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SUBJECT: Forwards response to Suppl 2 to NRC Bulletin 89-001, "Failure of Westinghouse Steam Generator Tube Mechanical Plugs." Item 2c inapplicable since Westinghouse mechanical plugs from Heat Batch NX-5222 not installed at facility.

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ROBERT C. MECREDY
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Ginna Nuclear Production

TELEPHONE
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July 29, 1991

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Response to Bulletin 89-01, Supplement 2
Failure of Westinghouse Steam Generator Tube
Mechanical Plugs
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Johnson:

NRC Bulletin 89-01, Supplement 2 requested that licensees verify installation of thermally treated inconel 600 steam generator tube mechanical plugs supplied by Westinghouse, and if applicable, address action Items 1 and 2a through 2f.

Enclosed is the Rochester Gas and Electric Response to actions requested.

Very truly yours,

Robert C. Mecredy

Subscribed and sworn to before me
on this 29th day of July, 1991.

James C. McGuire

JAMES C. McGUIRE
NOTARY PUBLIC, State of New York
Qualified in Monroe County
My Commission Expires Dec. 28, 1992

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xc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector - Ginna Station

References

1) Addendum 2 to Revision 3 of Westinghouse Report WCAP-12244, "Steam Generator Tube Plug Integrity Summary Report", June 1991

Response to Item 1

Rochester Gas & Electric has reviewed the information provided by Westinghouse in Table 2 of Reference 1. The listing of hot and cold leg temperatures, the number of mechanical plugs installed, date of installation and plug heat batches was correct for plant conditions prior to the 1989 Refueling Outage. However, during the 1989 Refueling Outage, Rochester Gas & Electric removed seven (7) Westinghouse mechanical plugs. Consequently, Table 2 of Reference 1 needs to be revised as shown in Attachment 1. The present number of Westinghouse mechanical plugs still installed in the Ginna steam generators is 176. All of these plugs are located in Steam Generator "B" with a distribution of 89 hot leg plugs and 87 cold leg plugs.

Rochester Gas & Electric has also reviewed the Westinghouse estimates on the Effective Full Power Days (EFPD) of cumulative operation for each set of plugs identified in Table 2 of Reference 1. Due to the higher operating capacity factor (approximately 80%) achieved by the Ginna Nuclear Power Plant during the 1980's, the Westinghouse estimates of remaining plug life as presented in Table 2 of Reference 1 are too high. Using actual cycle burn-up data, the estimated cumulative operating time up through the 1991 Refueling Outage and remaining plug life in EFPDs have been revised. These revised results are shown in Attachment 1.

Based upon the correlation for mechanical plug operating life developed by Westinghouse in Reference 1 for the various batches of plugs installed at Ginna and the cumulative operating time to date, the remaining EFPDs for the various batches of hot and cold leg plugs have been re-calculated and are presented in Attachment 1. Using the remaining EFPDs for the hot leg plugs and assuming an average cycle length of 300 EFPDs, Rochester Gas & Electric has estimated the latest Refueling Outage year that would require either repair or remedial action for the installed hot leg plugs. These estimated years are presented in Attachment 1. It should be noted that the tabulated repair years do not include the one year buffer that Westinghouse used in Reference 1 to calculate repair years. Additionally, the calculated repair year is based upon an estimate of future plant operating performance. Actual operating data for future cycles could affect the actual plug specific repair years.

Response to Item 2a

Rochester Gas & Electric will perform appropriate remedial actions for all Westinghouse Alloy 600 mechanical plugs prior to their cumulative operating time exceeding the effective operating life for the plugs as provided by Westinghouse in Reference 1.

Response to Item 2b

Due to actual operating data for the Ginna Nuclear Power Plant during the 1980's, the remaining EFPDs for the installed mechanical plugs is lower than the estimates provided by Westinghouse in Reference 1. Actual operating time to date and revised remaining operating life for the installed mechanical plugs are provided in the response to Item 1. These values in conjunction with future operating characteristics will be used by Rochester Gas & Electric to determine when remedial actions are needed for the various batches of hot leg mechanical plugs installed at the Ginna Nuclear Power Plant. Due to the extremely large effective lifetime calculated by Westinghouse in Reference 1 for all of the cold leg plugs, Rochester Gas & Electric believes no future remedial actions will be required for these plugs.

Response to Item 2c

This item is not applicable to Rochester Gas & Electric since Westinghouse mechanical plugs from heat batch NX-5222 are not installed at the Ginna Nuclear Power Plant.

Response to Item 2d

Rochester Gas & Electric discontinued installing Westinghouse Alloy 600 mechanical plugs after 1982. Rochester Gas & Electric will not install any Westinghouse Alloy 600 mechanical plugs in the future.

Response to Item 2e

If Rochester Gas & Electric undertakes any actions other than repair or replacement of mechanical plugs for insuring plug integrity, Rochester Gas & Electric will inform the NRC of the actions taken and provide the NRC with the necessary technical justification to support these actions. This information will be provided to the NRC at least 30 days before the end of the Refueling Outage in which these actions are performed.

Response to Item 2f

All remedial actions undertaken by Rochester Gas & Electric to insure mechanical plug integrity will be reviewed prior to implementation to ensure that ALARA considerations have been properly addressed.

ATTACHMENT 1

Rochester Gas & Electric Revisions to Table 2 of Addendum 2 of WCAP-12244, Rev.3

Plug Install Date	No. of Plugs Installed	Plug Heat No.	SG #	HL or CL	Initial EFPD to Min.	Ref. Calc Date	EFPD to Ref. Date	Remain. EFPD to Min.	Year to Repair Plug	Plugs Removed
12-79	8	9789	B	HL	4734	3/91	3215	1519	1996	0
04-80	32	9789	B	HL	4734	3/91	3120	1614	1996	0
04-80	1	9789	A	HL	4734	3/91	3120	1614	1996	1
02-82	16	1660	B	HL	4734	3/91	2615	2119	1998	0
10-82	1	2386	A	HL	4734	3/91	2515	2219	1998	1
10-82	33	2386	B	HL	4734	3/91	2515	2219	1998	0
12-79	8	9789	B	CL	53262	3/91	3215	50047	>2009	1
04-80	33	9789	B	CL	53262	3/91	3120	50142	>2009	0
04-80	1	9789	A	CL	53262	3/91	3120	50142	>2009	1
02-82	16	1660	B	CL	53262	3/91	2615	50647	>2009	2
10-82	1	2386	A	CL	53262	3/91	2515	50747	>2009	1
12-82	33	2386	B	CL	53262	3/91	2515	50747	>2009	0