Nebraska Public Power District
Nebraska's Energy Leader

NLS2001087
September 27, 2001

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

Gentlemen:

Subject: Response to Question Regarding Dose Calculation Methodology Amendment
Cooper Nuclear Station, NRC Docket No. 50-298, DPR-46

References:
1. E-mail to Edward McCutchen (Nebraska Public Power District) from Mohan Thadani (Nuclear Regulatory Commission) dated September 4, 2001, Cooper MB1419

2. Letter to U.S. Nuclear Regulatory Commission (NLS2001011) from John H. Swailes (Nebraska Public Power District) dated February 28, 2001, Proposed License Amendment Related to the Design Basis Accident Radiological Assessment Calculational Methodology

In Reference 1, the Nuclear Regulatory Commission (NRC) questioned the suitability of the ≤ 49 mR/hr setpoint for the Reactor Building Ventilation Exhaust Plenum Radiation - High function submitted with the proposed Technical Specification (TS) 3.3.7.1 contained in Reference 2. A teleconference was held on September 6, 2001, between Nebraska Public Power District (District) personnel and the NRC staff where this question was addressed. The purpose of this letter is to respond to this question on the Cooper Nuclear Station (CNS) docket.

The question consisted of two parts and contained the following preface:

"You state that the allowed value of < 49 mR/hr for the Reactor Building Ventilation Exhaust Plenum Radiation - High function was chosen to promptly detect gross failure of the fuel cladding."

Part 1- "How was this value derived?"

Response- The Allowable Value of ≤ 49 mR/hr was derived using the General Electric (GE) Instrument Setpoint Methodology based on the Analytical Limit value developed by GE for CNS, as discussed in the Bases Section for the proposed TS 3.3.7.1. The Allowable Value of ≤ 49 mR/hr used in the proposed TS 3.3.7.1 for Control Room Emergency Filter (CREF)

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System initiation is the same value that is currently used in TS 3.3.6.2 for Secondary Containment isolation, since the same instrumentation will be used for both purposes.

Part 2- "With this value, can the assumed release from the postulated design basis FHA be detected and cause initiation of the CREF System within the 90 seconds assumed in the FHA dose analysis?"

Response- Yes, the 49 mR/hr Allowable Value will cause the CREF System to initiate within 90 seconds following the proposed design basis Fuel Handling Accident (FHA) source term release. As described in the existing Bases to TS 3.3.6.2, the Allowable Value for Reactor Building ventilation radiation monitor has been chosen to detect gross failure of the fuel cladding. This gross failure may have originated from the primary containment due to a break in the Reactor Coolant Pressure Boundary or the refueling floor due to an FHA during refueling. During the first minute of the accident, the revised FHA releases a higher number of curies of iodine and noble gases to the Secondary Containment than the current FHA of record described in the CNS Updated Safety Analysis Report. Accordingly, the 49 mR/hr Allowable Value remains conservative relative to the revised FHA source term. In addition, the District has performed a cursory review which corroborates that the proposed FHA source term that is seen at the monitor will exceed the 49 mR/hr Allowable Value. The design CREF System response time will be 10 seconds following the Group 6 actuation signal, which is well within the Secondary Containment isolation damper design response time of 90 seconds used in the FHA analysis.

Should you have any questions concerning this matter, please contact Mr. David Kunsemiller at (402) 825-5236.

Sincerely,

John H. Swailes
Vice President of Nuclear Energy

/wrv

cc: Regional Administrator
USNRC - Region IV

Senior Project Manager
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector
USNRC

NPG Distribution

Records

STATE OF NEBRASKA)
)
NEMAHA COUNTY)

John H. Swailes, 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 correspondence on behalf of Nebraska Public Power District; and that the statements contained herein are true to the best of his knowledge and belief.

John H. Swailes

Subscribed in my presence and sworn to before me this 27 day of September, 2001.

William D. Shanks
NOTARY PUBLIC

WILLIAM D. SHANKS
MY COMMISSION EXPIRES
November 27, 2003

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The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the NL&S Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
None	N/A