Nebraska Public Power District

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NSD930791
July 6, 1993

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Subject: Inservice Testing Program Relief Requests
Cooper Nuclear Station
NRC Docket No. 50-298, License No. DPR-46

References:
1. Letter NSD920965, from G. R. Horn to NRC, dated September 14, 1992, "Inservice Test Program Addenda, Cooper Nuclear Station, NRC Docket No. 50-298, DPR-46"
2. Letter from NRC to G. R. Horn, dated April 7, 1993, "Safety Evaluation of the October 15, 1991, September 14, 1992, and February 15, 1993, Relief Requests Related to the Inservice Testing Program for Pumps and Valves for Cooper Nuclear Station (TAC No. M84734)"
3. Letter NSD930690 from G. R. Horn to NRC, dated June 7, 1993, "Status of Issues Related to Unit Startup"

Gentlemen:

In Reference 1, Nebraska Public Power District (the District) submitted an addenda to the Cooper Nuclear Station (CNS) Inservice Test (IST) Program, which included revised relief requests RV-28 and RV-45. Reference 2 provided the District with the NRC Safety Evaluation of these relief requests. The safety evaluation concluded that additional information or basis for relief were required before approval could be granted for Relief Requests RV-28 and RV-45.

The District provides the following clarification to specific sections of the safety evaluation that indicated additional information or basis for relief was needed for the two relief requests in order for the NRC to complete their review.

Response to 3.0 of Safety Evaluation (RV-28)

Relief Request RV-28 is withdrawn. Research has concluded that the subject check valves may be exercised during cold shutdowns when the drywell is de-inerted.

Testing during cold shutdowns is allowable via ASME Section XI, IWV-3522, 1980 Edition, Winter 1981 Addenda. Therefore, Cooper Nuclear Station (CNS) is in compliance with ASME Section XI regarding testing of the subject check valves. However, since there will be instances when the plant goes to a cold shutdown condition for repairs without de-inerting the drywell, a relief request for not testing during a cold shutdown inerted condition is necessary.

Accordingly, the District is submitting with this letter a new Relief Request, RV-58, for cold shutdown testing for your review and approval. Also attached for information concerning this relief request, is Technical Justification TJV-15. Relief Request RV-58 and Technical Justification TJV-15 will be included in the next IST Program addendum.

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Response to 5.0 of Safety Evaluation (RV-45)

Revised Relief Request RV-45 deleted two valves, RCIC-MO-17 and HPCI-MO-57, and changed valve identifiers from RCIC-AO-22 to RCIC-CV-26CV and HPCI-AO-18 to HPCI-CV-29CV. Therefore, RCIC-CV-26CV and HPCI-CV-29CV are not new valves.

Relief Request RV-45 does not contain Event V pressure isolation valves (PIVs). By letter dated March 17, 1980, the District stated that no Event V arrangements existed at CNS. The District's response of September 26, 1989, to Generic Letter 89-04, and a follow-up letter dated March 14, 1991, which provided additional information regarding GL 89-04, stated that 1) CNS Technical Specifications do not list or designate any PIVs, and 2) no Event V PIV configurations were identified at CNS. The letters concluded that Position 4 of GL 89-04 does not address a situation that is applicable to CNS. Therefore, the designation on page 80 of the IST Program indicating RV-45 is pre-approved by GL 89-04 is correct.

It should be noted however, that the District has recently committed to individually leak test valves designated as pressure isolation valves (PIVs) as part of augmented testing. This is discussed further in Reference 3.

The District has also revised Relief Request RV-45 as a result of recent changes to the District testing methodology. Some of the penetrations/valves were deleted from the relief request and other changes were made to include information regarding valve testing configuration, individual valve testing impracticality, and how leak rate acceptance criteria is applied. Revised Relief Request RV-45 is attached for your review. Relief Request RV-45 will be included in the next IST Program addendum.

Should you have any questions or require additional information regarding these matters, please contact J. R. Flaherty, CNS Engineering Manager.

Sincerely,

G. R. Horn
Nuclear Power Group Manager

GRH:RAS:sa

Attachments

cc: NRC Regional Office
Region IV
Arlington, Texas

NRC Resident Inspector
Cooper Nuclear Station

RELIEF REQUEST RV-58

VALVE:	MS-CV-20CV	MS-CV-24CV	MS-CV-28CV	MS-CV-32CV
	MS-CV-21CV	MS-CV-25CV	MS-CV-29CV	MS-CV-33CV
	MS-CV-22CV	MS-CV-26CV	MS-CV-30CV	MS-CV-34CV
	MS-CV-23CV	MS-CV-27CV	MS-CV-31CV	MS-CV-35CV

CLASS: 3

FUNCTION: Check valves required to open for vacuum relief of the Main Steam Relief lines to the suppression pool.

REQUIRED TEST: Exercise each quarter or when in cold shutdown in accordance with IWV-3522.

BASIS FOR RELIEF: For the reasons stated in Technical Justification TJV-15, these valves can only be exercised during cold shutdown when the drywell is de-inerted. These valves are located in the drywell and therefore, are only accessible when the plant is shutdown and the drywell de-inerted.

The drywell is not normally de-inerted when reaching the cold shutdown condition and is undesirable due to the cost and amount of time required. Except for refueling outages, cold shutdowns are usually unnecessary and if a shutdown occurs, down time is kept to a minimum. De-inerting containment for check valve testing is considered to be an unreasonable burden.

ALTERNATIVE TEST: These valves will be mechanically exercised during cold shutdown periods when the drywell is de-inerted.

