



Nebraska Public Power District

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NLS9100460
July 18, 1991

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

Gentlemen:

Subject: Proposed Change No. 68 to Technical Specifications
Reactor Building Isolation
Cooper Nuclear Station
NRC Docket No. 50-298, DPR-46

In accordance with the applicable provisions specified in 10 CFR 50, the Nebraska Public Power District (District) requests that the Cooper Nuclear Station Technical Specifications be revised as specified in the attachment. The requested changes include 1) revision of Section 3.2.D.2, "Reactor Building Isolation and Standby Gas Treatment Initiation," to reflect a planned design change which would add two more radiation monitoring channels, 2) clarification of the Section 3.2.D.2 Limiting Conditions for Operation and Action Statement associated with the Reactor Building Isolation and Standby Gas Treatment initiation function, and 3) miscellaneous editorial corrections.

Accordingly, the attached contains a description of the proposed change, the attendant 10 CFR 50.92 evaluation, and the CNS Technical Specification pages revised by the institution of this change. This proposed change has been reviewed by the necessary Safety Review Committees and incorporates all amendments to the CNS Facility Operating License through Amendment 144 issued July 17, 1991.

The District plans to implement the Reactor Building Isolation design change during the upcoming Reload 14, Cycle 15 refueling outage, scheduled to commence in October, 1991. Therefore, the District requests NRC approval of Proposed Change No. 68 in time to support the planned modification. The District will coordinate this schedule with the NRC Project Manager.

In addition to the signed original, 37 copies are also submitted for your use. By copy of this letter and attachment the appropriate State of Nebraska official is being notified in accordance with 10 CFR 50.91(b)(1). Copies to

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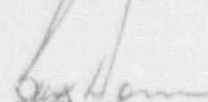
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the NRC Region IV Office and the CNS Resident Inspector are also being sent in accordance with 10 CFR 50.4(b)(2).

Should you have any questions or require any additional information, please contact me.

Sincerely,



G. R. Horn
Nuclear Power Group Manager

GRH/mjb
Attachment

cc: H.R. Borchert
Department of Health
State of Nebraska

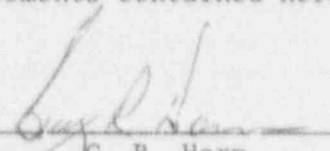
NRC Regional Office
Region IV
Arlington, TX

NRC Resident Inspector
Cooper Nuclear Station

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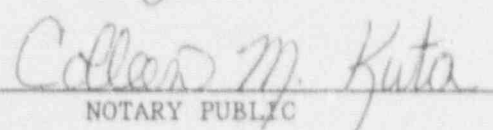
STATE OF NEBRASKA)
)
PLATTE COUNTY)

G. R. Horn, being first duly sworn, deposes and says that he is an authorized representative of the Nebraska Public Power District, a public corporation and political subdivision of the State of Nebraska; that he is duly authorized to submit this request on behalf of Nebraska Public Power District; and that the statements contained herein are true to the best of his knowledge and belief.

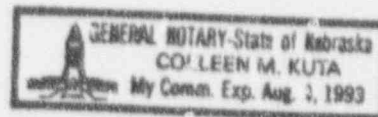


G. R. Horn

Subscribed in my presence and sworn to before me this 18th day of
July, 1991.



NOTARY PUBLIC



REVISED TECHNICAL SPECIFICATIONS
REACTOR BUILDING ISOLATION

Revised Pages

48	87
58	166
63	180
63a	205a
68	216v
71	216w
78	

I. INTRODUCTION

The Nebraska Public Power District (District) requests that the NRC approve the proposed changes to the CNS Technical Specifications described below. The requested changes include 1) revision of Section 3.2.D.2., "Reactor Building Isolation and Standby Gas Treatment Initiation," to reflect a planned design change which will add two more radiation monitoring channels and change the trip logic from a one-out-of-two to a one-out-of-two-taken-twice scheme, 2) clarification of the operability requirements and actions associated with inoperability for the Reactor Building Isolation and Standby Gas Treatment initiation function, and 3) miscellaneous editorial changes.

The proposed changes are detailed below in Section II. The Significant Hazards determination is provided in Section III. The District's analysis has determined that approval of this proposed change involves no significant hazards consideration.

