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September 30, 1988
JAFF-83-0903

United States Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555
ATTN: Document Control Desk

SUBJECT: Response to Concerns Identified During the NRC Emergency Operating Procedures Inspection at the James A. FitzPatrick Nuclear Power Plant

REFERENCE: Letter from S. Varga to J. Brons dated August 2, 1988 Concerning Emergency Operating Procedures Inspection (Inspection Report 50-333/88200)

Dear Sir:

This letter responds to the seven concerns identified in the "Summary of Results" section of your Inspection Report 50-333/88200 (Reference 1).

1) NRC Concern:

The EOPs and the PSTGs had not been maintained as a design basis document and therefore have not been maintained up-to-date and appropriately controlled. This resulted in several discrepancies between the PSTGs and the EOPs."

Authority Response:

The Emergency Operating Procedures (EOPs) and the procedure Writer's Guide have been controlled documents and adequately maintained since the start of the EOP program. The plant specific technical guidelines (PSTG) and associated calculations which have not been as rigorously maintained, will be sent to the plant's Document Control Center for archival storage.

A new department procedure (Operations Department Standing Order 26, "Maintenance of Operations Records") has recently been implemented. Changes to this and other procedures will be made as part of the overall EOP upgrade program to provide more detailed guidance on the record retention and control of the PSTG and supporting calculations.

2) NRC Concern:

Plant process computer setpoints did not correspond to the EOP entry conditions and potential confusion existed in the measurement and indication methodology of suppression pool level. In addition, outstanding validation comments concerning the suppression pool level measurement methodology had not been satisfactorily documented."

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TO: US NRC
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Authority Response:

Operations personnel know that the SPDS identifies if an EOP entry condition has been met. Personnel will be instructed to use the main control panel indications as backup. The Safety Parameter Display System (SPDS) subsystem of EPIC is a concise display of the EOP entry conditions consistent with the parameters and units specified in the EOPs. The units of measurement and reference point for suppression pool level were consciously left different in the EOPs and on SPDS (during the initial implementation of the SPDS) to maintain the EOP entry conditions consistent with indications that the operator was familiar with (0 to -1.5 inches are the numbers we use for determining Technical Specification compliance), while making the SPDS consistent with the lower level support displays. These displays use feet of water above torus bottom invert, since EOP control actions encompass a wide range of water levels, and this is the most reasonable unit of measurement (and the system we wished to use in the long term). The intention of plant personnel was to operate in this manner for an unspecified period of time, to allow operating staff familiarization with the new level references, and then to revise the EOP entry condition to be in feet of water above torus invert. This revision to EOP-4, Primary Containment Control, will be made prior to start-up from the current refueling outage.

The old plant process computer in which the setpoint discrepancies were observed is in the process of being totally replaced by the newer EPIC system. This old computer will be totally removed from the control room in 1989.

To help prevent recurrence of similar errors, a detailed validation and verification program will be completed as a part of the effort to upgrade the plant's EOPs to the Rev. 4, BWROG EPG. It is also planned to revise the procedure writer's guide to include guidance concerning the level of verification and validation necessary to support EOP revisions as part of the EOP upgrade effort.

The plant is also involved in a continuing effort to improve the man-machine interface encountered by the operators. As part of this program, many inconsistencies in plant instrumentation and procedures have already been identified. These inconsistencies are being eliminated by an ongoing, systematic program of plant modifications.

3) NRC Concern:

In a few instances, information or equipment necessary for the performance of the EOPs had not been provided."

Authority Response:

The specific corrective actions for the few identified instances are as follows:

A revision to F-AOP-35, "Post Accident Venting of the Primary Containment" to include Figure F-EOP-4.6a, (the Primary Containment Pressure Limit for use with 16-1PIT-104) will be completed prior to start-up from the current refueling outage.

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As you have noted, a modification has been initiated to install permanent drain connections for use in venting control rod drives while performing F-AOP-34, Alternate Control Rod Insertion.

The deficiencies noted during the walkdown of F-AOP-43, "Plant Shutdown From Outside the Control Room", (difficulty in opening a remote shutdown panel and in identifying lights indicating control power availability for EDG synchronization) will be corrected by procedure revision or hardware changes, as appropriate, prior to start-up from the current refueling outage.

4) NRC Concern:

The EOP simulation adequately demonstrated that the minimum shift crew described by Technical Specifications was sufficient to accomplish the required actions of the EOPS. However the team could not conclude that sufficient personnel would be available to accomplish all of the actions required in an emergency, such as implementation of the Emergency Plan or activation of the Fire Brigade, coincidental with implementation of the EOPS. In addition, a method of placekeeping was not used by the operators during the performance of the EOPS. Placekeeping methods have not been utilized during periodic training and were not supported by the procedures."

Authority Response:

NYPA believes that the staffing levels at FitzPatrick are adequate. The minimum defined levels comply with applicable NRC regulations and are comparable with staffing levels at other U.S. nuclear power plants.

