

June 13, 2000

Mr. R. P. Powers
Senior Vice President
Nuclear Generation Group
American Electric Power Company
500 Circle Drive
Buchanan, MI 49107-1395

SUBJECT: NRC INSPECTION REPORT 50-315/2000011(DRS)

Dear Mr. Powers:

On May 18, 2000, the NRC completed a portion of an ongoing inspection of the steam generator replacement at your D. C. Cook Unit 1 reactor facility. The enclosed report presents the results of this inspection. No violations of NRC requirements were identified.

Areas examined are identified in the report. Within those areas, the inspection consisted of a selective examination of procedures and representative records, and interviews with personnel. The objective of the inspection effort was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room and will be available on the NRC Public Electronic Reading Room (PERR) link at the NRC home page, <http://www.nrc.gov/NRC/ADAMS/index.html>.

Sincerely,

/RA/

John A. Grobe, Director
Division of Reactor Safety

Docket No. 50-315
License No. DPR-58

Enclosure: Inspection Report 50-315/2000011(DRS)

See Attached Distribution

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R. Powers

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cc w/encl: A. C. Bakken III, Site Vice President
J. Pollock, Plant Manager
M. Rencheck, Vice President, Nuclear Engineering
R. Whale, Michigan Public Service Commission
Michigan Department of Environmental Quality
Emergency Management Division
MI Department of State Police
D. Lochbaum, Union of Concerned Scientists

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J. Caldwell, RIII w/encl

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-315
License No: DPR-58

Report No: 50-315/2000011(DRS)

Licensee: American Electric Power Company

Facility: Donald C. Cook Nuclear Generating Plant

Location: 1 Cook Place
Bridgman, MI

Dates: February 9, 2000 through May 18, 2000

Inspector: Donald Jones, Reactor Inspector

Approved by: John M. Jacobson, Chief, Mechanical Engineering Branch
Division of Reactor Safety

EXECUTIVE SUMMARY

D. C. Cook, Unit 1 NRC Inspection Report 50-315/2000011(DRS)

This ongoing inspection covered the conduct of a portion of the D. C. Cook Unit 1 steam generator replacement project. This was an announced inspection conducted by one regional inspector.

Maintenance

- The welding activities observed were well controlled and demonstrated good management oversight. Review of the radiography and post weld heat treatment records indicated that the welds were in compliance with the ASME Code (Section M1.1).
- Overall the prime contractor's quality controls were considered effective by the inspector as evidenced by the number and types of issues identified and corrected in the nonconformance reports (Section M7.2).

Report Details

M1 Conduct of Maintenance

M1.1 Observations of Replacement Steam Generator (RSG) Welding Activities

a. Inspection Scope (50001)

The inspector observed RSG welding activities and radiography results and post weld heat treatment records.

b. Observations and Findings

The inspector verified welder qualifications (Bechtel D. C. Cook Welder Qualification List) and filler material withdrawal (Filler Material Withdrawal Authorization (Form WR-6)) during observation of the following welding activities:

- feed water header gooseneck to thermal sleeve weld (# FW-5, steam dome 4) in accordance with weld procedure specification P43-T-0 (690)
- manual welding of the feedring support welds (numbers 11, 12, 13 and 14, steam dome 4) in accordance with welding procedure specification P1-A-Lh (STR)
- manual welding of the girth weld (chipping and preheat temperatures) of steam generator 3 in accordance with welding procedure specification P3(G3)-A-Lh

Radiographs of the following listed welds were reviewed by the inspector and found to be acceptable:

SYSTEM: Reactor Coolant System Piping

<u>RT NO.</u>	<u>WELD NO.</u>	<u>STEAM GENERATOR</u>
RT-040	FW-1	1
RT-039	FW-2	1
RT-017	FW-1	2
RT-018	FW-2	2
RT-027	FW-1	3
RT-026	FW-2	3
RT-045	FW-1	4
RT-044	FW-2	4