II. DESCRIPTION OF CHANGES

A. Addition of Two Channels to the Reactor Building Isolation Ventilation Radiation Monitoring System

The Reactor Building Isolation Ventilation Radiation Monitoring System contains two radiation monitoring channels that initiate Reactor Building Isolation and Standby Gas Treatment System operation upon detection of high radiation. This function is accomplished via a one-out-of-two trip logic.

The District plans to change the current design to a one-out-of-two-taken-twice trip logic. This design change would improve operations in two ways. First, this design change will reduce the

potential for spurious trips, and thereby reduce unnecessary challenges to the Reactor Building Isolation and Standby Gas Treatment systems. Secondly, this design change will eliminate the need for installing jumpers during surveillance testing. Therefore, the potential for inadvertently tripping the system during installation of the jumpers, and the potential for defeat of the safety function through inadvertently failing to remove the jumpers following surveillance testing will be eliminated.

Accordingly, the District proposes to 1) change page 63 of the Technical Specifications to reflect four instrumentation channels in lieu of two and revise the instrument identification number to reflect the two added channels, 2) revise page 78 to reflect the corresponding instrument identification number change in Table 4.2.D., and 3) revise page 87 to reflect this change in the Bases section.

B. Clarification of Operability Criteria and Action Statement for the Reactor Building Isolation and Standby Gas Treatment Initiation Function

The District proposes to clarify the Limiting Conditions for Operation and Action Statement associated with the Reactor Building Ventilation and Exhaust System radiation monitors which isolate the Reactor Building and initiate the Standby Gas Treatment System upon high radiation.

NRC Inspection Report No. 50-298/88-28, dated October 21, 1988, documents the inspection conducted by the CNS Senior Resident Inspector of operational and maintenance activities at CNS. During this inspection, the NRC Inspector monitored District efforts to identify and correct the cause of an inadvertent Reactor Building isolation. The District determined the cause was a failed zener diode in the power supply for one of the Reactor Building radiation monitors.

The NRC Inspector noted that the CNS Technical Specifications were unclear regarding the operability requirements for the radiation monitors and the conditions requiring operability. Following further discussion with the District, the NRC Region IV, and the NRC Office of Nuclear Reactor Regulation, the NRC Inspector confirmed that the Reactor Building radiation monitors were required to be operable only during fuel handling operations to mitigate the consequences of a fuel handling accident. As a result, the District committed to submit a proposed Technical Specifications Change to provide this clarification.

Upon further review of this issue, the District has determined that the Reactor Building Isolation Ventilation Radiation Monitoring System should be operable during other activities as

well as fuel handling activities. The primary function of the Reactor Building Isolation Ventilation Radiation Monitoring System is to effect isolation of the Reactor Building to mitigate the consequences of the Fuel Handling Accident. Although the CNS accident analysis for this event assumes the accidental dropping of a fuel bundle onto the core or spent fuel pool, other scenarios exist which could potentially cause a breach of an irradiated fuel barrier, specifically, accidental dropping of other loads onto irradiated fuel. Therefore, the District has determined that it is both conservative and appropriate to ensure, through controls in the CNS Technical Specifications, that adequate means are available to mitigate the consequences of such events.

Accordingly, the District proposes to change page 63a of the CNS Technical Specifications to clarify 1) that one Reactor Building radiation monitoring channel in each of two trip systems is required to be operable when handling irradiated fuel inside secondary containment, and when moving loads inside secondary containment which have the potential to damage irradiated fuel, and 2) that if this operability is not assured, then the inoperable trip system shall be placed in the tripped condition, or secondary containment must be isolated, and the Standby Gas Treatment System initiated; otherwise, handling of irradiated fuel inside the secondary containment and movement of loads inside secondary containment which have the potential to damage irradiated fuel must be ceased.

The District also proposes to revise Section 3.7.C.1.d. on page 166 of the CNS Technical Specifications to include the language "and no loads which could potentially damage irradiated fuel are being moved in the secondary containment" as a condition for determining whether secondary containment is required. Likewise, similar language is included in the loss of Secondary Containment Action statement, Section 3.7.C.1.e.b., to direct suspension of loads movement which could potentially damage irradiated fuel in the secondary containment. Section 3.10.B.4.E. on page 205a is revised to provide the same limitation for the Standby Gas Treatment System Action statement. The Bases section for the Standby Gas Treatment System and Secondary Containment on Page 180 is also revised to briefly describe the basis for this language.

