



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 2, 2009

Mr. Stewart B. Minahan
Vice President-Nuclear and CNO
Nebraska Public Power District
72676 648A Avenue
Brownville, NE 68321

SUBJECT: COOPER NUCLEAR STATION – ENVIRONMENTAL ASSESSMENT AND
FINDING OF NO SIGNIFICANT IMPACT (TAC NO. MD9922)

Dear Mr. Minahan:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption dated October 13, 2008, as supplemented on April 8, May 29, June 12, and September 1, 2009. The proposed exemption from the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.54(o) and 10 CFR Part 50, Appendix J, Option B, Sections III.A and III.B, would permit exclusion of the main steam pathway leakage contribution from the overall integrated leakage rate Type A test measurement and from the sum of the leakage rates from Type B and Type C test measurements.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Lyon".

Carl F. Lyon, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-298

Enclosure:
As stated

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UNITED STATES NUCLEAR REGULATORY COMMISSION
NEBRASKA PUBLIC POWER DISTRICT
DOCKET NO. 50-298
COOPER NUCLEAR STATION
ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.54(o), and 10 CFR Part 50, Appendix J, Option B, Sections III.A and III.B, for Facility Operating License No. DPR-46, issued to Nebraska Public Power District (NPPD, the licensee), for operation of the Cooper Nuclear Station (CNS), located in Nemaha County, Nebraska. Therefore, as required by 10 CFR 51.21, the NRC performed an environmental assessment. Based on the results of the environmental assessment, the NRC is issuing a finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would permit exclusion of the main steam (MS) pathway leakage contribution (1) from the overall integrated leakage rate Type A test measurement required by Appendix J, Option B, Section III.A, and (2) from the sum of the leakage rates from Type B and Type C test measurements required by Appendix J, Option B, Section III.B.

The proposed action is in accordance with the licensee's application dated October 13, 2008, as supplemented by letters dated April 8, May 29, June 12, and September 1, 2009. The licensee's application included a corresponding license amendment request, which has been evaluated by the NRC staff separately from the exemption request.

The Need for the Proposed Action:

Paragraph 50.54(o) of 10 CFR Part 50 requires that primary reactor containments for water-cooled power reactors be subject to the requirements of Appendix J to 10 CFR Part 50. Appendix J specifies the leakage test requirements, schedules, and acceptance criteria for tests of the leak-tight integrity of the primary reactor containment, and of systems and components which penetrate the containment. Option B, Section III.A requires that the overall integrated leak rate not exceed the allowable leakage (L_a) with margin, as specified in the Technical Specifications (TSs). The overall integrated leak rate, as specified in the 10 CFR Part 50, Appendix J definitions, includes the contribution from MS pathway leakage. The MS pathway includes the leakage from the four MS line penetrations plus the leakage from the MS inboard drain line. By letter dated October 30, 2006, and corresponding License Amendment No. 226, dated October 31, 2006, the NRC previously granted the licensee an exemption for the four MS line penetrations from the requirements of 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, Sections III.A and III.B. By letter dated October 13, 2008, the licensee has requested an exemption from Option B, Section III.A, requirements to permit exclusion of the entire MS pathway leakage (the MS line penetrations and the MS inboard drain line leakage) from the overall integrated leak rate test measurement. Option B, Section III.B of 10 CFR Part 50, Appendix J, requires that the sum of the leakage rates of Type B and Type C local leak rate tests be less than the performance criterion (L_a) with margin, as specified in the TSs. The licensee's letter also requests an exemption from this requirement, to permit exclusion of the MS pathway contribution to the sum of the Type B and Type C test measurements.

The above-cited requirements of Appendix J require that MS pathway leakage measurements be grouped with the leakage measurements of other containment penetrations when containment leakage tests are performed. These requirements are inconsistent with the

design of the CNS and the analytical models used to calculate the radiological consequences of design-basis accidents. At CNS, and similar facilities, the leakage from primary containment penetrations, under accident conditions, is collected and treated by the secondary containment system, or would bypass the secondary containment. However, the leakage from the MS pathway is collected and treated via an Alternative Leakage Treatment (ALT) path having different mitigation characteristics. In performing accident analyses, it is appropriate to group various leakage effluents according to the treatment they receive before being released to the environment (i.e., bypass leakage is grouped, leakage into secondary containment is grouped, and ALT leakage is grouped), with specific limits for each group defined in the TSs. The proposed exemption would permit ALT path leakage to be independently grouped with its unique leakage limits.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action and concludes that the environmental impacts would not be significant.

The details of the staff's safety evaluation will be provided in the exemption and corresponding license amendment that will be issued as part of the letters to the licensee approving the exemption to the regulation and the license amendment.

The proposed action will not significantly increase the probability or consequences of accidents. No changes are being made in the types of effluents that may be released offsite. There is no significant increase in the amount of any effluent released offsite. There is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed action does not have any foreseeable impacts to land, air, or water resources, including impacts to biota. In addition,

there are no known socioeconomic or environmental justice impacts associated with the proposed action. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the Final Environmental Statement for the Cooper Nuclear Station dated February 1973.

Agencies and Persons Consulted:

In accordance with its stated policy, on March 30, 2009, the staff consulted with the Nebraska State official, Ms. Julia Schmitt of the Office of Radiological Health, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated October 13, 2008, as supplemented by letters dated April 8, May 29, June 12, and September 1, 2009. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the Internet at the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or send an e-mail to pdr.resource@nrc.gov.

Dated at Rockville, Maryland, this 2nd day of September 2009.

FOR THE NUCLEAR REGULATORY COMMISSION



Carl F. Lyon, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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/RA/

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*Previously concurred

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