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NLS2011091 2.201
September 7, 2011

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

Subject: Reply to Notice of Violation 05000298/2011006-05; EA-2011-176
Cooper Nuclear Station, Docket No. 50-298, DPR-46

References:
1. Letter to Brian J. O'Grady (Nebraska Public Power District) from Dr. Dale A. Powers (U.S. Nuclear Regulatory Commission) dated August 8, 2011, "Cooper Nuclear Station – NRC Problem Identification and Resolution Inspection Report 05000298/2011006 and Notice of Violation"

2. Letter to Brian J. O'Grady (Nebraska Public Power District) from Thomas R. Farnholtz (U.S. Nuclear Regulatory Commission) dated December 3, 2010, "Cooper Nuclear Station – NRC Component Design Bases Inspection Report 05000298/2010007"

Dear Sir or Madam:

The purpose of this correspondence is to provide Nebraska Public Power District's (NPPD) reply to a Notice of Violation in accordance with 10 CFR 2.201. By letter dated August 8, 2011 (Reference 1), the Nuclear Regulatory Commission cited NPPD for being in violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control.

The violation is concerned with Cooper Nuclear Station failing to assure that applicable regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures and instructions within a reasonable amount of time after a previous noncited violation (Reference 2) documented the same issue.

NPPD accepts the violation and recognizes the importance of its responsibilities with respect to design basis control. As discussed in the attachment to this letter, NPPD has taken prompt action to return to compliance with 10 CFR Part 50, Appendix B, Criterion III, and to prevent recurrence of this violation.

IE01

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

If you have any questions concerning this matter, please contact David Van Der Kamp, Licensing Manager, at (402) 825-2904.

Sincerely,

for

Brian J. O'Grady
Vice President – Nuclear and
Chief Nuclear Officer

/bk

Attachment

cc: Regional Administrator w/ attachment
USNRC - Region IV

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

Senior Resident Inspector w/ attachment
USNRC - CNS

NPG Distribution w/ attachment

CNS Records w/ attachment

REPLY TO NOTICE OF VIOLATION 05000298/2011006-05; EA-2011-176
COOPER NUCLEAR STATION, DOCKET NO. 50-298, DPR-46

During Nuclear Regulatory Commission (NRC) inspection activities conducted June 6 through June 24, 2011, a violation of NRC requirements was identified. The violation and Nebraska Public Power District's (NPPD) reply are set forth below:

Restatement of the Violation

"Title 10 CFR 50, Appendix B, Criterion III, "Design Control," requires, in part, measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2 and as specified in the license application, for those components to which this appendix applies, are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, since December 3, 2010, the licensee failed to assure that applicable regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to correctly translate regulatory and design basis requirements, associated with tornado and high wind generated missiles, into design information necessary to protect the emergency diesel generator fuel oil day tank vent line components.

This violation is associated with a Green Significance Determination Process finding."

Background

During the 2010 Component Design Bases (CDB) Inspection, conducted July 21, 2010, to October 20, 2010, at Cooper Nuclear Station (CNS), NRC personnel questioned whether analysis existed for a postulated tornado-induced missile strike on the number one emergency diesel generator's (EDG) fuel oil day tank vent line. The EDG fuel oil day tank vent lines at CNS are made of six-inch diameter, schedule 40 thick steel pipe. The vent lines run from each EDG's fuel oil day tank to outside of the EDG rooms, and extend upward along the exterior wall of the turbine building and terminate at a vent cap. CNS determined the current configuration of the EDG fuel oil day tank lines acceptable based on an original Burns and Roe civil design specification which documented the worst case for the tornado-induced missile scenario; i.e., impact of a wooden utility pole traveling at 200 miles per hour. CNS did not have a formal design basis calculation on record to support this conclusion and initiated a corrective action to develop one.