Additionally, the District proposes to delete from Specification 3.2.D.2 on page 48 the reference to Specification 3.21.A.2. This reference was added to the CNS Technical Specifications during the incorporation of the Environmental Technical Specifications into the Radiological Technical Specifications, accomplished with the NRC's issuance of Amendment No. 89 to the CNS Operating License.

Section 3.21.A.2 provides the requirements for the Gaseous Effluent Monitoring System. These requirements are provided to

ensure that releases of gaseous effluents via this pathway are properly monitored and controlled. The monitor fulfilling these requirements for the Reactor Building Ventilation System, RMV-RM-40, is a Kaman normal-range monitor set to alarm in accordance with the CNS Offsite Dose Assessment Manual (ODAM).

The Reactor Building Isolation Ventilation Radiation Monitoring System, as described above, currently consists of two channels which input to a single two-pen recorder, and Reactor Building Isolation and Standby Gas Treatment initiation logic. These monitors are General Electric Geiger-Mueller tubes (RMP-RE-430A,B) which input to indicator and trip units RMP-RM-452A,B. This monitoring function is provided to initiate Reactor Building isolation and Standby Gas Treatment operation. Although this monitoring function necessarily provides control room operators with information concerning Reactor Building effluent activity, this system is separate and distinct from the monitoring function described in Section 3.21.A.2 of the Technical Specifications. Therefore, reference to Section 3.21.A.2 in regard to limiting conditions for operation for the Reactor Building Isolation and Initiation function is inappropriate, and accordingly, the District proposes deletion of this reference.

In addition, although Section 3.21.A.2 does not contain limiting conditions for operation for RMP-RM-452 A,B,C & D (GE Monitor), Section 4.21.A.2, specifically, Table 4.21.A.2, does provide the surveillance requirements for RMP-RM-452 A,B,C & D. This is currently referenced in Table 4.2.D, footnote (12) of the existing Technical Specifications. For clarification purposes, pages 216v and 216w have been changed to add new footnote (6) to reference Section 3.2.D.2 for the limiting conditions of operation for RMP-RM-452 A,B,C & D.

C. Miscellaneous Editorial Changes

The District also requests that the NRC approve revision of several editorial changes to the CNS Technical Specifications. These changes are detailed below.

Page 58 - Add to Table 3.2.B the setting limit for the Reactor Core Isolation Control (RCIC) system steam line high ΔP for steam line flow in the reverse direction. This is consistent with the setting limit for the High Pressure Coolant Injection (HPCI) System steam line high ΔP given in Table 3.2.B of the CNS Technical Specifications. Additionally, add the appropriate units to the setting limit for 1) the RCIC Turbine Conditional Supervisory Alarm Timer (seconds - sec), and 2) the Reactor High Water Level trip (inches - ").

- Page 63 - Change the Instrument I.D. No. for the Mechanical Vacuum Pump Isolation from RMP-RM-251 A - D to RMP-RM-251 A,B,C & D for clarification.
- Page 68 - Correct the component identification code for the main steam line leak detection from MS-TE-XXX to MS-TS-XXX to notate temperature "switch" in lieu of "element."
- Page 71 - Reinsert in Table 4.2.B, "RHR System Test & Calibration Frequencies" a new Item No. 2, "Reactor Low Water Level -- NBI-LIS-72 A,B,C, & D #1 -- Once/Month (1) -- Once/3 Months -- Once/Day for the Item Description, I.D. No., Functional Test Frequency, Calibration Frequency, and Instrument Check respectively. This line was inadvertently removed from Table 4.2.B during processing of Amendment No. 32; however, the required surveillance has continued on these instruments in accordance with CNS procedures.
- Page 78 - Change the Instrument I.D. No. for the Mechanical Vacuum Pump Isolation from RMP-RM-251 A - D to RMP-RM-251 A,B,C & D for clarification.

III. SIGNIFICANT HAZARDS DETERMINATION

10 CFR 50.91(a)(1) requires that licensee requests for operating license amendments be accompanied by an evaluation of significant hazards posed by the issuance of the amendment. This evaluation is to be performed with respect to the criteria given in 10 CFR 50.92(c). The following analysis meets these requirements.

