 = 2170°F

PCT at end of 2013 = 2170 °F