

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

NOV 10 1987

MEMORANDUM FOR: Thomas M. Novak, Director
 Division of Safety Programs, AEOD

THRU: Jack E. Rosenthal, Chief *JKR*
 Reactor Operations Analysis Branch
 Division of Safety Programs, AEOD

FROM: Peter Lam, Chief
 Reactor Systems Section W and B&W
 Reactor Operations Analysis Branch
 Division of Safety Programs, AEOD

SUBJECT: TRIP REPORT - TURKEY POINT SITE VISIT ON NOVEMBER
 4 AND 5, 1987

On November 4 and 5, 1987, Eric Leeds and I visited the Turkey Point site to discuss recent operating events involving the intake cooling water (ICW) system, the identification of root causes of these events, the adequacy of corrective actions implemented and planned, and the licensee's ongoing efforts in ICW system modifications. This site visit was conducted as a part of our current effort in a systematic and comprehensive review, analysis and evaluation of operating experience related to service water system failures and degradations.

The topics for discussion in our two-day visit are listed in the enclosed agenda. Emphasis was placed on the following items:

1. Single failure vulnerabilities of the ICW system and corrective actions implemented and planned.

The licensee had identified two potential single failures of the ICW system: a spurious closure of valve CV2202 leading to ICW system failure; and the failure of valve CV2201 to close on demand leading to ICW system flow degradation. The corrective actions already implemented involve a hardware modification (added piping bypassing valve CV2202) and a procedural change (stationing a local operator on valve watch for CV2201). Other corrective actions on a longer term basis are being evaluated by the licensee.

2. Fouling of ICW/CCW heat exchangers due to calcium carbonate deposition.

The source of the calcium carbonate is the coral and limestone in the ICW cooling canals. The fouling of the heat exchangers is severe, which necessitates heat exchanger performance testing and cleaning about three times a week during summer months to ensure acceptable heat exchanger performance under postulated design basis accident conditions. The

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licensee has installed an Amertap system (a system commonly used on circulating water condensers) which uses sponge balls to continuously clean the heat exchanger tubes during ICW operation.

3. Licensee's options for upgrading the ICW system.

These options involve the replacement of ICW system piping to eliminate an observed problem of structural degradation of piping where instrument taps are located due to graphite deposits; and the automatic isolation of a part of the system serving turbine cooling from the ICW/CCW heat exchangers.

During entry and exit meetings with licensee site management, in response to a licensee inquiry, a discussion was provided to describe both the process and the product of an AEOD case study report, and how it will be fed back to the industry. Specifically, the following items were discussed: (a) the process of initiating and conducting a technical study based on a systematic review, analysis and evaluation of operating events; (b) AEOD management review and approval of recommendations; (c) peer review of case study reports for technical accuracy but not the recommendations; (d) the resolution and documentation of peer review comments; (e) the transmittal of final case study reports to program and regional offices; (f) the tracking of recommendations until their satisfactory resolution; and (g) the feedback of AEOD technical reports to the industry. It was emphasized that the results gathered and insights gained during the site visit would be fed back to the industry in a constructive way so that Turkey Point's operating experience would provide valuable lessons learned.

Finally, we would like to acknowledge the efforts of NRR project manager (Dan McDonald), the Turkey Point senior resident inspector (Russ Brewer), Region II representative (Mike Scott), and licensee's technical staff, who all contributed to the fruitful site visit.

Peter Lam

Peter Lam, Chief
Reactor Systems Section W and B&W
Reactor Operations Analysis Branch
Division of Safety Programs, AEOD

Enclosure: Agenda

cc: E. Jordan
C. J. Heltemes
V. Benaroya
K. Black
M. Williams
E. Leeds
* McDonald, NRR
H. Berkow, NRR
R. Brewer, RII
M. Scott, RII

AGENDA

NOVEMBER 4, 1987

9:30 - 9:45	Introduction of Attendees & Opening Statements	Russ Gouldy JNL
9:45 - 10:00	PTN's Intake Cooling Water System	Tom Fisher System Eng.
10:00 - 10:45	ICW Surveillance Program	
10:45 - 11:00	Break	
11:00 - 12:00	Control of Calcium Carbonate	Tom Fisher
12:00 - 12:30	Lunch	
12:30 - 2:30	ICW Walkdown	All
2:30 - 2:45	ICW LERs	Tech. Dept.
2:45 - 3:30	ICW JCO	Ed Preat - JPM Mark Kobl - JPE
3:30 - 4:00	ICW Proposed Upgrade	Ed Preat
4:00 - 4:30	Open Discussion & NRC Requests	

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9:30 - 11:30	Walkdown of Systems	
11:30 - 12:00	Lunch	
12:00 - 12:15	Closing Remarks	