

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DOCKETED
USNRC

In the Matter of
METROPOLITAN EDISON COMPANY
(THREE MILE ISLAND NUCLEAR
GENERATING STATION, UNIT 1)

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Docket 50-289
Steam Generator Tube Repairs

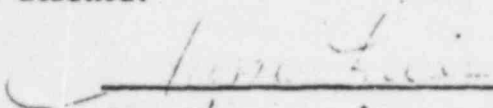
LEE ET AL., RESPONSES TO STAFF INTERROGATORIES (12/23/83)

1. IGA and IGSCC can be initiated.
2. We believe we can only know the answer to this after the results of the cleaning process are fully determined by measurements taken on the OTSG piping and throughout the RCS.
3. a. IGSCC was found in areas of most severe IGA. See SER Att. 3, Pg. 2, #2., "severe cracking is usually related to more severe IGA."
4. Yes, Possibly. Definition of inadequacies and their remedies can only be defined on the basis of experimental work which clearly defines the conditions which cause IGSCC initiation in IGA islands and demonstrates the effects of those parameters which influence the length of time required to initiate IGSCC and subsequent thru-wall cracks.
5. a. - Low Valence Carbon
- Heretofore unidentified or unevaluated agents
- Sulfur contaminants in the Inconel 600
- Heretofore unidentified synergists
b. IGSCC, thru-wall cracks
c. - Failure of licensee to conduct an in-depth search for agents other than low valence sulfur
- SER, Third Party Review 2/18/83 Pg. 9, Recommendation #1
"Carbonates in the presence of oxidants at high temperature can produce IGA of IGSCC of Inconel 600."
- Failure of Licensee to conduct any evaluation/ possible synergistic effects with contaminants present in the water.
d. - IGSCC and thru-wall cracks could occur and nobody knows how or when.
e. - Nobody knows but should be experimentally determined.
f. - We don't know, and apparently Licensee does not either.
g. - We don't know. Their presence must be confirmed or denied experimentally.

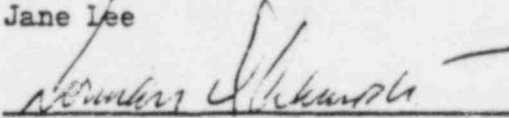
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h. - Possibly. Experimental verification is required.

6. Yes, possibly, in that the universe of potential cracking agents has not been defined. It must be defined.



Jane Lee



Norman O. Aamodt

January 16, 1984