EDO Principal Correspondence Control

FROM: DUE: 11/22/00 EDO CONTROL: G20000494
DOC DT: 10/15/00
FINAL REPLY:

Marvin I. Lewis
Philadelphia, Pennsylvania

TO:

Commission

FOR SIGNATURE OF : ** GRN ** CRC NO: 00-0640

Collins, NRR

DESC:

2.206 -- Request to Stop Operation at Nuclear Power Plants Affected by Steam Generator Tubing Cracks

DATE: 10/19/00

ASSIGNED TO: CONTACT:

NRR Collins

SPECIAL INSTRUCTIONS OR REMARKS:

ROUTING:

Travers
Paperiello
Miraglia
Norry
Craig
Burns
Subbarathnam,NRR
Cyr, OGC
Goldberg, OGC

Template: SECY-017

E-RIDS: SECY-01

OFFICE OF THE SECRETARY
CORRESPONDENCE CONTROL TICKET

Date Printed: Oct 18, 2000 10:13

PAPER NUMBER:	LTR-00-0640	**LOGGING DATE:**	10/18/2000
ACTION OFFICE:	EDO		
AUTHOR:	MARVIN LEWIS		
AFFILIATION:			
ADDRESSEE:			
SUBJECT:	REQUEST TO CLOSE INDIAN POINT 2--NRC SPECIAL INSPECTION REPORT....		
ACTION:	Appropriate		
DISTRIBUTION:	CHAIRMAN, COMRS		
LETTER DATE:	10/15/2000		
ACKNOWLEDGED	No		
SPECIAL HANDLING:			
NOTES:	2.206 REQUEST		
FILE LOCATION:	ADAMS		
DATE DUE:		**DATE SIGNED:**	

From: "Marvin I. Lewis" <marvlewis@juno.com>
To: <BAJ011545@aol.com>, <novakpen@utility.net>, <cata...
Date: Sun, Oct 15, 2000 9:19 PM
Subject: Request to close IP2.

Marvin I. Lewis
3133 Fairfield St.
Phila., PA 19136
215 676 1291
United States Nuclear Regulatory Commission
Washington, D. C. 20555
Dear Commissioners;

Please accept this letter as a comment and a plea for action on the problems of steam generator tubing cracks in nuclear power plants. I am specifically pointing out deficiencies in the investigation of tube failures, connections between said tube deficiencies and probabilistic risk assessment and inaccurate conclusions regarding root causes of the tube failures. The sum of these comments is my conclusion that these deficiencies endanger the public in direct contradiction to the requirements of the Atomic Energy Act and the the Charter of the NRC to protect the health and safety of the public.

The action that I seek is a cessation of operations at nuclear power plants affected by steam generator tubing cracks. A cessation of operations at affected plants is the only course that would protect the health and safety of the public.

Comment and Critique of the NRC Specail Inspection Report IP2 SGTF 05000247/2000-010.

This letter critiques and comments upon the NRC Specail Inspection Report IP2 STGF 05000247/2000-010 dated August 31, 2000. My reading of the report produced the following points:

1. Tube cracks were missed because the sensitivity of the probe was reduced: a possibility not specifically mentioned in the Specail Report. There are several reasons that the sensitivity may have been reduced. This method is often used to try to reduce interference such as 'noise' which was present during the testing. Another possibility was to avoid indications which the client would not like.
2. The Specail Report concludes that the cause of the tube failure was that crack indications were not detected and persued. This was a cause of the tube failure , but not a root cause or first cause (prima causa). A tube crack had to exist for the tube to fail. An etiology of what caused that tube crack is the first cause (prima cause.) Tube crack indications must be detected and persued to protect the health and safety of the public. The first cause of the crack needs to be addressed also. The first cause is important as the steam generator cracking at IP2 is 80 times greater than predicted in the design documents!
3.The report gives the root cause of the tube failures as PWSCC, primary water stress corrosion cracking. The PWSCC is the result of hour glassing at the TSP, tube support plate. The hour glassing is caused be deposition of a corrosion product, magnetite, from the carbon steel of the TSP. The water chemistry had to be such that the corrosion proceeded to cause enough deposition of magnetite to produce PWSCC to give 80 times more tube cracking than used in design documents!
4. The Specail Report admits that tube cracking is 80 times more likely

