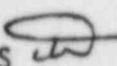


July 2, 1982

H. Gray

DOCKET NO. 50-289

MEMORANDUM FOR FILE

THRU: Jacques P. Durr, Chief, M&PS 
FROM: Harold Gray, Reactor Inspector, M&PS
SUBJECT: MEETING IN BETHESDA 6/28-29/82 ON REACTOR COOLANT SYSTEM (RCS) AND
STEAM GENERATORS (OTSG)

The meetings covered results of the reactor system internals inspection, cause of problem status and plans for work on steam generators and the corrosion relation between the two systems. The attendee's list is attached.

The documentation referenced and presented at the meetings is noted below:

TDR #343 by GPU of 6/14/82 - RCS
Task 7, Appendix C - RCS inspections by GPU
TDR #341 (draft copy) OTSG Failure Analysis (Preliminary)
TMI #1, OTSG copy of slides presented on Failure Analysis and Data, by
S. Giacobbe (GPU)
TMI #1 OTSG Status and Repair Process Description of 6/29/82

As discussed by C. McCracken with NRC and consultants, attached is the 6/18/82 status update for TMI #1 steam generator corrosion study and repair. Of particular interest is the outline of consulting laboratories and their tasks.

Specific questions by Region I (H. Gray) included:

- (1) How to purge system of remaining sulfur
- (2) OTSG Bubble Leak Test - What pressure gas (N_2)
- (3) What is the maximum allowable sulfur level acceptable in the system prior to start up?
- (4) What will prevent sulfur attack of the RCS and OTSG during pretest time heat up, testing, operations and the next wet layup.
- (5) Where will blasting cap be located to detonate explosive? Answer - outside of steam generator head in a container to prevent mercury and copper contamination.
- (6) Will tube length and therefore tube preload be changed by the explosive expansion process? Answer - the tube length will not be significantly changed by the process.

IN SUMMARY

- (1) RCS examination showed no cracking or defects attributable to sulfur assisted stress corrosion cracking.
- (2) There are no known outstanding problems that would hinder successful steam generator repair that are not in the schedule with work proceeding for resolution.
- (3) The overview of the O.T.S.G. repair sequence is to flush the tube-tubesheet crevice explosive from the tubes into the tube to tubesheet annulus to form a seal, base line eddy current (E.C.) inspect a sample of tubes (1000), hot full pressure test with a shutdown transient, cold wet layup and eddy

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- current inspect preliminary to operational test cycle.
- (4) The exact length of tube to be explosively expanded into the tubesheet is still under consideration but is expected to be between 12-16".
 - (5) The main corrosion question is IF or how remaining insoluble sulfur should be removed from the system internals.
 - (6) A test explosive expansion is planned in a full size steam generator at Mount Vernon, Indiana during the week of 7/12/82.

for Jacques D. [Signature]
Harold Gray
Reactor Inspector

Enclosures:
As stated

H. Gary

NRC/GPU MEETING 6/28/82
TWO-1 STEAM GENERATORS

1. SINGH
C. McCracken
Harold Gary
John R. Weeks
Robert L. Dillon
DAVID SLEAR
C.D. Sellers
JACK BERGA

TWO-1 PM / NRC
NRC/NRC/DE/CMED
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BNL
BTH PNL
GRUNC
NRC MTER
EPRI

S. SINGH BAJWA

NRC

Scott Giacobbe
Phil Matthews
Carl S. Schulten
Paul Wu
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H. F. CONRAD

NRC/NRC/CMED

D. van Rooyen

BNL - Upton NY.

HAROLD BEHNKE

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Charles Davey

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VINCENT K. LUK

FRC

E. M. UCHIDA

FRC

Larry Edwards

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M. S. BRADY

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8:30

8:30 Am

6/29/82

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NRC/GPU STEAM GENERATOR
REPAIR MEETING

6/29/82

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C. McCracken
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John Rebeck
Demens Auerbach
R.J. Conte
Harold Gray
Larry Leonard
Ed Wallace
JOHN F. PEARSON
Richard E. Kraska
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Mary Jane Graham
F. Scott Giacobbe
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D. H. BROOKER
ED. MUCHAM
VINCENT K. ALUK
M. CARRINGTON
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B&W
B+W
FWEA
GPUN-Partip
GPWN
Babcock & Wilcox
NRC/MTER
NRC/DL
GPUN-Comm.
GPUN
GPLIN
COUN
GRN/NUCLON
FRC
FRC
NRC/DL
NRC/DE
THEPO/NRC

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Roger Newman BNL

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III
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