

APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-298/88-17

Operating License: DPR-46

Docket: 50-298

Licensee: Nebraska Public Power District (NPPD)
P.O. Box 499
Columbus, NE 68601

Facility Name: Cooper Nuclear Station (CNS)

Inspection At: CNS, Nemaha County, Nebraska

Inspection Conducted: May 16-17 and May 23-27, 1988

Inspectors:

Claude E. Johnson
C. E. Johnson, Reactor Inspector, Plant
Systems Section, Division of Reactor Safety

6-22-88
Date

Amarj Singh
A. Singh, Reactor Inspector, Plant Systems
Section, Division of Reactor Safety

6/22/88
Date

Ramon V. Azua
R. V. Azua, Reactor Inspector, Test Programs
Section, Division of Reactor Safety

6/22/88
Date

Accompanying
Personnel:

G. Hammer, NRR; P. Bezler, NRC Consultant;
G. Breidenbach, NRC Consultant; P. Kuo, NRR;
W. Long, NRR

Approved:

W. C. Seidle
W. C. Seidle, Chief, Test Programs Section
Division of Reactor Safety

6/22/88
Date

Inspection Summary

Inspection Conducted May 16-17 and 23-27, 1988 (Report 50-298/88-17)

Areas Inspected: Routine, announced inspection of the CILRT, and the operability evaluation of essential piping systems for the Cooper Nuclear Station.

Results: Within the two areas inspected, one violation was identified (failure to follow the CILRT procedure, paragraph 2.b).

DETAILS

1. Persons Contacted

NPPD

- °*G. R. Horn, Plant Manager
- °*E. M. Mace, Engineering Manager
- °*J. M. Meacham, Senior Manager, Technical Support
- °*D. R. Robinson, Acting Quality Assurance (QA) Manager
- *R. Brungardt, Operations Manager
- *Y. Armstrong, Administrative Secretary
- R. Deatz, Test Director
- °F. J. Schaab, Project Engineer
- °M. T. Boyce, Licensing Engineer
- °G. R. Smith, Licensing Supervisor
- °K. C. Walden, Nuclear Licensing and Safety Manager
- °W. S. Fehrman, Mechanical Engineer

Testing Engineering Research (TER)

T. Renton, Consultant

CYGNA

- °N. Williams, Manager, Walnut Creek Area Office
- °L. Shipley, Manager, Western Region
- °R. Baliga, Engineer

NRC

- *W. R. Bennett, Senior Resident Inspector
- °W. Long, Project Manager, NRR
- °P. Kuo, Section Chief, NRR
- °P. Bezler, Engineer, NRC Consultant (BNL)
- *G. Breidenbach, Engineer, NRC Consultant (BNL)
- *°C. E. Johnson, Reactor Inspector
- *°A. Singh, Reactor Inspector
- °G. Hammer, Mechanical Engineer, NRR
- *R. Azua, Reactor Inspector

°Denotes those individuals attending the exit interview conducted on May 26, 1988.

*Denotes those individuals attending the exit interview conducted on May 27, 1988.

2. Containment Integrated Leak Rate Test

The objective of this inspection was to ascertain through direct observation, records review, and independent calculations whether the CILRT was conducted in compliance with the licensee's procedure and as required by the CNS Technical Specifications (TS), 10 CFR 50 Appendix J, and ANSI N45.4-1972, "Leakage-rate Testing of Containment Structures for Nuclear Reactors."

a. Procedure Review (70307)

The NRC inspectors reviewed TS 4.7.A regarding CILRTs and an approved copy of the procedure to be used in performing the CILRT. There were three exemptions to Appendix J of 10 CFR 50 requested by the licensee. Review of Amendments 38 and 44 to the Facility Operating License documented approval by the NRC of the exemptions.

The NRC inspectors reviewed Surveillance Procedure (SP) No. 6.3.1.3 "Primary Containment Integrated Leak Rate Test." Review of this procedure indicated the following items were addressed: proper materials and test equipment; posting of precaution and warning signs; TS limitations; prerequisites; detail steps and instructions for performing the test; restoration, and acceptance criteria. The TS and SP appeared to be in accordance with American National Standards Institute (ANSI) N45.4-1972 and Appendix J of 10 CFR 50.

b. Test Surveillance (70313)

On May 24, 1988, prior to initiation of the CILRT, the NRC inspectors performed a walkdown of the reactor building and the drywell. This was done to inspect a sampling of the CILRT valve lineup as described in the CILRT Procedure 6.3.1.3, Sections 5.5 and 8.4.1 through 8.4.4.

