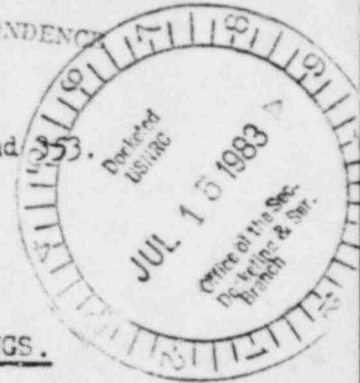


UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

RELATED CORRESPONDENCE

In the matter of)
Phila Electric Company)
(Limerick Generating Station
Units 1 and 2))

Dockets Nos. 50-352 and 353.



SECOND ROUND OF INTERROGATORIES IN THE LIMERICK OPERATING LICENSING HEARINGS.

In compliance with the Memorandum and Order Confirming Schedules Established During Pre hearing Conference (May 16, 1983.), Intervenor Lewis submits his second round of interrogatories to the Applicant and the Staff. Again please use the "definitions and instructions " set up by the Applicant (in his) First Set of Interrogatories and Request for Production of Documents to Delaware"(July 21, 1982,) on Pages 1 thru 4 inclusive.

I am submitting the same set of interrogatories to the applicant and the staff. Please state if the staff discussed the answers to these interrogatories with the applicant and v.v.

1. When was Pressurized Thermal Shock first raised as an issue in any NRC commercial nuclear power plant hearing? Which hearing? Page nos of Transcript ?
2. Present a history or explanation of the development of pressurized thermal shock(PTS) as a problem and show how PTS has been investigated and raised to its present level of concern.
3. A. For the NRC Staff: Include dates when pertinent NRC memo's and NUREG's were issued , presentments before the ACRS , boards and professional societies and agency conferences on the subject of PTS.
B. For the applicant: Include dates and reasoning when the applicant (thru design change requests, company correspondence, other paperwork) changed or investigated procedures, materials , or testing due to any PTS related concern.(For instance: welding procedures, metallurgical alloys, ultrasonic testing.) Present latest company material and welding procedures , dates on which these procedures were last updated and document specifications; such as ASTM , ASME, or NRC which were the basis of change.

The response to Interrogatory 3 shall be limited to procedures and documentation pertaining to PTS and PTS associated concerns only.

4. NRC : The resume or credentials of Demetrios Basdekas are requested.
5. NRC :The staff is requested to present Demetrios Basdekas as a witness. Please explain what steps would be necessary to get Demetrios Basdekas as a witness.

In the following questions , exposure to neutron flux is referred to as "neutron bombardment in the following questions.

6. Applicant and NRC documentation admits, thatneutron bombardment affects the "brittleness" of metals. This increase in brittleness and decrease in toughness is measure by a change in the value of a Charpy V-notch test. Is this increase in brittleness the only change observed directly attributable to neutron bombardment?
7. Have other changes in any properties been attributed , observed or theorized to change due to neutron bombardment?

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8. Do metals , which have been embrittled by neutron bombardment, show any changed behaviour when previously , subsequently, or concurrently exposed to environments which cause chloride sensitization, ordering reaction, or any other deleterious effect? vs metals not embrittled by neutron bombardment?
9. Have these sets of permutations and environmental testing been explored experimentally or in actual reactors? Give dates and extent of evaluation.
10. Is there any theoretical or physical reason that neutron embrittlement should or should not affect properties other than toughness?

I am sending this out to the entire mailing list for the Docket 50-353 and 353, and I do so certify.

sent off by 1st class mail 7-13-83.

Marvin I. Lewis