



**Nebraska Public Power District**

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50.90

NLS2015103  
September 8, 2015

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

Subject: License Amendment Request to Replace Figure with Text in Technical  
Specifications  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Dear Sir or Madam:

The purpose of this letter is for the Nebraska Public Power District (NPPD) to request an amendment to Facility Operating License DPR-46 in accordance with the provisions of 10 CFR 50.4 and 10 CFR 50.90 to revise the Cooper Nuclear Station (CNS) Technical Specifications (TS). This request replaces Figure 4.1-1, Site and Exclusion Area Boundaries and Low Population Zone, with a text description of the site location in TS Section 4.1. In addition, a typographical error is being corrected in Section 1.1, Definitions.

NPPD requests Nuclear Regulatory Commission (NRC) approval of the proposed TS change and issuance of the requested license amendment by September 8, 2016. The amendment will be implemented within 60 days of issuance of the amendment.

Attachment 1 provides a description of the proposed TS change, the technical evaluation, the regulatory analysis, the no significant hazards consideration evaluation pursuant to 10 CFR 50.91(a)(1), and the environmental impact evaluation pursuant to 10 CFR 51.22. Attachment 2 provides marked up pages with the specific change to the current CNS TS. Attachment 3 provides the revised TS page in final format. No TS Bases pages are affected by this amendment request.

This proposed TS change has been reviewed by the necessary safety review committees (Station Operations Review Committee and Safety Review and Audit Board). Amendments to the CNS Facility Operating License through Amendment 252 dated August 27, 2015, have been incorporated into this request. This request is submitted under oath pursuant to 10 CFR 50.30(b).

By copy of this letter and its attachments, the appropriate State of Nebraska official is notified in accordance with 10 CFR 50.91(b)(1). Copies to the NRC Region IV office and the CNS Resident Inspector are also being provided in accordance with 10 CFR 50.4(b)(1).

This letter contains no regulatory commitments.

COOPER NUCLEAR STATION  
P.O. Box 98 / Brownville, NE 68321-0098  
Telephone: (402) 825-3811 / Fax: (402) 825-5211  
www.nppd.com

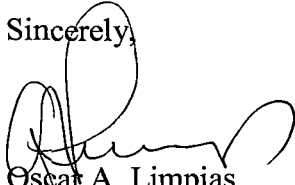
A001  
NRC

Should you have any questions concerning this matter, please contact Jim Shaw, Licensing Manager, at (402) 825-2788.

I declare under penalty of perjury that the foregoing is true and correct.

Executed On: 9/8/15  
Date

Sincerely,



Oscar A. Limpas  
Vice President – Nuclear and  
Chief Nuclear Officer

/dv

Attachments: 1. License Amendment Request to Replace Figure with Text in Technical Specifications  
2. Proposed Technical Specifications Revision (Markup)  
3. Proposed Technical Specifications Revision (Final Typed Format)

cc: Regional Administrator w/ attachments  
USNRC - Region IV

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

Senior Resident Inspector w/ attachments  
USNRC - CNS

Nebraska Health and Human Services w/ attachments  
Department of Regulation and Licensure

NPG Distribution w/o attachments

CNS Records w/ attachments

**Attachment 1**

**License Amendment Request to Replace Figure with Text in Technical Specifications**

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

Revised Technical Specification Pages

1.1-3

4.0-1

4.0-3

**1.0** Summary Description

**2.0** Proposed Change

**3.0** Technical Evaluation

**4.0** Regulatory Analysis

4.1 Precedence

4.2 No Significant Hazards Consideration

4.3 Conclusion

**5.0** Environmental Consideration

**6.0** References

## **1.0 Summary Description**

This is a request to amend the Cooper Nuclear Station Facility Operating License DPR-46 Technical Specifications (TS). The proposed amendment would modify TS to replace Figure 4.1-1, Site and Exclusion Area Boundaries and Low Population Zone, with a text description of the Site Location in Section 4.1, site location. In addition, a typographical error is being corrected in Section 1.1, Definitions.

## **2.0 Proposed Change**

This license amendment request is proposed to revise the following:

TS Section 4.0, Design Features, Page 4.0-1, by adding a description of the site location in Section 4.1, Site Location. Delete Page 4.0-3, which contains Figure 4.1-1, Site and Exclusion Area Boundaries and Low Population Zone. This figure will remain in the Offsite Dose Assessment Manual.

A typographical error was introduced in the final typed TS page 1.1-3 included in the license amendment request for Amendment 251. In the definition for Linear Heat Generation Rate, the acronym was inadvertently typed as LGHR, instead of LHGR.

## **3.0 Technical Evaluation**

The removal of the figure, adding a text description of the site location, and correction of a typographical error are administrative changes. No technical changes are being made. This is consistent with the Standard Technical Specifications.

## **4.0 Regulatory Analysis**

### **4.1 Precedence**

Adding a text description, removal of the figure, and correcting a typographical error are administrative changes, no precedence is needed.