SYSTEM: FEEDWATER

<u>RT NO.</u>	<u>WELD NO.</u>	<u>STEAM GENERATOR</u>
RT-087	FW-1	1
RT-082	FW-2	1
RT-032	FW-3	1
RT-049/046	FW-4 R1	1
RT-053	FW-3 C1	2

RT-054	FW-4	2
RT-080	FW-5	3
RT-078	FW-6	3
RT-015	FW-3 R1	3
RT-037/022	FW-4 R2	3
RT-090	FW-7	4
RT-088	FW-8	4
RT-051	FW-3 R1	4
RT-050	FW-4	4

SYSTEM: REPLACEMENT STEAM GENERATOR GIRTH WELD

<u>RT NO.</u>	<u>WELD NO.</u>	<u>STEAM GENERATOR</u>
RT-074	FW-1	1
RT-091	FW-1	2
RT-069/075	FW-1	3
RT-089	FW-1	4

The inspector also reviewed the strip chart record of the post weld heat treatment of the RSG number 4 girth weld by verifying the hold times at temperature including the pre-heat and post-heat and the 5 hour hold time at 1152 degrees F. The inspector also verified the calibration record of the chart recorder used to produce the strip chart.

c. Conclusions

The welding activities observed were well controlled and demonstrated good management oversight. Review of the radiography and post weld heat treatment records indicated that the welds were in compliance with the ASME Code.

M7.2 Control of Nonconforming Conditions

a. Inspection Scope (50001)

The inspector reviewed the replacement steam generator project prime contractor's (Bechtel) nonconformance log, and selected nonconformance reports (NCRs) for further review.

b. Observations and Findings

The contractor documented in NCR No. 00-120 the usage of E7018 electrodes instead of E8018 electrodes in welding the girth welds of steam generators 3 and 4. The E7018 electrodes were determined to have been used in the cap pass of the weld, therefore, the disposition was to remove the cap pass for the full width of the weld on the entire circumference of the steam generator. The inspector reviewed the NCR disposition implementation and reinspection results and considered the actions to be appropriate.

The contractor documented in NCR No. 00-082 the exceeding of the post weld heat treatment temperature specified for the feedwater transition ring to steam dome 3 by 10 degrees F. for approximately 20 minutes. The disposition was to use-as-is since the

ASME Code post weld heat treatment temperature range was not violated and the original material tempering temperature was not exceeded. The inspector reviewed the project engineering disposition and considered the actions to be appropriate.

c. Conclusions

Overall the prime contractor's quality controls were considered effective by the inspector as evidenced by the number and types of issues identified and corrected in the nonconformance reports.

V. Management Meeting

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection on May 18, 2000. The licensee acknowledged the findings presented. The licensee did not identify any items discussed as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

C. Bakken, Site Vice President
R. Crane, Licensing
S. Johnson, SGRP Welding Engineer
J. Kobyra, SGRP Project Director
D. Petro, SGRP Engineering Manager
M. Allen, SGRP Production Manager
A. Rivers, Performance Assurance
B. Sears, SGRP Performance Assurance Lead
R. Meister, Regulatory Affairs

Bechtel

D. Williams, Project Manager
B. McKenzie, Construction Site Manager
G. Klein, Welding Supervisor
G. Stoll, NDE Level III

Conam

J. Ours, NDE Level II

INSPECTION PROCEDURES USED

IP 50001: Steam Generator Replacement Inspection

LIST OF ACRONYMS USED

NCR	Nonconformance Report
RSG	Replacement Steam Generator

PARTIAL LIST OF DOCUMENTS REVIEWED

<u>Procedure</u>	<u>Revision</u>	<u>Title</u>
RT-ASME/ANSI	0	Bechtel Nondestructive Examination Standard Radiographic Examination
PHT-1	2	Bechtel Special Processes Manual, Section 7, Post Weld Heat Treatment Standard
GWS-TC	1	Thermocouple Attachment
18504-CHP-006	1	Girth Weld Postweld Heat Treatment (PWHT)