Evaluation of this Amendment with Respect to 10 CFR 50.92

The enclosed Technical Specifications change is judged to involve no significant hazards based on the following:

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

Evaluation

The addition of two channels to the Reactor Building Isolation Ventilation Radiation Monitoring System will not involve a significant increase in the probability or consequences of an accident previously evaluated. This modification will change the Reactor Building Isolation logic from a one-out-of-two to a one-out-of-two-taken-twice logic. This design change provides other safety as well as operational benefits.

The change in logic will enable plant personnel to perform surveillance testing on individual channels without first installing bypasses. With the existing configuration, plant personnel must, during testing, bypass the channel being tested to prevent Reactor Building isolation and Standby Gas Treatment initiation during that testing. Changing the logic design to a one-out-of-two-taken-twice scheme will enable plant personnel to test individual channels in this system without installing bypasses. This will eliminate the potential for inadvertent trip of the system during installation of the bypasses, as well as eliminate the improbable, but potential risk associated with defeat of individual channel operability through inadvertent failure to remove the bypass following surveillance testing.

Additionally, changing the logic to a one-out-of-two-taken-twice scheme will reduce unnecessary challenges to the safety systems by significantly reducing the potential for spurious actuations. This logic scheme is consistent with the logic scheme for CNS Reactor Protection System and provides an optimum compromise between reliability, testability, and freedom from spurious actuations.

The improvements proposed to clarify the operability requirements for the Reactor Building isolation and Standby Gas Treatment initiation and to make the miscellaneous editorial changes will not involve a significant increase in the probability or consequences of an accident previously evaluated. The changes proposed are administrative in nature or are more restrictive than the current Technical Specifications, do not reflect any changes to the plant configuration or the plant safety analysis, and are proposed to provide clarification to station operators.

2. Does the change create the possibility for a new or different kind of accident from any accident previously evaluated?

Evaluation

The changes proposed herein will not create the possibility for a new or different kind of accident from any accident previously evaluated. As discussed above, the only changes proposed resulting from planned plant modifications are those associated with the improvement in the Reactor Building Isolation Ventilation Radiation Monitoring System logic design. This change involves enhancements to the existing design in that the new configuration will provide excellent actuation reliability and improved operational characteristics, i.e., less potential for spurious actuations and inadvertent bypass. Therefore, since the District is not proposing changes to the Reactor Building Isolation Ventilation Radiation Monitoring System design function, but instead, enhancing fulfillment of that function through an

improved design, the possibility for a new or different kind of accident is not created.

In addition, since the changes proposed to clarify the operability requirements for the Reactor Building isolation and Standby Gas Treatment System initiation functions, and to make the miscellaneous editorial changes involve no hardware changes or new mode of plant operation, no possibility for a new or different kind of accident is created.

3. Does the proposed change create a significant reduction in the margin of safety?

Evaluation

The changes proposed to reflect a planned design change to improve the logic scheme for the Reactor Building Isolation Ventilation Radiation Monitoring System do not constitute a significant reduction in the margin of safety. The planned design change to a one-out-of-two-taken-twice design is consistent with the design basis for the CNS Reactor Protection System, and has therefore been previously reviewed by and accepted by the NRC in these applications. This logic design is also consistent with the objectives set forth in IEEE 279-1971 for protection systems, and provides an optimum blend of reliability and operability. Therefore, it is the District's determination that this proposed change will not result in a significant reduction in the margin of safety.

For the reasons stated above, the changes proposed to provide operability clarification and make the minor editorial changes do not affect the margin of safety. These changes merely clarify the description of operating conditions and limitations for the associated systems, and do not change the CNS safety analysis.

IV. CONCLUSION

The District has evaluated the proposed changes described above against the criteria given in 10 CFR 50.92(c) in accordance with the requirements of 10 CFR 50.91(a)(1). This evaluation has determined that this proposed change will not 1) involve a significant increase in the probability or consequences of an accident previously evaluated, 2) create the possibility for a new or different kind of accident from any accident previously evaluated, or 3) create a significant reduction in the margin of safety. Therefore, for the reasons detailed above, the District requests NRC approval of this Proposed Change 68.