



Nebraska Public Power District

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NLS2014043
May 20, 2014

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

Subject: Response to Integrated Inspection Report No. 05000298/2013005 -
Denial of Non-Cited Violation No. 05000298/2013005-01
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Reference: Letter from Donald B. Allen, U.S. Nuclear Regulatory Commission, to Oscar A. Limpias, Nebraska Public Power District, dated February 13, 2014, "Cooper Nuclear Station - NRC Integrated Inspection Report 05000298/2013005 and NRC Investigation Report No. 2013-009"

Dear Sir or Madam:

In the above reference, Nebraska Public Power District (NPPD) received the Cooper Nuclear Station (CNS) inspection report for the fourth quarter 2013. The purpose of this letter is for NPPD to contest non-cited violation (NCV) 2013005-01, "Failure to Promptly Identify and Correct a Condition Adverse to Quality." The basis for the denial of the subject NCV is provided in the attachment to this letter.

There are no new commitments contained in this letter.

If you have any questions or require additional information, please contact David Van Der Kamp, Licensing Manager, at (402) 825-2904.

Sincerely,

Oscar A. Limpias
Vice President - Nuclear and
Chief Nuclear Officer

/bk

Attachment: Denial of Non-Cited Violation 05000298/2013005-01, Failure to Promptly Identify and Correct a Condition Adverse to Quality

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cc: Director, Office of Enforcement, w/attachment
USNRC

Regional Administrator, w/attachment
USNRC - Region IV

CNS 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

**Denial of Non-Cited Violation 05000298/2013005-01,
Failure to Promptly Identify and Correct a Condition Adverse to Quality**

Details

Section 1R04 of Nuclear Regulatory Commission (NRC) Integrated Inspection Report 05000298/2013005, dated February 13, 2014, contains, in part, the following non-cited violation (NCV) discussion:

"The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," associated with the licensee's failure to promptly identify and correct a condition adverse to quality.

While performing plant walk downs, inspectors noted that the diesel generator fuel oil storage tank vent lines appeared to be susceptible to tornado missiles. Specifically, the vent lines were approximately 1 foot apart, and inspectors questioned whether a single tornado generated missile could render both vent lines incapable of performing their specified function.

Inspectors were not able to locate an evaluation of the vent lines that demonstrated their ability to withstand a tornado missile impact. Inspectors did, however, note that Station Procedure 5.1 WEATHER, "Operations During Weather Watches and Warnings," Revision 12, Section 7.4, directed that, in the event of a tornado impact to the site, operators would inspect the vent lines, and if they were damaged, one of the diesel generator fuel oil tank fill lines was to be opened. Inspectors determined this to be a compensatory action, and questioned if the vent lines were adequately protected from tornado generated missiles.

Inspectors informed the licensee of their concerns, and the licensee initiated Condition Report CR-CNS-2013-03720. In this condition report, the licensee identified that during the 2010 NRC component design basis inspection, NRC inspectors had similar questions and Condition Report CR-CNS-2010-05211 had been initiated to address these questions. The licensee subsequently closed Condition Report CR-CNS-2013-03720 with no further actions being taken.

Inspectors reviewed Condition Report CR-CNS-2010-05211 and noted that it had been initiated due to questions about a statement in the licensee's design control document for the diesel generators which dealt with tornado missile protection for the diesel generator fuel oil storage tank vents. Specifically, the design control document stated, in part, "The vent pipe concerns was satisfactorily resolved during the 1991 EDSFI," and inspectors had requested the station's evaluation for the diesel generator fuel oil storage tank vents and fill valves with respect to tornado missile."

Additional details regarding this NCV are contained in Pages 5 through 8 of NRC Integrated Inspection Report 05000298/2013005.

Basis for Denial

Nebraska Public Power District (NPPD) disputes the use of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," as the basis for the NCV. In the violation, the NRC states that *"Inspectors were not able to locate an evaluation of the vent lines that demonstrated their ability to withstand a tornado missile impact."* As discussed in detail below, NPPD previously evaluated this condition under condition report (CR) Cooper Nuclear Station (CNS) 2010-05211 which was initiated due to a question from the 2010 Component Design Basis Inspection (CDBI) team. NPPD has also re-evaluated these results and concluded the original evaluation remains valid.

