

William Fernandez II
Resident Manager

January 25, 1991
JAFP-91-0070

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT
DOCKET NO. 50-333
INSPECTION NO. EXAMINATION REPORT
NO. 50-333/90-24 (OL)

Gentlemen:

We are submitting our response to unresolved items 333/90-21-01 and 333/90-21-02 as requested by the subject examination report dated December 14, 1990. This refers to the NRC administered examinations conducted during the week of October 29, 1990 by R. Conte, D. Florek, J. Williams, L. Wink, S. Hansell and J. Hanek (EG&G NRC contractor).

A. Unresolved item 333/90-21-01, section 4.1 Response to Abnormal Conditions of the examination report, listed five observations which were considered discrepancies relating to emergency/abnormal procedures.

1. Observation One:

"The examiner observed that the transition from the Emergency Operating Procedures (EOPs) to the system operating procedures or abnormal operating procedures (AOPs) are not always clearly indicated on the EOP flow charts. While this did not appear to cause the applicants difficulty during the examination process, this could result in errors by the operating staff when actually using the EOPs. Examples identified are the transitions identified in EOP-2 "RPV Control" to inject water into the reactor pressure vessel with the fire water crosstie and the transition in EOP-3, "Failure to Scram" to AOP-38. No specific procedure sections are referenced in the EOPs. The fire water crosstie option requires the use of three separate procedure portions to inject water into the reactor vessel and AOP-38 has multiple sections, some of which may not be required to be performed, or if performed will degrade the plant response."

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Response to Observation One:

FitzPatrick's EOP "flow chart" implementing procedures were carefully researched and developed over a lengthy period of time to meet human factor and technical requirements. As a result, specific procedural cross-references were intentionally not included in the flow charts to reduce the mass of information presented in the already complicated flow charts.

Operating shifts are trained on the use of these procedures and the transition between procedures. Proficient use and easy transition to these support procedures is maintained through simulator training. As indicated in the observations, "this did not appear to cause applicants difficulty."

Additionally, during NRC inspection 50-333/90-20, which specifically addressed EOP implementation, operating crews were observed in the simulator using the EOPs and support procedures. As stated in this inspection report, "The crew's performance was satisfactory." During the operating crew critique, the inspector told the crew they had demonstrated good procedure usage and transition between the EOPs and other procedures was performed in a smooth manner. In addition, the inspector verbally communicated to plant management that the EOP flow chart procedure methodology as implemented was very good.

As discussed in the response to observation two, the Authority continually assesses procedures for improvements where appropriate and beneficial.

Based on initial and requalification training and observed use of the EOPs, the basic philosophy of not referencing all specific procedure sections has been correct.

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2. Observation Two:

"The examiner was also concerned on the adequacy of the procedures referenced from the EOP flowcharts. The three separate sections utilized to accomplish the fire water crosstie activity were not directly linked by the procedure. The linkage of the procedure sections was left up to operator judgement."

Response to Observation Two:

To improve the ease of use, the RHR operating procedure will be revised to contain all necessary steps required to inject fire water using an available fire pump. This change will eliminate the need for the operator to use three separate sections to control a single evolution. This revision will be made and operating crews will be trained on this revision by March 31, 1991.

The FitzPatrick simulator has only been used for training for approximately 18 months. During this period numerous procedure changes have been made as operating shifts identify improvements. The simulator allows many plant procedures to be exercised that have never been used previously. This use has identified errors, methods to ease the transition between procedures and improvements to individual procedures. As these items are identified the Authority will continue to update and improve plant procedures.

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3. Observation Three:

"The sequence for operating the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) systems under emergency (or urgent) conditions, as identified in the approved operator aid, did not agree with the number sequence posted on the HPCI and RCIC operating panels. The HPCI and RCIC valve operation sequence on the approved operator aid agrees with the HPCI and RCIC operating procedures when performing a "manual initiation" of the respective system. The labeling numbers on the HPCI and RCIC panels utilize a different sequence of valve operation than the operating procedures and operator aids. During a simulator walkdown, the examiners were informed that the numbers were used by the operators to manually initiate the HPCI and RCIC systems to allow the operators to place the system in service without taking the extra time to find the correct procedure. Although plant staff personnel were aware of this difference for approximately one year, they agreed to resolve the discrepancy utilizing the human factor groups."

Response to Observation Three:

The Authority agrees and a modification was processed by the human factors group. The numbers have been removed from the operating panels.

4. Observation Four:

"The examiners also expressed concern that the Abnormal Operating Procedure tool cabinet in the relay room is not locked. The AOP tool cabinet contains the tools, procedures and jumpers to perform tasks directed by the EOP flow charts. The applicants utilized the tools in the AOP tool cabinet to perform non-EOP flow chart tasks. While there was no indication that any equipment was missing, the examiner was concerned of the lack of control of the AOP tool cabinet. If non-emergency use of the AOP tool cabinet is permitted, the required tools, procedures and jumpers may not be available during an emergency."