than used in design documents.Page 16.
5. The primary and secondary coolant may be involved due to "presence of chlorides and sulfates." Page 4.
6. Primary and secondary coolant contamination by microbial contamination which introduced corrosion potentials was not mentioned. (Engineering News Record 8/28/00 Page 58.)
7. Detection methods have provided inadequate and misleading results, or the licensee "did not have a procedure, a method or criteria" to determine hour glassing Page 8 or "specific review" of " crack significance." Page 7. Cracks were not detected or persued (Letter NRC to Blind EA#00179.)
8. The Specail Report exposes immediate dangers that extend to all NPPs using Steam generators. Tube cracking has occurred at IP2 at a rate 80 times greater than used in design documents. A miscalculation of 8000% shows the entire notion of PRA, probabilistic risk analysis, defense in depth, and the new inspection programs as inadequate to protect the health and safety of the public. (See attachment 2 of the Specail Report re SGTF "600 gallon per minute leak.")
9. The NRC cites, " Con Ed did not recognize and take appropriate actions." The NRCdid not reconize and take appropriate actions. The motivation for not taking appropriate actions is limited to "training" in this Specail Report Page 3 and 4. The real motivation to take inappropriate action remains, and can cause inappropriate action to resume in the next tube failure.

Inappropriate action has endangered the public at IPA2 and at other NPPs. We are doomed to repeat our mistakes unless we learn from them. The Specail Report does not purport to have learned adequately.
10. The Specail Report cites SCC as the "Applicable Steam Generator Degradation Mechanism". PWSCC requires "applicable steam generator degradation mechanisms." PWSCC or SCC requires "a tensile stress, a specific corrosive medium, and a susceptible material." The "susceptible material" is "mill annealed Inconel Alloy 600."

Inconel 600 has notable resistance to stress corrosion cracking and provides an excellent choice for steam generator service as evidenced by its history in this application for decades. When Inconel 600 fails in steam generator service from SCC, the history about the particular lot of Inconel 600 needs investigation:
A. How have coupons of this heat treament lot of Inconel 600 done in service and laboratory testing?
B. Is the original design proper or does the design overstress, not provide stress relief, or subject the tubing to conditions beyond the Inconel 600 capability?
C. What is the specific work hardening history? Was the tubing annealed properly after work hardening? Please provide certifications with appropriate lot numbers for annealing, work hardening for the Inconel 600 lot in question.
11. The Specail Report gives the area of "a specific corrosive medium" as the coolant on the secondary side due to the "presence of chlorides and sulfates." Page 4. this leads to many questions unanswered in the Specail Report:
A. Why were the chlorides and sulfates allowed into the secondary coolant in sufficient concentration and time to cause tube cracking? Many clean up mechanisms are in place to assure a non-corrosive medium in the coolants. Why were they deficient? How is this being addressed now? Where

are the laboratory reports on the coolants showing the corrosion potential?
B. The Specail Report cites the corrosion of the TSP producing "magnetite" which "grows". Why was the coolant allowed to be corrosive despite the clean up mechanisms in place? Where are the laboratory reports on the Ph, sulfates, chlorides in the coolants? Why wasn't corrosion potential measured by Langlier?

Request for Action:

In the short term an 8000% overoptimistic estimate results in an unexpected risk to the health and safety of the public, increases operating costs, reduces availibility, and puts the probabilistic risk assessment in doubt. This overoptimistic estimate puts all NPPs in the category of indangering the health and safety of the public. The design of NPPs rests on engineering estimates. The engineering design at IP2 rests on an engineering assessment that is 8000% overoptimistic, which reflects an tube failure rate of 80 times more than the engineering assessment of one tube failure in the lifetime of IP2.

I request that the NRC cease all operations of all nuclear power plants using steam generator tubing until all the above questions are answered for all NPPs involved.

Respectfully submitted,

10-16-2000.