### **4.2 No Significant Hazards Consideration**

Nebraska Public Power District (NPPD) is requesting a revision to Facility Operating License No. DPR-46 for Cooper Nuclear Station. The requested change removes a figure, replaces that figure with a text description of the site location and corrects a typographical error.

NPPD has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below.

- 1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No.

The proposed change removes a figure, replaces that figure with a text description of the site location and corrects a typographical error. An administrative change such as this is not an initiator of any accident previously evaluated. As a result, the probability of an accident previously evaluated is not affected. The consequences of an accident with the incorporation of this administrative change are not different than the consequences of the same accident without this change. As a result, the consequences of an accident previously evaluated are not affected by this change.

Based on the above, it is concluded that the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No.

The proposed change does not modify the plant design, nor does the proposed change alter the operation of the plant or equipment involved in either routine plant operation or in the mitigation of design basis accidents. The proposed change is administrative only.

Based on the above, it is concluded that the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

- 3. Does the proposed amendment involve a significant reduction in a margin of safety?**

Response: No.

The proposed change consists of an administrative change to remove a figure, replace that figure with a text description of the site location, and correct a typographical error. The change does not alter the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined. The safety analysis acceptance criteria are not affected by this change. The proposed change will not result in plant operation in a

configuration outside of the design basis. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, NPPD concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92, paragraph (c), and, accordingly, a finding of no significant hazards consideration is justified.

#### 4.3 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

### 5.0 Environmental Consideration

10 CFR 51.22(c) provides categories of actions which are categorical exclusions from performing an environmental assessment. An action which is a categorical exclusion does not require an environmental assessment or an environmental impact statement. 10 CFR 51.22(c)(9) allows as a categorical exclusion issuance of an amendment to a license for a reactor pursuant to 10 CFR Part 50 which changes a requirement with respect to installation or use of a facility component located within a restricted area as defined in 10 CFR Part 20, or which changes an inspection or a surveillance requirement, provided that (1) the amendment involves no significant hazards consideration, (2) there is no significant change in the types or significant increase in the amounts of any effluents that may be released off-site, and (3) there is no significant increase in individual or cumulative occupational radiation exposure.

NPPD has reviewed the proposed license amendment and concludes that it meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). The basis for this determination is as follows:

1. The proposed license amendment does not involve significant hazards as described previously in the No Significant Hazards Consideration Evaluation.
2. The proposed license amendment does not introduce any new equipment, nor does it require any existing equipment or systems to perform a different type of function than they are presently designed to perform. NPPD has concluded that this proposed change does not result in a significant change in the types or significant increase in the amounts of any effluent that may be released off-site.

3. These changes do not adversely affect plant systems or operation and therefore, do not significantly increase individual or cumulative occupational radiation exposure beyond that already associated with normal operation.

Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with issuance of the proposed license amendment.

## **6.0 References**

None.

**Attachment 2**

**Proposed Technical Specifications Revision  
(Markup)**

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

Revised Pages

1.1-3  
4.0-1  
4.0-3



## 1.1 Definitions

### DOSE EQUIVALENT I-131 (continued)

I-133, I-134, and I-135 actually present. The DOSE EQUIVALENT I-131 concentration is calculated as follows:  
$$\text{DOSE EQUIVALENT I-131} = (I-131) + 0.0060 (I-132) + 0.17 (I-133) + 0.0010 (I-134) + 0.029 (I-135).$$
The dose conversion factors used for this calculation are those listed in Federal Guidance Report (FGR) 11, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion," 1989.

### LEAKAGE

LEAKAGE shall be:

#### a. Identified LEAKAGE

1. LEAKAGE into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or
2. LEAKAGE into the drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE;

#### b. Unidentified LEAKAGE

All LEAKAGE into the drywell that is not identified LEAKAGE;

#### c. Total LEAKAGE

Sum of the identified and unidentified LEAKAGE;

#### d. Pressure Boundary LEAKAGE

LEAKAGE through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall.

### LINEAR HEAT GENERATION RATE (~~LHGR~~)

LHGR

The LHGR shall be the heat generation rate per unit length of fuel rod. It is the integral of the heat flux over the heat transfer area associated with the unit length.

### LOGIC SYSTEM FUNCTIONAL TEST

A LOGIC SYSTEM FUNCTIONAL TEST shall be a test of all logic components required for OPERABILITY of a logic circuit,

(continued)



## 4.0 DESIGN FEATURES

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### 4.1 Site Location

#### ~~4.1.1 Site Area and Exclusion Area Boundary~~

~~The Site and Exclusion Area Boundaries coincide with each other and shall be as shown on Figure 4.1 1.~~

#### ~~4.1.2 Low Population Zone~~

~~The low population zone is all the land within a circle with its center at the reactor and a radius of 1 mile as shown on Figure 4.1 1.~~

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### 4.2 Reactor Core

#### 4.2.1 Fuel Assemblies

The reactor shall contain 548 fuel assemblies. Each assembly shall consist of a matrix of Zircaloy or ZIRLO fuel rods with an initial composition of natural or slightly enriched uranium dioxide ( $UO_2$ ) as fuel material, and water rods. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with NRC staff approved codes and methods and have been shown by tests or analyses to comply with all safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

#### 4.2.2 Control Rod Assemblies

The reactor core shall contain 137 cruciform shaped control rod assemblies. The control material shall be boron carbide or hafnium metal as approved by the NRC.