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Response to Observation Four:

The Authority agrees. Several of the tool cabinets cannot be locked as they currently exist. The cabinets will be modified to allow installation of a lock. The cabinets will be added to the periodic inventory currently performed on shutdown outside the control room cabinets. These cabinets will be added to the inventory surveillance by March 31, 1991.

5. Observation Five:

"The glare on the EOP flowcharts in the control room and simulator resulted in the applicants having to frequently adjust their body and head position in order to be able to read the flowcharts. This could result in the operators making errors in the control room when the flowcharts are being used."

Response to Observation Five:

During the development of the EOP flow charts, many human factor considerations were required to be resolved. Examples include: large type size versus manageability of overall large chart, the ability to mark and erase the users place and keeping notes versus the glare of the surface. While the smooth surface can cause some glare, it is easily marked upon with grease pencil and more importantly erased. This is necessary to allow the user to maintain his current location in each procedure. Any entry condition requires re-entry into affected EOPs. This may require erasing previously marked paths. Non-glare coverings were used as a trial during the flow chart verification. It was found that the mechanism that produced a non-glare quality also made it impossible to easily erase.

During initial training of the operating crews all users were questioned about their ability to read and follow the flow charts based on lighting, type size and glare. All crews found the current flow charts and plastic covering acceptable. After many hundreds of hours of use during simulator training no errors have been identified as being caused by glare.

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- B. Unresolved item 33/90-21-02, section 4.2 Biennial Procedure Review of the examination report, described several deficiencies in the biennial review of procedures.

"The biennial procedure review as described in AP-1.4, "Control of Plant Procedures," was not performed in a timely manner for all plant procedures. Section 7.8 of AP-1.4 indicates that nuclear or environmental safety procedures shall be reviewed at approximately 2 year intervals not to exceed 2-1/2 years. At the time of the examination, several fire protection procedures and surveillance procedure ST-40H, "Instrument Valve and Instrument Root Valve Alignment" had exceeded the 2-1/2 year limit for a procedure review. Based on review of the biennial procedure review log book located in the control room, several procedures in the past also had exceeded the 2-1/2 year limit for procedure review. It also appeared that the 2 year review date was frequently exceeded and the 6 month grace period for procedure review completion was frequently utilized. The examiner also was concerned on the quality of the review conducted to meet the requirement of AP-1.4 based on indication in the biennial review log book that one person completed a full log page of fire protection procedure reviews on the same day."

Response:

The biennial review requirements of plant procedures as described in AP-1.4 applies to those procedures which are nuclear or environmental safety related. It does not apply to all procedures. In addition, AP-1.4 allows the review to be deferred if the procedure has been revised within the prior two years and a review checklist was used.

After the inspection, the Authority took actions to review and ensure all Operations Department procedures requiring biennial review were within the 2-1/2 year review period. The Fire Protection Procedures discussed in this observation were related to Fire Pre-Plan Actions in Non-Safety Related areas of the plant and Fire Protection Supervisor Out Building Inspections. These procedures did not require the 2-1/2 year review in accordance with AP-1.4. These reviews were actually completed over a several week period, by the Fire Protection Supervisor, but the review was signed off in the review schedule on the same day. The Fire Protection Supervisor waited until all the reviews were completed before completing the administrative task of initialing and dating the review schedule.

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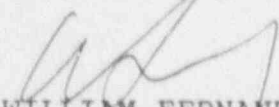
The procedure file for ST-40H was reviewed and documentation of a biennial review completed within the 2 year period was located in the file subsequent to the inspection. ST-40H was reviewed on February 16, 1988 and again on February 9, 1990.

Addressing the concern on the quality of review based on number of procedures reviewed in a single day, the time required to complete an adequate review is dependent on the type and length of the procedure. A page in the biennial review book could include 20 annunciator response procedures, each consisting of a single page, or 20 operating procedures, each averaging 60 pages. It can be seen the review time required would be drastically different.

The procedure review did identify several annunciator response procedures associated with the feed and condensate system which had slightly exceeded the allowed review period. These were immediately acted upon. This oversight was a result of unclear direction in program implementation within the Operations Department. An Operations Department Standing Order (ODSO) is being generated to correct this weakness. This ODSO will describe responsibilities and method of scheduling reviews. Responsibility will also be clearly stated to track the status of procedures currently due for review.

The Quality Assurance Department will conduct an audit of the Operations Department biennial review program. This audit will be completed by April 30, 1991.

Very truly yours,


WILLIAM FERNANDEZ

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