



**Nebraska Public Power District**

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NLS2016007  
January 21, 2016

50.46(a)(3)(ii)

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 2015  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

**Reference:** Letter from Jim Shaw, Nebraska Public Power District, to U.S. Nuclear  
Regulatory Commission, dated January 21, 2015, "Annual Report of  
Changes and Errors in Emergency Core Cooling System Evaluation  
Models for 2014"

Dear Sir or Madam:

The purpose of this letter is to submit the 2015 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).

In the reference letter, Nebraska Public Power District reported it would pursue additional action  
due to the limited margin to the 2200°F Peak Cladding Temperature (PCT) limit for both fuel  
types currently in the core. CNS contracted with the fuel vendor to evaluate Maximum Average  
Planar Linear Heat Generation Rate (MAPLHGR) limit setdowns to reduce the licensing basis  
peak clad temperature (LB PCT). The results of this reanalysis are provided below.

The revised LB PCT will be 2150°F for both GE14 and GNF2 fuel types. This change in the LB  
PCT is a result of a 1.1% PLHGR/MAPLHGR setdown for GE14 and a 2.0% PLHGR/  
MAPLHGR setdown for GNF2. Use of the revised LB PCT was approved on September 1,  
2015, by Engineering Calculation NEDC 99-046, "Review of GE Calculation - Cooper Nuclear  
Station SAFER/GESTR-LOCA Analysis," Revision 9. This document accepted the use of  
General Electric Hitachi/Global Nuclear Fuel Report 002N7432-R1, "Updated LHGR/  
MAPLHGR Limits for Cooper GE14 and GNF2 Fuel." The revised LB PCT was applied on  
September 1, 2015.

The previously reported LB PCT limits in the reference letter were 2195°F for GE14 fuel and  
2180°F for GNF2 fuel. The subsequent changes of -45°F (GE14) and -30°F (GNF2) are not  
classified as significant per 10CFR 50.46(a)(3)(i).

**COOPER NUCLEAR STATION**

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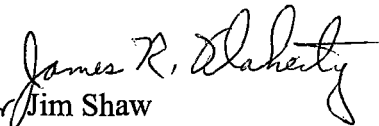
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The reanalysis incorporated all errors/changes applicable to the ECCS evaluation models for GE14 and GNF2 fuel types that were previously reported in the 2014 annual report. Since September 1, 2015, there have been no other changes or errors affecting the LB PCT. 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.

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,

  
for Jim Shaw  
Licensing Manager

/lb

Attachment: LB PCT Limits in Emergency Core Cooling System Evaluation Models for 2015  
Nebraska Public Power District - Cooper Nuclear Station

cc: Regional Administrator w/attachment  
USNRC - Region IV

Cooper Project Manager w/attachment  
USNRC - NRR Plant Licensing Branch IV-2

Senior Resident Inspector w/attachment  
USNRC- CNS

NPG Distribution w/attachment

CNS Records w/attachment

LB PCT Limits in Emergency Core Cooling System Evaluation Models for 2015  
Nebraska Public Power District - Cooper Nuclear Station

<b>Fuel Type</b>	<b>Licensing Basis PCT (°F)</b>	<b>Local Oxidation (%)</b>	<b>Core-Wide Metal-Water Reaction (%)</b>
GE14	2150	<6.00	<0.10
GNF2	2150	<6.00	<0.10