TECHNICAL JUSTIFICATION TJV-15

VALVE:	MS-CV-20CV	MS-CV-24CV	MS-CV-28CV	MS-CV-32CV
	MS-CV-21CV	MS-CV-25CV	MS-CV-29CV	MS-CV-33CV
	MS-CV-22CV	MS-CV-26CV	MS-CV-30CV	MS-CV-34CV
	MS-CV-23CV	MS-CV-27CV	MS-CV-31CV	MS-CV-35CV

CLASS: 3

FUNCTION: Check valves required to open for vacuum relief of the Main Steam Relief lines to the suppression pool.

BASIS FOR TECHNICAL JUSTIFICATION: These vacuum breaker check valves are located inside containment and are not equipped with actuators or position indicators. Manual exercising requires drywell access. The drywell is not accessible during normal station operations and therefore the valves cannot be full-stroked or partial-stroke exercised during normal station operations.

ALTERNATIVE TEST: Each valve will be mechanically exercised during cold shutdown, in accordance with IWV-3522, when the drywell is de-inerted (Relief Request RV-58).

RELIEF REQUEST RV-45

VALVE: Penetration	Valves
X-7A	MS-AOV-AO80A, MS-AOV-AO86A
X-7B	MS-AOV-AO80B, MS-AOV-AO86B
X-7C	MS-AOV-AO80C, MS-AOV-AO86C
X-7D	MS-AOV-AO80D, MS-AOV-AO86D
X-8	MS-MOV-MO74, MS-MOV-MO77
X-9A	RF-CV-15CV, RCIC-CV-26CV, RWCU-CV-15CV
X-9B	RF-CV-13CV, HPCI-CV-29CV
X-10	RCIC-MOV-MO15, RCIC-MOV-MO16
X-11	HPCI-MOV-MO15, HPCI-MOV-MO16
X-16A	CS-MOV-MO11A, CS-MOV-MO12A
X-16B	CS-MOV-MO11B, CS-MOV-MO12B
X-25	PC-MOV-232MV, PC-AOV-238AV
X-25	PC-MOV-1305MV, PC-MOV-1306MV
X-26	PC-MOV-231MV, PC-AOV-246AV, PC-MOV-306MV, PC-MOV-1310MV
X-39A	RHR-MOV-MO26A, RHR-MOV-MO31A
X-39B	RHR-MOV-MO26B, RHR-MOV-MO31B
X-39B	PC-MOV-1311MV, PC-MOV-1312MV
X-41	RR-AOV-740AV, RR-AOV-741AV
X-205	PC-MOV-233MV, PC-AOV-237AV
X-205	PC-AOV-243AV, PC-CV-13CV
X-205	PC-AOV-244AV, PC-CV-14CV
X-205	PC-MOV-1303MV, PC-MOV-1304MV
X-210A	RCIC-MOV-MO27, RCIC-CV-13CV
X-210A	RHR-MOV-MO16A, RHR-CV-10CV, RHR-CV-12CV
X-210B	HPCI-MOV-MO25, HPCI-CV-17CV
X-210B	RHR-MOV-MO16B, RHR-CV-11CV, RHR-CV-13CV
X-210A, 211A	RHR-MOV-MO34A, RHR-MOV-MO38A, RHR-MOV-MO39A
X-210B, 211B	RHR-MOV-MO34B, RHR-MOV-MO38B, RHR-MOV-MO39B
X-211B	PC-MOV-1301MV, PC-MOV-1302MV
X-212	RCIC-CV-15CV, RCIC-V-37
X-214	HPCI-CV-15CV, HPCI-V-44
X-214	RHR-MOV-MO166A, RHR-MOV-MO167A
X-214	RHR-MOV-MO166B, RHR-MOV-MO167B
X-214	HPCI-AOV-AO70, HPCI-AOV-AO71
X-220	PC-MOV-230MV, PC-AOV-245AV, PC-MOV-305MV, PC-MOV-1308MV
X-221	RCIC-CV-12CV, RCIC-V-42
X-222	HPCI-CV-16CV, HPCI-V-50

CLASS: 1, 2

FUNCTION: Primary Containment Isolation Valves

RELIEF REQUEST RV-45 (Continued)

REQUIRED TEST: Category A valves shall be seat leak tested to a specific maximum amount for each valve in the closed position for fulfillment of their safety function at least once every two years (IWV-3421, 3422, 3426).

BASIS FOR RELIEF: Even though individual testing of these valves is not performed, the actual testing methods utilized are set up to provide comparable results and acceptance criteria.

The configuration of the piping systems are such that individual testing is either not possible or practical. Several penetrations do not contain a manual isolation valve that can be used as a test boundary. Other penetrations do not have sufficient test connections to allow for individual testing. In some cases a test configuration could be developed using valves outside the containment boundary to individually test the applicable valves in the reverse direction or to block a leakage path through one valve while attempting to determine leakage through another. However it would be very difficult to obtain accurate and meaningful results. These test configurations would typically involve considerably larger and more complex test volumes which include test boundary valves that were never intended to be leak tight. As a result, this testing would cause a considerable burden regarding manhours required, additional exposure, maintaining additional test boundary valves and plant outage delays, without providing additional assurance of containment integrity.

Furthermore, for all simultaneous valve leak rate testing, conservatism is applied to assignment of leak rate test results. When a leak rate has been obtained for a simultaneous test, that leakage rate is assigned to each valve in the set within the test boundary. Corrective action is taken on all associated valves unless additional information is obtained which identifies the leaking valve.

Multiple valve leak rate testing, combined with conservatively applied leak rates, outweighs the burden of individual leak rate test attempts. This testing will identify stuck open valves and provide adequate assurance of containment integrity.

ALTERNATIVE TEST: Valves in each set (penetration) will be leak rate tested simultaneously. The measured leakage, which represents the combined leakage from the valves in the set, will be assigned to each valve.