Background

In the NRC's discussion of the basis for the NCV, the NRC states:

"Contrary to the above, from July 2010 to present, measures established by the licensee failed to assure that an identified condition adverse to quality was corrected. Specifically, the licensee failed to evaluate the lack of tornado missile protection for the diesel generator fuel oil storage tank vents and demonstrate their ability to perform their specified safety function in the event of a tornado missile strike."

NPPD performed engineering evaluation, EE 10-60, Evaluation of the Diesel Generator Fuel Oil Tank Vents after a Tornado Strike, Revision 0, under CR-CNS-2010-05211. This EE was in response to a 2010 CDBI team question related to the diesel generator (DG) design criteria document (DCD) statement *"The vent pipe concern was satisfactorily resolved during the 1991 EDSFI."*

EE 10-060 evaluated the DG fuel oil (DGFO) storage tank design to meet the CNS design basis events delineated in IEEE-308-1970, Table 1, which is how CNS met its pre-General Design Criteria 2 compliance (AEC 1967 Draft GDC Criterion 40) as part of Appendix F of the CNS Updated Safety Analysis Report (USAR). The EE provided a technical basis on the location of the vents, how much of the vents are exposed to missile impacts, and also discussed that these pipes are cast in place thus minimizing the amount of load transferred to the DGFO storage tanks by a missile strike. Therefore, transfer of the minimal load would not damage any part of the tank below the fuel level, validating that the DGFO storage tanks and vents would remain operable after a tornado strike to the vents.

This method of evaluation for assessing the ruggedness of these structural components was based on guidance from USAR, Appendix C, Section 3.1.2, which in part states:

"3.1.2 Components Designed Primarily By Empirical Methods

There are many important Class I components or equipment which are not normally designed or sized directly by stress analysis techniques. Simple stress analyses are sometimes used to augment the design of these components, but the primary design work does not depend upon detailed stress analysis. These components are usually designed by tests and empirical experience, which may include earthquake experience for the

seismic qualification of Class I components. Complete detailed stress analysis is currently not meaningful nor practical for these components. Examples of such components are valves, pumps, electrical equipment, and mechanisms. Field experience and testing are used to support the design. Alternatively, use of the SQUG Generic Implementation Procedure (GIP-3) may be used for seismic qualification of electrical and mechanical equipment within the scope of the GIP. Where the structural or mechanical integrity of components is essential to safety, the components referred to in these criteria must be designed to accommodate the events of the Safe Shutdown Earthquake (SSE) or Operating Basis Earthquake (OBE), or a design basis pipe rupture, or a combination where appropriate. The reliability requirements of such components cannot be quantitatively described in a general criterion because of the varied nature of each component and its specific function in the system."

EE 10-060 postulated a potential impact to the DGFO storage tank vents after a design basis tornado and recommended a defense-in-depth action for the Operations staff to visually check the DGFO storage tank vents for any obstructions. This information was provided to document the basis made in response to the 1991 Electrical Distribution System Functional Inspection (EDSFI) comment that CNS did not require any operator actions to ensure the vent or fill lines were not obstructed as noted in the DG DCD material.

During the 2013 fourth quarter inspection period, the NRC Resident Inspectors questioned the technical basis provided in EE 10-060. The original EE preparer and responsible supervisor were no longer with NPPD. As such, CNS Design Engineering staff completed a sensitivity calculation, NEDC 13-046, DG Storage Tank Vent Line Tornado Missile Durability. This calculation utilized similar design inputs and basis from NEDC 11-077, DG Day Oil Tank Vent Line Missile Protection Evaluation, which addressed a previous NCV from the same 2010 CDBI inspection.

The results of NEDC 13-046 are similar to NEDC 11-077; the vent line stays rigid and does not crimp or bend over, thereby maintaining its venting capabilities. The vent piping construction is also similar as both the DGFO storage tank vents (2-inch diameter) and the DG day tank vents (6-inch diameter) are schedule 40 steel pipe. This provides another comparison that if the larger vent is robust to handle a tornado missile, the smaller pipe would be just as robust due to same schedule type.

In summary, NEDC 13-046 independently validated the technical adequacy of the conclusions from EE 10-060, that the DGFO storage tanks would remain operable after a tornado strike to the vents.

Conclusion

It is NPPD's position that the previous NRC CDBI question related to the DGFO storage tank vent's ability to withstand a tornado missile strike was adequately resolved under CR-CNS-2010-05211 and adequately evaluated in a timely manner commensurate with 10 CFR 50, Appendix B, Criterion XVI. Accordingly, NPPD denies the subject NCV.