

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

CMEB

JUN 14 1982

MEMORANDUM FOR: William V. Johnston, Assistant Director
Materials & Qualifications Engineering, DE

James P. Knight, Assistant Director
for Components & Structures Engineering, DE

FROM: Richard H. Vollmer, Director
Division of Engineering

SUBJECT: REVIEW OF TMI-1 STEAM GENERATOR TUBE REPAIR
PROPOSAL

As you are aware, in the near future the Division of Engineering will be reviewing the licensee's proposal for repairing the TMI-1 steam generator tubes. The proposal is expected to contain the rationale for: (1) the selection of specific tubes to be repaired; (2) the procedures for repairing the tubes (either by plugging or by explosive forming of short sleeves within the tube sheet); (3) the removal of any remaining contaminants from the steam generator or reactor primary system; and (4) the evaluation of the examination of the primary system internal components for corrosive attack. The purpose of this memo is to define the DE responsibilities and interfaces to assure an efficient and high quality review of this topic.

The Materials Engineering Branch is responsible for the review of the adequacy of the tube repair criteria, including that for plugging defected tubes where the defects are not within the tube sheet region. In addition, MTEB is responsible for evaluation of the primary system, including internal components which were potentially subject to corrosive attack.

The Mechanical Engineering Branch is responsible for evaluation of the process of expanding and sealing of defected tubes in the tube sheet region, as well as the evaluation of the long term integrity of this revised reactor coolant pressure boundary configuration. The potential effects, if any, on the tube sheet or other members as a result of this repair process should be evaluated.

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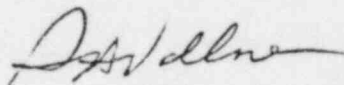
The Chemical Engineering Branch is responsible for the review of the procedure to be used for removing contaminants from the steam generators prior to tube repair. Particular attention should be given to residual contaminants in the crevices formed by the repair and the likelihood of further attack.

The Quality Assurance Branch is responsible for evaluating if the controls provided will assure that the procedures, personnel qualifications, materials, special processes and inspections are adequate.

The Chemical Engineering Branch, specifically Conrad McCracken, is requested to coordinate the inputs from the above groups and prepare a single SER for the Division of Engineering.

This effort should generally be conducted within the scope of review as defined in the latest SRP revision. However, because of the unique nature of this repair and the potential for extended hearings, staff work should be augmented by outside consultants who have expert experience in the problems raised by this proposed repair procedure.

Please arrange for timely briefings to keep this and other interested NRR offices informed of progress during this review.



Richard H. Vollmer, Director
Division of Engineering

cc: H. Denton
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