

April 20, 2006

MEMORANDUM TO: Docket File

FROM: Brian Benney, Project Manager /RA/
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: COOPER NUCLEAR STATION RE: REASON FOR POSTPONING
PUBLIC MEETING DISCUSSING TORNADO DESIGN CONCERNS
(TAC NO. MC8236)

The NRC planned a public meeting for April 21, 2006, at the Nuclear Regulatory Commission's (NRC's) offices in Rockville, Maryland between the Nebraska Public Power District (the licensee for the Cooper Nuclear Station (CNS)) and the NRC staff from Region IV and the Office of Nuclear Reactor Regulation. The purpose of the meeting was, in part, to discuss the NRC staff's concerns with the adequacy of an informal calculation performed by the licensee that was intended to demonstrate the structural integrity of the safety-related heating, ventilation, and air conditioning (HVAC) ductwork in the diesel generator building at CNS under certain tornado loadings. The NRC staff's review of the calculation found that the high stresses calculated for the ductwork did not demonstrate that the structural integrity of the HVAC ductwork would be maintained. The NRC also believes that the stresses would likely cause failure of the ductwork, and could lead to a condition where the diesel generators may become inoperable. The NRC staff proposed to hold the meeting as soon as possible to establish if the high stresses in the HVAC ductwork represented an immediate safety concern to the CNS facility.

The licensee was aware of the NRC staff's concerns prior to the April 21, 2006, meeting, and, subsequently, performed a new calculation using a different methodology than previously used. The new calculation is based on an American Society of Civil Engineers (ASCE) paper entitled, "Evaluation of the Ultimate Pressure Capacity of Rectangular HVAC Ducts for Nuclear Power Plants," by Bendt W. Wedellsborg, published in the conference proceedings, "Structural Engineering in Nuclear Facilities," Volume 2, September 10-12, 1984. The licensee's new calculation is intended to demonstrate that the HVAC ductwork will not fail when subjected to the tornado depressurization and repressurization loadings using the design method described in the ASCE paper. The analytical design method in the ASCE paper is correlated with data obtained from testing of HVAC ductwork for another nuclear power plant.

Consequently, the NRC staff decided to postpone the meeting until the first week in May 2006, which would allow the staff sufficient time to review the ASCE paper and the new calculation performed by the licensee. Because the licensee is no longer relying on its initial calculation to ensure the structural integrity of the HVAC ductwork, and instead, is relying on the newly found methodology based on the ASCE paper, the previous calculation is no longer valid and could not justify that there is an immediate safety concern with the CNS HVAC ductwork. Therefore, postponing the meeting for approximately two weeks was deemed appropriate.

Docket No. 50-298

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