

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 50-298
License No.: DPR 46
Report No.: 50-298/98-21
Licensee: Nebraska Public Power District
Facility: Cooper Nuclear Station
Location: P.O. Box 98
Brownville, Nebraska
Dates: October 5-9, 1998
Inspector: Claude E. Johnson, Senior Reactor Inspector, Maintenance Branch
Accompanied By: Vitali Chevtchenko, Gosatomnadzor of Russia
Eva Hickey, Pacific Northwest National Laboratory
Svetlana Sidorchouk, Gosatomnadzor of Russia
Approved By: Dr. Dale A. Powers, Chief, Maintenance Branch
Division of Reactor Safety

ATTACHMENT: Supplemental Information

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EXECUTIVE SUMMARY

Cooper Nuclear Station
NRC Inspection Report 50-298/98-21

This inspection was a routine, announced inspection of activities associated with the third 10-year interval inservice inspection program, including the General Electric reactor inspection system automated ultrasonic examinations of the reactor vessel circumferential and longitudinal welds. This inspection covered a 1-week period from October 5-9, 1998.

Maintenance

- The third 10-year interval inservice inspection program was well defined and implemented the requirements of Section XI of the ASME Boiler and Pressure Vessel Code, 1989 Edition, no addenda. The licensee clearly identified, in the third 10-year interval inservice inspection program plan, the ASME Code Class components to be examined. The licensee appropriately submitted relief requests in accordance with the requirements of 10 CFR 50.55(a)(3) and (g)(5) for those Code Class weld examinations where 100 percent of full examination coverage was not achieved (Section M1.1).
- The refueling bridge and equipment were in good visual condition. Foreign material exclusion area controls for the reactor building refueling floor were good. Water clarity of the fuel pool during the installation of the General Electric reactor inspection system (automated ultrasonic examination of the reactor pressure vessel circumferential and longitudinal seam welds) was excellent (Section M2).
- Management oversight for the installation of the General Electric reactor inspection system was good, in that effective guidance and communications were noted (Section M4).

Plant Support

- The overall housekeeping for the reactor building refueling floor was good (Section M2).

Report Details

Summary of Plant Status

During this inspection period, the plant was in Refueling Outage 18.

M1 Conduct of Maintenance

M1.1 Inservice Inspection Program Plan and Schedule

a. Inspection Scope (73753)

The inspector performed a limited review of the licensee's "Third Ten-Year Interval Inservice Inspection Program Plan and Schedule," Revision 1.1. The inspector also reviewed the second 10-year interval inservice inspection program because of numerous deficiencies identified by the licensee in Condition Report 94-1123. In addition, the inspector reviewed inspection documentation from the second and third 10-year interval inservice inspection programs to determine if the licensee had submitted relief requests when less than 100 percent of any Code Class weld examination could not be accomplished.

b. Observations and Findings

The inspector found that the third 10-year interval inservice inspection program at Cooper Nuclear Station was well defined and had generally implemented the requirements of Section XI of the ASME Boiler and Pressure Vessel Code, 1989 Edition, no addenda. The inspector found that the licensee had performed an extensive and detailed review of the second 10-year interval inservice inspection program, which documented findings and recommendations. The inspector was informed by the licensee's staff that the findings and recommendations were incorporated into the second 10-year interval inservice inspection program. The inspector found that both the second and third 10-year interval inservice inspection program documentation was current and appropriately managed.

The program plan for the third 10-year interval, first period, documented both inservice and augmented inspections, and the methods of nondestructive examinations to be performed. The licensee's staff clearly identified, in the third 10-year interval inservice inspection program plan, the ASME Code Class components to be examined.

The inspector determined that the licensee had submitted relief requests for those Code Class weld examinations where less than 100 percent of full examination coverage was not achieved. The inspector specifically concluded that the licensee was complying with the requirements of 10 CFR 50.55(a)(3) and (g)(5).

c. Conclusions

The third 10-year interval inservice inspection program at Cooper Nuclear Station was well defined and had generally implemented the requirements of Section XI of the ASME Boiler and Pressure Vessel Code, 1989 Edition, no addenda. The licensee's staff clearly identified, in the third 10-year interval inservice inspection program plan, the ASME Code Class components to be examined. The licensee appropriately submitted relief requests in accordance with the requirements of 10 CFR 50.55(a)(3) and (g)(5) for those Code Class weld examinations where less than 100 percent of full examination coverage was not achieved.

M2 Maintenance and Material Condition of Facilities and Equipment

a. Inspection Scope (73753)

In the course of verifying the installation of the General Electric reactor inspection system (GERIS), the inspector examined the material condition of the refueling bridge and hoist.

b. Observations and Findings

The inspector noted that the reactor building refueling bridge and equipment were in good visual condition. During the installation of the GERIS, the bridge and hoist were used extensively. The GERIS 2000 was designed and used for automated ultrasonic examinations of the reactor pressure vessel circumferential and longitudinal seam welds from the inner diameter, with a minimum impact on other refueling activities.

The inspector noted that the licensee had established good foreign material exclusion area controls for the reactor building refueling floor. Water clarity of the fuel pool during the installation of the GERIS was excellent. The overall housekeeping on the reactor building refueling floor was good.

c. Conclusions

The visual material condition of the refueling bridge and equipment were good. Foreign material exclusion area controls for the reactor building refueling floor were good. Water clarity of the fuel pool during the installation of the GERIS was excellent.

