

50-213



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 23, 1996

Ms. Rosemary Bassilakis
54 Old Turnpike Road
Haddam, CT 06438

Dear Ms. Bassilakis:

I am responding to your memorandum to Chairman Jackson of September 10, 1996, in which you requested that the U.S. Nuclear Regulatory Commission (NRC) ensure that extensive steam generator (SG) testing at the Haddam Neck Plant is performed using state-of-the-art plus point probes.

By way of background, there are four Westinghouse Model 27 SGs in use at the Haddam Neck Plant. Each SG contains 3,794 alloy 600 steam generator tubes. The major forms of degradation affecting the SG tubes at Haddam Neck include primary water stress corrosion cracking within the tubesheet (mostly in the hot leg root transition region) and outside diameter initiated corrosion (e.g., pitting and wastage) just above the secondary face of the tubesheet. To date, a total of 1253 tubes have been plugged in the four SGs (255 in SG 1 (6.7%); 426 in SG 2 (11.2%); 111 in SG 3 (2.9%); and 461 in SG 4 (12.2%)). Additional details regarding the major types of degradation affecting the SG tubes and information related to the 1995 SG tube inspections are discussed in the licensee's May 24, 1995, letter (Enclosure 1).

After weaknesses were noted in the SG tube inspection findings at Maine Yankee Atomic Power Station and after considering the safety significance of this issue, the NRC issued Generic Letter (GL) 95-03, "Circumferential Cracking of Steam Generator Tubes," on April 28, 1995. GL 95-03 requested licensees to develop plans for their next SG tube inspections as they pertain to the detection of circumferential cracking.

Connecticut Yankee Atomic Power Company, the licensee for Haddam Neck, responded to GL 95-03 by letters dated June 27, 1995, and February 16, 1996. In these letters, the licensee described its inspection plans for the refueling outage that had recently begun at Haddam Neck. The licensee stated that the tube locations susceptible to circumferential cracking would be inspected using equipment "qualified for crack detection in accordance with Appendix H of the EPRI [Electric Power Research Institute] PWR [Pressurized Water Reactor] Steam Generator Examination Guidelines, Revision 3, EPRI Report NP-6201."

Both the plus point coil and the pancake coil are qualified for detecting cracks in accordance with the EPRI report. As evidenced by operating experience throughout the industry, either coil can detect SG tube cracks at an early enough stage to ensure SG tube integrity provided that plant-specific conditions, which may affect the capabilities of the coils, are considered and evaluated. These plant-specific conditions include such items as the interval between inspections and the presence of conditions that cause interfering

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signals. With respect to your specific concern regarding the use of the plus point coil, the licensee has used this coil in the past for monitoring certain locations susceptible to cracking as documented in the licensee's June 16, 1995, letter (Enclosure 2). The licensee's responses to GL 95-03 are also enclosed for your information (Enclosures 3 and 4). As indicated in the enclosures, the licensee has used a combination of qualified probe types for SG tube crack detection. The probe type used is dependent on the type of degradation being assessed. The staff concludes that no additional regulatory action is required at this time to ensure the safe operation of the Haddam Neck SGs. The NRC has no basis on which to require the licensee to include any particular SG assumptions in its economic analysis of the viability of Haddam Neck's continued operation. Nevertheless, we would assume that the licensee would make realistic assumptions about future costs to maintain safe operation of the facility.

On October 9, 1996, the owners of Haddam Neck said that an economic analysis of operations, expenses, and the cost of replacement power indicated that a permanent shutdown of the plant seemed likely. As a result of the analysis, restart related plant work (including SG inspections) has been postponed pending a final decision by the licensee's Board of Directors. The licensee has informed the staff that the planned SG inspection will not take place if the plant is permanently shutdown.

Sincerely, Original signed by
 Frank J. Miraglia
 Frank J. Miraglia, Acting Director
 Office of Nuclear Reactor Regulation

Enclosures: As stated

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RZimmerman

TMartin

PDI-3 Plant (w/incoming)

SVarga/JZwolinski

PMcKee

PMilano

JStrosnider

NRR Mailroom (EDO #GT96703 (w/inc))

CNorsworthy

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*See previous concurrence

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DATE	10/18/96	09/24/96	10/18/96	10/18/96	09/26/96
OFFICE	D:DRPE	ADPR	D:NRR	D:EDO	OC
NAME	SVarga*	RZimmerman*	FMiraglia	JTaylor*	SJackson
DATE	09/27/96	10/01/96	10/18/96	10/08/96	09/18/96

OFFICIAL RECORD COPY

October 18, 1996



EDO -

Attached is the proposed response to Rosemary Bassilakis. Please note the last two sentences (in bold) that have been added at the suggestion of the Chairman and Commissioner McGaffigan. The Chairman's office would also like to have a couple sentences added about Haddam Neck's recent decision to stay shutdown. There is no need for further Commission review. *on EDO.*

Doris Mossburg
415-1964

Att.

*Please provide file
copy to OEDO.*

*Thank you,
Cathy Jaeger*

Check as G.L. 75-03

ACTION

Dembek

EDO Principal Correspondence Control

FROM:

DUE: 10.02/96

EDO CONTROL: GT96703

DOC DT: 09/10/96

FINAL REPLY:

Rosemary Bassilakis
Citizens Awareness Network

TO:

Chairman Jackson

FOR SIGNATURE OF :

** PRI **

CRC NO: 96-0978

Russell

DESC:

ECONOMIC ANALYSIS OF HADDAM NECK NUCLEAR POWER
PLANT

ROUTING:

Taylor
Milhoan
Thompson
Blaha
HMiller, RI

DATE: 09/19/96

ASSIGNED TO:

CONTACT:

NRR

Russell

SPECIAL INSTRUCTIONS OR REMARKS:

Put EDO and Chairman on for concurrence.
Chairman's Office to review response prior
to dispatch.

NRR RECEIVED:

SEPTEMBER 19, 1996

NRR ACTION:

DRPE:VARGA

NRR ROUTING:

RUSSELL
MIRAGLIA
THADANI
ZIMMERMAN
MARTIN
BOHRER

ACTION

DUE TO NRR DIRECTOR'S OFFICE

BY

Sept 30, '96

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

PAPER NUMBER: CRC-96-0978 LOGGING DATE: Sep 13 96
ACTION OFFICE: EDO
AUTHOR: ROSEMARY BASSILAKIS
AFFILIATION: CONNECTICUT
ADDRESSEE: CHAIRMAN JACKSON
LETTER DATE: Sep 11 96 FILE CODE: IDR-5 HADDAM NECK
SUBJECT: ECONOMIC ANALYSIS OF HANDDAM NECK NUCLEAR POWER
PLANT
ACTION: Direct Reply
DISTRIBUTION: CHAIRMAN
SPECIAL HANDLING: SECY TO ACK
CONSTITUENT:
NOTES: CHAIRMAN SHOULD REVIEW RESPONSE PRIOR TO DISPATCH
DATE DUE: ~~Sep 27 96~~
SIGNATURE: OCT 3 DATE SIGNED:
AFFILIATION:

EDO -- GT96703

Rec'd Off. EDO
Date 9/18/96
Time 3:30