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March 14, 1979

Dr. Joseph Muscara
Metallurgy and Materials Branch
Reactor Safety Research Division
Nuclear Regulatory Commission
Mail Stop 1130-SS
Washington, D.C. 20555

Dear Joe:

PWR Steam Generator Tube Integrity Program
NRC/RSR - B-2097
January and February 1979

The following were the monthly activities for January and February 1979.

Management Activities

Pacific Northwest Laboratory program management responsibility was transferred from Milt Vagins to Robert A. Clark on February 9, 1979. This transfer was due to the departure of Mr. Vagins from Battelle. Mr. Clark authored the original program proposal and has been a principal investigator involved in the program since its inception. The NRC conducted its annual program review in early February. No written comments were received from the reviewers. However, oral comments regarding format of data presentation and inclusion of Babcock and Wilcox specimens into our test matrix will be addressed as requested in the NRC mid-year program task letter.

Surry Steam Generator Task

The feasibility study addressing transfer of a retired Surry Steam Generator to Hanford was completed in February. The study results were circulated for internal PNL review and review by DOE-RL. Upon approval of those agencies, a final letter report was drafted for transmittal of the feasibility study results to NRC-RSR. A project organization was established at PNL to conduct several tasks recommended by the feasibility study for further FY 1979 action. Initiation of these tasks awaits NRC-RSR task authorization. With issuance of the feasibility study letter report in early March, this task is considered complete.

Non-Destructive Testing Tasks

We are still attempting to achieve a non-destructive characterization of stress corrosion cracked steam generator tubing. An attempt at characterization using neutron tomography has been held up. Equipment for neutron tomography is in the prototype stage and the researchers are having operational problems. Thus our subcontract for services awaits the availability of the experimental equipment at Los Alamos Laboratory.

George Lyon and Chuck Morris attended an eddy current signal evaluation course offered by Zetec. Our EM3300 was also recalibrated by Zetec during this course.

Statistical analysis of Phase I eddy current data is continuing. Chuck Morris is intending, upon NRC approval, to present Phase I eddy current results at two conferences in April.

Materials Tasks

The new stress corrosion cracking autoclave set-up is ready for plug-in of the Nickel 200 autoclave. Specimens are being prepared to be available simultaneous with autoclave start-up. A further accoustic emission test was conducted on the old SCC set-up. This test achieved an excellent specimen with two linear cracks only partially through wall. The accoustic emission data is being correlated by Phil Hutton's people.

Reporting

The Phase I topical report was completed. A draft copy was forwarded to NRC-RSR. The camera ready copy will go to NRC the week of March 12, 1979. The Battelle composite NRC quarterly report, October 1 - December 31, 1979 has been completed. The document is now going through management review prior to publication.

Yours Sincerely,

R. A. Clark
Senior Research Scientist
Corrosion Research & Engineering

RAC:daa

cc: Public Document Rm (3)

INTERIM REPORT

Accession No. 7904050065

Contract Program or Project Title: Steam Generator Tube Integrity Program

Subject of this Document: Monthly Progress Report January-February 1979

Type of Document: Informal Letter Report

Author(s): R. A. Clark

Date of Document: March 14, 1979

Responsible NRC Individual and NRC Office or Division: Dr. Joseph Muscara
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This document was prepared primarily for preliminary or internal use. It has not received full review and approval. Since there may be substantive changes, this document should not be considered final.

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Prepared for
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