



**Nebraska Public Power District**

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NLS2018003  
January 15, 2018

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 2017  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Dear Sir or Madam:

The purpose of this letter is to submit the 2017 annual report of changes and errors in the Emergency Core Cooling System (ECCS) evaluation models pursuant to 10 CFR 50.46(a)(3)(ii) for Cooper Nuclear Station (CNS).

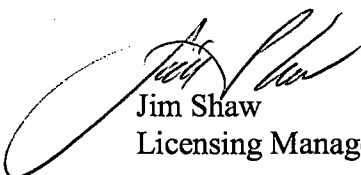
In 2017, CNS received two General Electric Hitachi (GEH) 10 CFR 50.46 Notification Letters reporting changes/errors in the acceptable ECCS evaluation models. GEH Notification 2017-01 reported an error in the application of the model for GNF2 fuel that resulted in a -20°F change in the Peak Cladding Temperature (PCT). GEH Notification 2017-02 reported a change to the model for both GNF2 and GE14 fuel that resulted in a 0°F change in the PCT. The PCT for GNF2 fuel is now 2130°F and the PCT for GE14 fuel remains at 2150°F. 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.

Attachment 1 to this letter itemizes the changes/errors in the ECCS evaluation models and Attachment 2 provides current data that demonstrates compliance with the ECCS performance requirements of 10 CFR 50.46.

This letter makes no regulatory commitments.

If you have any questions regarding this report, please contact Lorne Covington, Engineer, at (402) 825-5052.

Sincerely,



Jim Shaw  
Licensing Manager

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NRR

Attachments: 1) Changes/Errors in Emergency Core Cooling System Evaluation Models for 2017  
2) 10 CFR 50.46 Criteria in Emergency Core Cooling System Evaluation Models for 2017

cc: Regional Administrator w/attachments  
USNRC - Region IV

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

Senior Resident Inspector w/attachments  
USNRC - CNS

NPG Distribution w/attachments

CNS Records w/attachments

**Changes/Errors in Emergency Core Cooling System Evaluation Models for 2017**GE14 Fuel

| GE Hitachi<br>10 CFR 50.46<br>Notification Letter | Date   | Subject                               | PCT Impact  |
|---|--------|---------------------------------------|-------------|
| 2017-02   | 8/2/17 | Fuel Rod Plenum<br>Temperature Update | 0°F         |
|   |        |                                       | Total = 0°F |

GNF2 Fuel

| GE Hitachi<br>10 CFR 50.46<br>Notification Letter | Date    | Subject                               | PCT Impact    |
|---|---------|---------------------------------------|---------------|
| 2017-01   | 6/12/17 | GNF2 Lower Tie<br>Plate Leakage       | -20°F         |
| 2017-02   | 8/2/17  | Fuel Rod Plenum<br>Temperature Update | 0°F           |
|   |         |                                       | Total = -20°F |

**10 CFR 50.46 Criteria in Emergency Core Cooling System Evaluation Models for 2017**

| Fuel Type | Licensing Basis PCT | Local Oxidation | Core-Wide Metal-Water Reaction |
|-----------|---------------------|-----------------|--------------------------------|
| GE14      | 2150°F              | <6.00%          | <0.10%                         |
| GNF2      | 2130°F              | <6.00%          | <0.10%                         |