M3 Maintenance Procedures and Documentation

M3.1 Nondestructive Examination Procedures

a. Inspection Scope (73753)

The inspector reviewed nondestructive examination (NDE) procedures identified in the Attachment, to determine if these documents were developed in accordance with regulatory and applicable ASME code requirements.

b. Observations and Findings

The inspector found that the NDE procedures reviewed contained sufficient detailed instruction to perform the intended examinations, and were in compliance with regulatory and applicable ASME Code requirements. The inspector noted that the licensee had reviewed and approved the contractor's procedures to be used at the Cooper Nuclear Station, and had maintained good control over applicable NDE procedures.

c. Conclusions

The inspector concluded that NDE procedures were in compliance with regulatory and applicable ASME code requirements, and that the licensee had maintained good control over contractor NDE procedures.

M4 Maintenance Staff Knowledge and Performance

a. Inspection Scope (73753)

The inspector assessed NDE personnel knowledge and performance through observation of work activities.

b. Observations and Findings

The inspector observed NDE personnel calibrate ultrasonic test equipment prior to performing examinations in the field. Calibrations were conducted appropriately and documented on calibration data sheets. The inspector did not identify any discrepancies.

The inspector observed three nondestructive examinations performed on the main steam reactor nozzle welds. The first two examinations were conducted on Weld MSB-BJ-111 (nozzle-safe end) and they included an ultrasonic and a magnetic particle examination. The third examination observed by the inspector was an ultrasonic examination performed on Weld NVIR-BD-N3A (inner radius). The inspector noted that NDE personnel performed the examinations in accordance with approved procedures, and were knowledgeable of the various techniques used.

The inspector observed the installation of the GERIS 2000 equipment. Installation activities were performed satisfactorily with minor problems noted. The installation of the GERIS was performed by experienced personnel. The inspector noted that management oversight for the installation of the GERIS equipment was good, in that effective guidance and communications were noted. The inspector did not note any significant problems during the installation of the GERIS. This activity was well planned.

c. Conclusions

Nondestructive examination personnel performed the examinations in accordance with approved procedures and were knowledgeable of the various techniques used.

Management oversight for the installation of the GERIS was good, in that effective guidance and communications were noted.

M5 Maintenance Staff Training and Qualification

a. Inspection Scope (73753)

The inspector reviewed 19 NDE personnel certification and qualification records.

b. Observations and Findings

The inspector noted that 2 of the 19 NDE personnel were Level III certified. The personnel records indicated that the NDE personnel were qualified to perform the examinations they were assigned. The inspector verified for each of these personnel that the qualification and certification record properly reflected the employer, the person certified, the specific methods qualified, the level of certification, the effective period of certification, and the annual visual acuity and color vision examination.

The inspector determined that NDE personnel designated as qualified to perform the examinations were properly certified according to the industry Standard ASNT-TC-1A.

c. Conclusions

The inspector concluded that NDE personnel were properly certified in accordance with industry Standard ASNT-TC-1A.

M8 Miscellaneous Maintenance Issue (92902)

M8.1 (Closed) Followup Item 50-298/9718-01: Adequacy of licensee's program to review and disposition GE service advice letters. The inspector verified that the licensee implemented a procedure change to Procedure 0.10, "Operating Experience Program," to ensure that service advice letters were clearly identified as documents to be included in the operating experience program for review and disposition. The inspector concluded that the licensee's corrective actions were appropriate.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection on October 9, 1998. The licensee acknowledged the findings presented.

The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Bohling, Quality Assurance Auditor
P. Donahue, Engineering Services Department Manager
M. Friedman, Senior Staff Engineer, Engineering Services Department
C. Gaines, Maintenance Manager
B. Houston, Licensing Manager
D. Kunsemiller, Consultant, Licensing
D. Madsen, Senior Licensing Engineer
M. Peckham, Plant Manager
M. Roup, Quality Assurance Auditor
R. Schultz, Senior Program Engineer, Engineering Services Department
J. Sumpter, Licensing Supervisor

Contractor

J. Hewett, General Electric, Project Manager

NRC

V. Gaddy, Acting Senior Resident Inspector
T. Meadows, Senior Reactor Engineer

INSPECTION PROCEDURES USED

73753 Inservice Inspection

ITEMS CLOSED

Closed

50-298/9718-01 IFI Adequacy of licensee program to review and disposition GE
service advice letters

LIST OF DOCUMENTS REVIEWED

Fall 1998 Outage	Third 10-Year Interval, First Period Inservice Inspection Pipe and Augmented Inspection Plan, Revision 0
GENE-523-008-0194	Cooper Nuclear Station RPV Flaw Evaluation Handbook, September 1998, prepared by GE Nuclear Energy, Revision 1
NLS980133, August 31, 1998	Inspection of Reactor Vessel Shell Welds Cooper Nuclear Station
GE-ADM-2007	Procedure For Assembly, Installation and Removal of The GERIS 2000 ID Upper Guide Ring In The RPV, Revision 0
UT-CNS-300V3	Procedure for Manual Ultrasonic Examination of Reactor Vessel Assembly Welds, Revision 0
386HA480	Certification of Nondestructive Test Personnel, Revision 16
Administrative Procedure 0.4A	Procedure Change Process, Revision 0
UT-CNS-104V0	Procedure for Manual Ultrasonic Planar Flaw Sizing, Revision 2
GE-ADM-2006	Procedure for Assembly, Installation and Removal of the GERIS 2000 ID Lower Guide Ring in the RPV, Revision 0
GE-UT-700	Procedure for the Examination of Reactor Pressure Vessel Welds with the GERIS 2000, Revision 2
UT-CNS-208V2	Procedure for Automated Ultrasonic Examination of Similar and Dissimilar Metal Piping Welds, Revision 0
UT-CNS-102V1	Procedure for Manual Ultrasonic Examination of Similar and Dissimilar Metal Piping Welds, Revision 0
UT-CNS-106V1	Procedure for Manual Ultrasonic Examination of Ferritic Piping and Vessel Welds 2" and Less in Thickness, Revision 0