In the CDB Inspection Report dated December 3, 2010 (Reference 2), the NRC documented seven examples as a green noncited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to establish measures to ensure that applicable regulatory requirements and the design bases were correctly translated into specifications, drawings, procedures, and instructions. Reference 2 specified that this finding applied to the tornado and high wind impact on the EDG fuel oil storage facilities.

On December 14, 2010, CNS design engineering completed a calculation, and associated engineering evaluation, to evaluate a postulated tornado-induced missile impact on the EDG fuel oil day tank vent lines. The evaluation concluded that the existing EDG day tank vent lines were adequate after a postulated tornado strike and able to provide venting.

From June 6, 2011, to June 24, 2011, the NRC conducted a Problem Identification and Resolution inspection at CNS. During this inspection, the NRC noted that the design basis calculation performed in December 2010, and subsequent revisions, contained non-conservative assumptions related to net positive suction head and head loss, that could affect the outcome of the calculation. CNS reviewed the calculation and determined additional clarifying engineering analysis would be required to resolve the NRC's concern.

In Reference 1 the NRC discussed its review of the December 2010 calculation and corrective actions taken in response to the CDB Inspection NCV, and concluded that CNS had failed to restore compliance within a reasonable time after the NCV was identified on December 3, 2010. Specifically, CNS failed to correctly translate regulatory and design basis requirements, associated with tornado and high wind generated missiles, into design information necessary to protect the EDG fuel oil day tank vent line components.

Reason for Violation

NPPD accepts the cited violation.

CNS performed an evaluation utilizing root cause analysis. The root cause team reviewed the December 2010 calculation, associated engineering evaluation, and subsequent revisions. The team identified that the calculation was inadequate. When the December 2010 calculation was being prepared, a decision was made by CNS engineering supervision to pursue the worst case approach; i.e., assuming the EDG fuel oil day tank steel vent line would be flattened and pinched off. The engineer assigned to prepare the calculation was provided with this presumed result and was not tasked with determining the result of the impact based upon the original design basis scenario. Rather, the evaluation attempted to demonstrate no adverse effect to EDG operation.

The root cause for the condition, cited in Reference 1, is underestimation of the scope and task to address an NCV. In summary, CNS failed to resolve a design basis issue in a timely manner because an initial decision had been made by CNS engineering supervision to develop an operability type evaluation. This decision resulted in a calculation that focused on addressing the operability of the vent pipe after impact, rather than generation of the missing design basis analysis of the impact.

Corrective Steps Taken and Results Achieved

CNS has performed a new calculation to evaluate the design basis tornado-induced missile impact on the EDG fuel oil day tank vent lines. This calculation is approved and implemented, and supersedes the December 2010 calculation and associated engineering evaluation.

Corrective Steps That Will Be Taken to Avoid Further Violations

The action described above will prevent further violations related to translating regulatory and design basis requirements for tornado and high wind generated missiles into design information necessary to protect the EDG fuel oil day tank vent line components.

Additional Corrective Actions

CNS will deliver a case study of the decision making aspects of this issue to design engineering supervisors. CNS will also review calculation assignments in the civil engineering department made in the past 18 months to determine if any were directed towards establishing operability rather than addressing design basis.

Date When Full Compliance Will Be Achieved

NPPD has restored compliance with 10 CFR Part 50, Appendix B, Criterion III.

References

1. Letter to Brian J. O'Grady (Nebraska Public Power District) from Dr. Dale A. Powers (U.S. Nuclear Regulatory Commission) dated August 8, 2011, "Cooper Nuclear Station – NRC Problem Identification and Resolution Inspection Report 05000298/2011006 and Notice of Violation"

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ATTACHMENT 3 LIST OF REGULATORY COMMITMENTS©[4]

Correspondence Number: NLS2011091

The following table identifies those actions committed to by Nebraska Public Power District (NPPD) in this document. Any other actions discussed in the submittal represent intended or planned actions by NPPD. They are described for information only and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITMENT NUMBER	COMMITTED DATE OR OUTAGE
None		