



**Nebraska Public Power District**

*Always there when you need us*

NLS2021002  
January 20, 2021

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 2020  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

**Reference:** Letter from Linda Dewhirst, Nebraska Public Power District, to U.S. Nuclear  
Regulatory Commission, dated January 20, 2020, "Annual Report of Changes and  
Errors in Emergency Core Cooling System Evaluation Models for 2019"

Dear Sir or Madam:

The purpose of this letter is to submit the 2020 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).

Per the reference letter, Nebraska Public Power District previously reported errors/changes in the  
ECCS evaluation models for GNF2 fuel, these errors continued to apply to the ECCS evaluation  
methodologies for 2020. There was one zero-degree error for the GNF2 fuel type reported in  
2020 applicable to the licensing basis peak clad temperature (PCT). CNS continues to comply  
with the PCT limit of 2200°F specified in 10 CFR 50.46(b)(1).

Attachment 1 to this letter itemizes the changes/errors in the ECCS evaluation models that  
remained applicable in 2020 and Attachment 2 provides 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,

Linda Dewhirst  
Regulatory Affairs & Compliance Manager

/tf

Attachments: 1) Changes/Errors in Emergency Core Cooling System Evaluation Models  
Applicable in 2020

ADD2  
NRR

**COOPER NUCLEAR STATION**

P.O. Box 98 / Brownville, NE 68321-0098

Telephone: (402) 825-3811 / Fax: (402) 825-5211

www.nppd.com

NLS2021002

Page 2 of 2

2) 10 CFR 50.46 Criteria in Emergency Core Cooling System Evaluation Models  
for 2020

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 Applicable in 2020**

GNF2 Fuel

GE Hitachi 10 CFR 50.46 Notification Letter	Date	Subject	PCT Impact
2017-01	6/12/17	GNF2 Lower Tie Plate Leakage	-20°F
2017-02	8/2/17	Fuel Rod Plenum Temperature Update	0°F
2019-05	11/1/19	SAFER Lower Limit on Differential Pressure for Bypass Leakage	0°F
2020-01	4/14/20	PRIME Code Errors for Evaluation Model Fuel Rod Condition Inputs	0°F
			Total = -20°F

**10 CFR 50.46 Criteria in Emergency Core Cooling System Evaluation Models for 2020**

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