The station site is located in Nemaha County, Nebraska, on the west bank of the Missouri River, at river mile 532.5. This part of the river is referred to by the Corps of Engineers as the Lower Brownville Bend. The site consists of 1,351 acres of land owned by NPPD. About 205 acres of this property is located in Atchison County, Missouri, opposite the Nebraska portion of the station site. The land which the station physically occupies is bounded by the Missouri River on the east and by privately-owned property on the north, south, and west. The boundary of the exclusion area is delineated by the property lines. The distance from the reactor center to the boundary of the low population zone is a radius of 1 mile.

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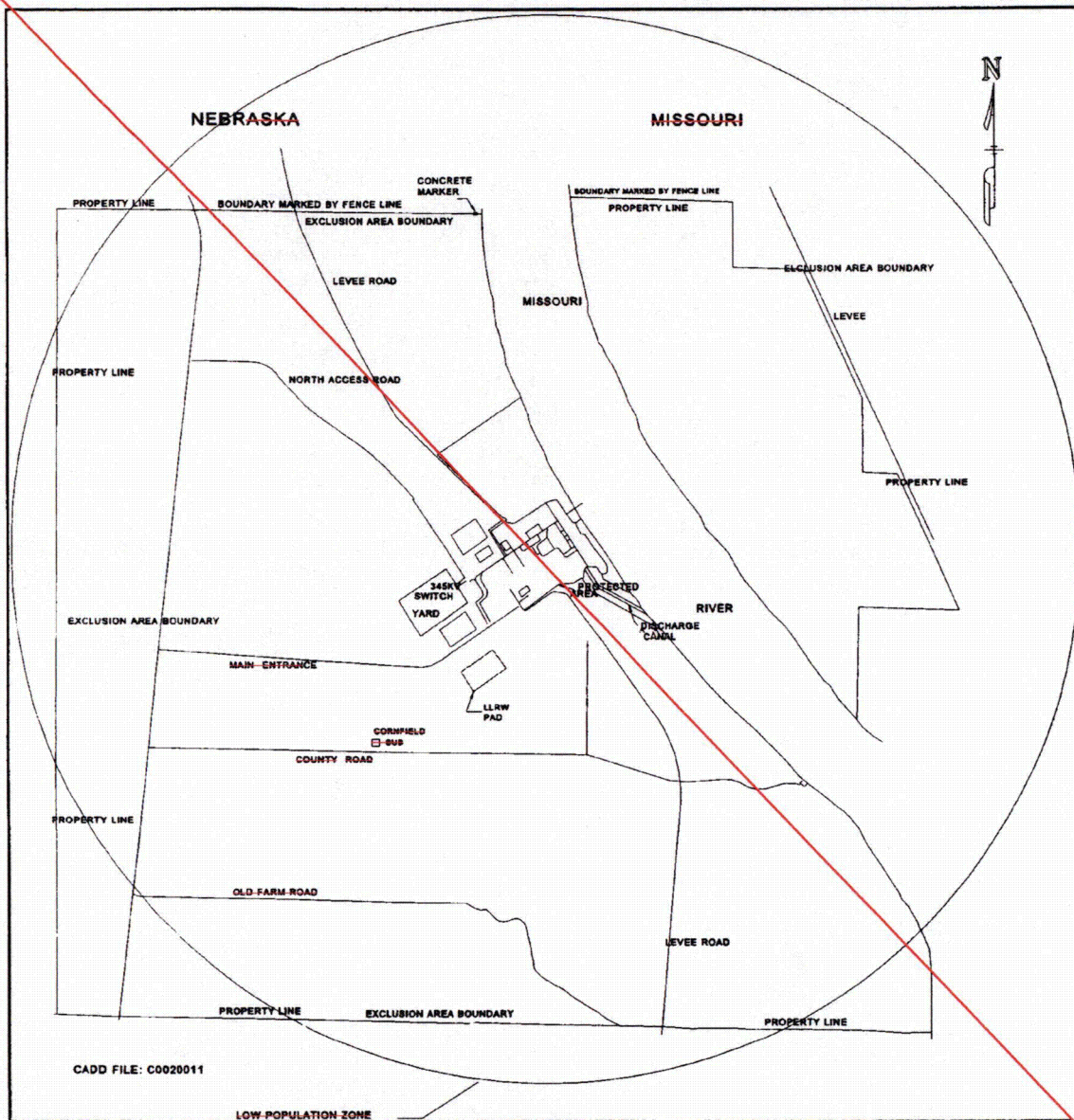


Figure 4.1-1 (page 1 of 1)  
Site and Exclusion Area Boundaries  
and Low Population Zone

**Attachment 3**

**Proposed Technical Specifications Revision  
(Final Typed Format)**

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

Revised Pages

1.1-3

4.0-1



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