Specification 6.2, Figure 6.2-1 and Table 6.2-1 of the FitzPatrick Technical Specifications clearly define minimum shift crew composition. One year ago, the Authority revised the Technical Specifications to add a second Senior Reactor Operator (SRO - Assistant Shift Supervisor) to the minimum shift crew. This new crew member was added to comply with the requirements of NUREG-0737 Item 1.A.1.3 and Generic Letter 86-04 ("Commission Policy Statement on Engineering Expertise on Shift.")

These changes were approved by the NRC as Amendment No. 111. The NRC staff, in the safety evaluation associated with this amendment, stated, referring to Table 6.2-1, "Minimum Shift Manning Requirements":

"The requirements of this table are consistent with applicable sections of 10 CFR 50.54."

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Technical Specification 6.2.3 already considers the effects of fire brigade duty when establishing minimum shift crew composition, stating that the

"fire brigade of (5) or more members ... excludes two (2) members of the minimum shift crew ..."

Typically, one SRO (the Assistant Shift Supervisor) and two operators from the shift crew leave to join the fire brigade. Assuming that only the minimum shift crew were on-site, this would still leave the Shift Supervisor (an SRO) and a Reactor Operator on-duty in the Control Room with an additional reactor operator available to be used anywhere.

During normal business hours, the control room staff will be able to devote their attention to executing EOPs. During off-hours, other plant personnel will be available to assist them. The FitzPatrick Security Plan requires that members of the Security Staff must be present twenty-four hours a day. Plant procedures require that two Radiological and Environmental Services (RES) technicians be on-site at all times. During off-hours, emergency procedures require that the control room staff perform off-site notifications and event classifications until additional personnel can relieve them. An existing "call-out" procedure assures that additional trained and qualified plant personnel can be on-site in one hour. In an unannounced drill, approximately 100 persons responded within one hour - including licensed reactor operators.

The issue of placekeeping aides is being addressed in the EOP upgrade program. The new EOPs to meet EPG Revision 4, are being developed in a flowchart format which allows for easier placekeeping.

5) NRC Concern:

A response to the Safety Evaluation incorrectly indicated that action statements would not be carried over from one page to another."

Authority Response:

The NRC had stated that "Information should be presented in procedures so that interruptions in flow are minimal. To achieve this, each procedure should be written so that an action step, a warning (caution), or a note should be completed on the page where it began. This guidance should be included in the writer's guide." Our response to this comment was that "The Writer's Guide ... requirement for conciseness and precision in instructions naturally achieves these results. More specific guidance will be provided in a future revision of the Writer's Guide." As was stated in the cover letter for the above submittal, NYPA did not intend to make "major revisions to the EPGs, Writer's Guide and EOPs ... until final issuance and approval of the generic EPGs" (Revision 4). The intent of the original response was not that action steps should not be carried over from page-to-page (this is occasionally impossible due to the length of a step), but that such carry-overs should be minimized and performed in a consistent manner. Recognizing the sensitivity of this issue, a revision to the EOP Writer's Guide which addresses this issue will be completed as part of the upgrade program in progress.

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6) NRC Concern:

Sufficient guidance was not provided in the EOP for Primary Containment Control to describe the calculation of the Heat Capacity Temperature Limit."

Authority Response:

The plant staff agrees that the calculation required to obtain the Heat Capacity Level Limit may be difficult to perform under accident conditions. Use of these curves is included in licensed operator classroom training, and exercised during simulator training. We will attempt to identify a method of making this calculation easier for an operator to perform.

7) NRC Concern:

An evaluation had not been performed to demonstrate the capability of the Standby Gas Treatment System to operate under the anticipated accident conditions of high pressure and temperature during containment venting."

Authority Response:

NYPA does not consider it necessary to assure Standby Gas Treatment System (SBGT) operability during all cases of primary containment emergency venting.

The EPG direction to vent primary containment was meant to be irrespective of offsite radioactivity release rate (this is stated explicitly in EPG, Rev. 4) as indicated by the words in the February, 1984 Draft Appendix B (page 8.6-20): "Containment failure may follow if suppression chamber pressure exceeds the Primary Containment Pressure Limit; at this point venting the containment is the only mechanism which remains to prevent an uncontrolled, unpredictable breach of primary containment integrity and release of radioactivity to the environment. Although venting will probably result in the release of some radioactivity to the environment, this is preferable to containment failure whereby adequate core cooling is also lost and radioactivity is released with no control whatsoever."

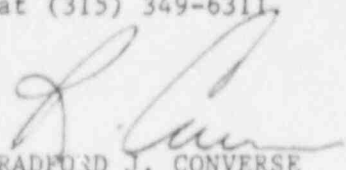
NYPA believes a potential ground level release outside of secondary containment is preferable to a potential failure of primary containment, because the former is much more likely to permit access to secondary containment to perform activities necessary for accident mitigation.

Evaluations have been performed which demonstrate that containment isolation valves close fast enough to assure that SBGT will remain intact if a LOCA occurs while venting through the 6 inch vent line.

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If you have any further questions regarding this matter, please contact D. Burch
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