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

AUG 20 1985

S. Elrod

MEMORANDUM FOR: Roger D. Walker, Director
Division of Reactor Projects, Region II

FROM: James G. Partlow, Director
Division of Inspection Programs
Office of Inspection and Enforcement

SUBJECT: AUXILIARY FEEDWATER SYSTEM OPERATIONAL READINESS INSPECTION BY IE PERSONNEL - TURKEY POINT

This memorandum confirms our plans to conduct an inspection at the Turkey Point site. The inspection will be performed during August 26-30 and September 9-13, 1985. An exit meeting is planned for September 13, 1985.

The inspection team will be:

Name	Badge No.	Social Security Number
*Leonard J. Callan	A-3052	458-72-8770
Ralph E. Architzel	A-3063	072-42-3247
Thomas O. Martin	B-2973	187-42-7446
Jimmy D. Smith	B-2972	416-48-5921

*Team Leader

The team will also include two NRC contractors (from WESTEC Services, Inc.) for whom security information is not available.

James G. Partlow, Director
Division of Inspection Programs
Office of Inspection and Enforcement

cc: SRI-Turkey Point

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Inspection Plan for Turkey Point

Inspection Objective:

The objective of the IE team inspection at Turkey Point is to assess the operational readiness of selected safety systems. This assessment is to be comprehensive, including, but not limited to, a determination of the following:

- if the system is capable of performing all of the safety functions required of it by its design basis and safety analysis;

- if the system has been adequately tested to demonstrate that it will perform all of the safety functions required of it;

- if the system's components (with emphasis on pumps and valves) have been adequately maintained to ensure their operability under all postulated conditions;

- if operator/maintenance technician training is adequate to ensure proper operation and maintenance of the system;

- if the human factors considerations relative to the system (e.g., accesibility and labelling of valves) and the system's

supporting procedures are adequate to ensure proper system operation under all accident conditions.

Background:

One of the major conclusions from the NRC investigative team that reviewed the June 9, 1985 loss of all feedwater event at Davis-Besse (discussed in detail in NUREG-1154) was the extreme importance of adequate attention to detail by licensees with regard to care of plant equipment. Specifically, the operational readiness of safety systems was found to be highly dependent on the quality of the maintenance, engineering design, testing of equipment, and evaluation of operating experience provided for system components.

Many of the specific safety system weaknesses that led to the June 9, 1985 event at Davis-Besse had gone undetected by the NRC despite the aggressive implementation of the MC 2515 Program by NRC Region III. An innovative inspection method may prove to be more effective in identifying the type of problems that can degrade the operational readiness of safety systems.

Inspection Methodology:

1. Review the design basis requirements for the selected systems and determine the operating conditions under which each active component will function under accident or abnormal conditions.

A. for valves: What permissive interlocks are involved? What differential pressures will exist when the valve strokes? Will the valve be repositioned during the course of the event? What is the source of control/indication power? What control logic is involved?

B. for pumps: What are the various flow paths the pump will experience during accident scenarios? Do the flow paths change? What permissive interlocks/control logic apply? How is the pump controlled during accident conditions? What suction/discharge pressures can the pump be expected to experience during accident conditions? What is the motive power for the pump during all conditions?

C. for instrumentation: Is the instrumentation of adequate range and accessibility for operations to control the system under normal and abnormal conditions?

2. Review the design of the selected systems as installed in the plant.

A. Determine if the as-built design of system modifications matches the system's current design basis requirements (e.g., are fuses and thermal overloads properly sized? are current D.C. loads within the design capacity of the station batteries?).

B. Determine if system modifications implemented subsequent to initial construction have introduced any unreviewed safety questions.

3. Review the maintenance and test records for the selected systems.

A. Determine if the system components have been adequately tested to demonstrate that they can perform their safety function under all conditions they might experience in an accident situation.

B. Determine if the system components are being adequately maintained to ensure their operability under all accident conditions (e.g., are limit and torque switch settings proper? is the instrument air system adequately maintained to ensure the reliability of pneumatic valves? are fuse and thermal overload sizes correct?).

4. Perform walkdown of selected systems.

A. Determine if components are labeled and accessible (can the components be operated locally/manually if required? is there HP/security interference?).

B. Determine if MOV operators and check valves (particularly plug-type) are installed in the orientation required by the manufacturer.

C. Determine if system lineup is consistent with design basis requirements. Included in this lineup should be considerations of the normal and backup power supplies, control circuitry, indication and annunciation status, and sensing lines for instrumentation.

5. Review abnormal, emergency, and normal operating procedures for the selected systems.

A. Determine the technical adequacy of the system procedures (is the amount of detail provided consistent with the training provided to the operator?).

B. Determine if the procedural steps pertaining to abnormal emergency conditions are consistent with the design basis.

6. Review the operational experience of the selected systems (LERs, NPRDS, 50.72 reports, enforcement, maintenance work requests, etc.)

A. Determine the historical reliability of the system and its components.

B. Determine if the licensee has aggressively pursued, identified, and corrected root cause problems.

C. Determine the extent of the maintenance backlog and ascertain if the licensee has a program to ensure that priority safety-related maintenance is performed in a timely manner.

Inspection Team Composition and Assignments:

Inspector	Lead Responsibility*
L. J. Callan	Team Leader/Item 6
T. O. Martin	Item 3.B
R. E. Architzel	Item 3.A
J. D. Smith	Item 5
WESTEC contractors (2)	Items 1 and 2
N. Merriweather (RII) and M. B. Shymlock (RII)	Item 4

*The item numbers listed under the heading "Lead Responsibility" refer to the action items of the Inspection Methodology section of this Inspection Plan.