The NRC inspectors walked down all levels of the reactor building plus the 888', 901' and 933' elevations in the drywell. Valve positions were visually verified and were compared with the positions identified on both the procedure tables and the green ILRT tags. The green ILRT tags were hung from the respective control switches or handwheels to indicate the valve test position and to identify the affected valve as being part of the ILRT.

During the walkdown of the 931' level of the reactor building, the NRC inspectors noted that valve No. PC-80 was not in the proper position as identified on both the test procedure and the green ILRT tag. Further, the cap for valve No. PC-74 was not removed as directed by the procedure and the green ILRT tags. The NRC inspectors noted that both the tags and the procedure had signatures that identified these valves as having been verified. The NRC inspectors notified the licensee of their findings.

On May 25, 1988, the NRC inspectors returned to the 931' level of the reactor building to verify the number of the mispositioned valve and the number of the valve that was still capped. Upon arrival, the NRC inspectors noticed that valve No. PC-80 was still mispositioned, as previously identified, and the cap for PC-74 was still in place. In addition, it was noted that the contiguous valves that had green ILRT tags, and were identified the day before as being in the correct position, had been altered. The caps for valve Nos. PC-77, PC-79 and PC-84 had been replaced, contrary to what was required and identified in the procedure and the green ILRT tags. Also, PC-77 and other valves had been closed.

A technician who was working with an unassociated system nearby was questioned by the NRC inspectors. He was asked if he knew who altered the valves. He said that he had replaced the caps and shut the valves himself. He was asked if he had notified either the shift supervisor or the ILRT test director, and he said no. He was asked if he saw the green tags on the valves and, if he did, did he read them? He said he saw the green tags but did not read them. He was then asked if he knew the valves were being tagged out for the CILRT. He said no. Finally, he was asked why he altered the valves. He replied that he noticed the caps on those lines were missing and that the valves were open, so he took it upon himself to put them in the position in which he felt that they were normally operated. He said it did not occur to him to read the tags.

The licensee was notified of this apparent violation of Section 5.5 of the CILRT procedure. (298/8817-01)

One of the corrective actions taken by the licensee was to perform a second verification of the CILRT valve lineup. An additional column was added to the procedure tables for a second verification signature. Also, all the green ILRT tags were signed again, once the valves were reverified. This provided reasonable assurance that the valves were in the proper position prior to the test.

The NRC inspectors performed a walkdown following the licensee's reverification. The valves were identified to be in the proper position with their associated green ILRT tags to have the reverification signature. In addition, the inspectors verified that the instrumentation such as dew-monitors, which were located in the drywell at the 901' level, were calibrated within the time period specified in the procedure.

c. Test Witnessing and Results

Due to time constraints, the NRC inspectors were unable to be present during the actual test, i.e., pump-up, stabilization, data taking, and pump-down. The data and the results of this test will be forwarded to the NRC for review. The review of the results will be addressed in a separate report.

3. Operability Evaluation of Essential Piping Systems For CNS (92701)

During this inspection, the NRC inspector attended several meetings with consultants from Brookhaven National Laboratories (BNL) and representatives from NRR and the licensee on the subject of operability evaluation of essential piping systems for the CNS. At the end of the meetings, a plant tour was taken. This subject is being addressed in separate correspondence between NRR and the licensee.

4. Exit Interview

Two exit interviews were conducted at the conclusion of the inspection.

On May 26, 1988, the NRC inspectors, NRR representatives, and BNL consultants met with licensee representatives to discuss the findings associated with the operability evaluation of essential piping systems.

On May 27, 1988, the NRC inspectors met with licensee representatives to summarize the scope and findings of the CILRT inspection.

The licensee did not identify as proprietary any of the materials provided to, or reviewed by, the NRC inspectors during the inspection.