

# Nebraska Public Power District

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NSL8500077

April 30, 1985

50-298

Director, Nuclear Reactor Regulation  
Attention: Mr. Domenic B. Vassallo, Chief  
Operating Reactors Branch No. 2  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Vassallo:

Subject: Detailed Control Room Design Review (DCRDR) -  
In-Progress Audit Report Response

Reference: 1) Letter from J. M. Pilant to D. B. Vassallo, dated  
February 4, 1985, "NUREG-0737, Supplement 1 -  
Detailed Control Room Design Review Summary  
Report"

Your letter of March 20, 1985, requested that the District provide our NRC Project Manager with a schedule for addressing various recommendations not already resolved in our DCRDR Summary Report of Reference 1. It is anticipated that the Supplement to our Summary Report will be submitted approximately February, 1986. The District must implement an action plan with considerable scope in order to address the staff's recommendations. The most probable action plan is outlined in Attachment 1, including the estimated completion date for each of the various phases. The scheduled dates for completion provided herein are considered estimated dates in accordance with our April 15, 1983, response to NUREG-0737, Supplement 1. As defined in Attachment 8 to that document, our NRC Project Manager will be kept informed of all substantive changes in the implementation schedule.

It should be noted that the District will not directly implement some of the staff's recommendations. For example, the staff recommends that Regulatory Guide 1.97 instrumentation be available prior to EOP implementation; however, the District is under Order to implement the EOP's prior to September, 1985, before the Regulatory Guide 1.97 efforts are complete. If the staff wishes to discuss any of the enclosed information in further detail prior to submittal of our Supplement to the Summary Report, the District would welcome an additional meeting with the staff or a conference call.

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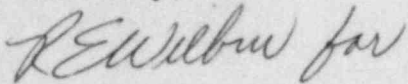
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Mr. Domenic B. Vassallo  
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It must also be recognized that the schedules submitted in Reference 1 for accomplishing modifications to the Control Room are subject to change due to the additional effort required in implementing the staff's recommendations.

If you have any questions, please call.

Sincerely,

A handwritten signature in cursive script, appearing to read "JMPilant for".

Jay M. Pilant  
Manager, Technical Staff  
Nuclear Power Group

JMP:::s30/1

RESPONSE TO NRC MARCH 20, 1985  
DETAILED CONTROL ROOM DESIGN REVIEW IN PROGRESS AUDIT REPORT

<u>NRC RECOMMENDATION/SUGGESTION</u>	<u>NPPD PROBABLE RESOLUTION/ACTION</u>	<u>ESTIMATED COMPLETION DATE</u>
<u>I. Task Analysis - Recommendations</u>		
a. Task analysis definition of information and control characteristics for the EOPs should; define requirements for operability under accident condition (e.g., power quality and qualification of portions of the instrument and control loops located in harsh environments).	Characteristics of information and controls required to perform the EOPs will be expanded in order to define requirements for operability under accident conditions. This information will be contained in the task analysis sheets.	September 30, 1985
b. Task analysis definition of information and control characteristics for the EOPs should; identify requirements on indicator resolution for tasks that require the operator to determine the value of a parameter or compare the value of a parameter against a action, control or caution point.	For tasks that require the operator to determine the magnitude of a parameter, the required indicator accuracy will be noted in the task analysis sheets.	September 30, 1985
c. Task analysis definition of information and control characteristics for the EOPs should; maintain a consistent level of detail throughout the analysis.	The task analysis sheets will be reviewed and where details are lacking, additional details will be provided. Information regarding information and control requirements for operability under accident conditions and indicator accuracy will provide such additional detail.	September 30, 1985

NRC RECOMMENDATION/SUGGESTION	NPPD PROBABLE RESOLUTION/ACTION	ESTIMATED COMPLETION DATE
d. Function and Task Analysis should be carried through to; Normal Procedures implicitly referenced in EOPs that are required to support performance of EOPs.	A Verification and Validation process was used to verify the adequacy of the EOPs. A Function and Task Analysis is felt to be unnecessary for Normal Procedures implicitly referenced in the EOPs. The station procedural initiation, approval process, and on going review process of these Normal Procedures are judged to be adequate measures to ensure that such procedures can sufficiently support the EOPs as required.	N/A
e. Function and Task Analysis should be carried through to; existing Emergency Procedures to the extent they will still be in use after implementation of the EOPS.	A Verification and Validation process was used to verify the adequacy of the EOPs. A Function and Task Analysis is felt to be unnecessary for the existing Emergency Procedures which will still be in use after implementation of the EOPs. The station procedural initiation, approval process, and ongoing review of these procedures ensures adequacy and workability of these procedures.	N/A
f. Function and Task Analysis should be carried through to; revised EOPs, if significant revisions are required prior to implementation.	The Verification and Validation process used on the EOPs are judged to be adequate by NPPD, and additional Function and Task Analysis is considered unnecessary for the EOPs. If significant revisions are required to the EOPs prior to implementation, a Verification and Validation process will be conducted on the revisions.	N/A

NRC RECOMMENDATION/SUGGESTION	NPPD PROBABLE RESOLUTION/ACTION	ESTIMATED COMPLETION DATE
g. Function and Task Analysis should be carried through to; SPDS and PMIS Procedures required to support performance of EOFs.	The need for a Function and Task Analysis for the SPDS and PMIS Procedures will be assessed upon development of the procedures. The SPDS will be operable February, 1986.	February, 1986
II. <u>Control Room Survey - Recommendations</u>		
a. The apparent oversights noted in the Control Room Survey should be reviewed to determine if they are indicative of a systematic problem with the survey process, and appropriate action should be taken.	A Control Room Survey will be performed guided by NUREG 0700 and discrepancies will be identified and assessed for safety importance.	November 30, 1985
b. The control room environment and communications survey should be repeated after completion of planned modifications that will affect the environment (e.g., PMIS, SPDS, and a new communications system). This resurvey should consider the ability of operators to communicate while wearing self-contained breathing apparatus and respirators.	A Control Room environment and communications survey will be conducted by a Human Factors consultant following Control Room modifications.	February, 1986
c. Human Factors principles, conventions and plant nomenclature consistent with that used in the Control Room should be implemented in the design of the SPDS and PMIS.	SPDS/PMIS Human Factor principles, conventions, and nomenclature will be compared against that used in the Control Room and discrepancies noted.	July 1, 1985
d. The safety significance of the lack of lamp test capability should be reassessed.	The lack of lamp test capability will be reassessed for safety importance and the results of the assessment will be reported in the Supplement to the Summary Report submitted approximately February, 1986.	November 30, 1985 Completion of Reassessment.

NRC RECOMMENDATION/SUGGESTION	NPPD PROBABLE RESOLUTION/ACTION	ESTIMATED COMPLETION DATE
e. The specifics of each HEO identified by the Control Room Survey should be documented and justification provided for any HEOs that are not corrected.	As the Control Room Survey is conducted guided by NUREG 0700, HEOs will be additionally detailed and assessed per NUREG 0700. Justification for HEOs not corrected will be provided.	September 30, 1985
f. It should be verified that Regulatory Guide 1.97 instruments required for performance of EOPs will be available prior to EOP implementation and that relabeling of Control Boards and procedure changes are happening in a manner that ensures consistent nomenclature between the procedures and boards.	The District is under NRC order to implement the EOP's by September, 1985, without necessarily having all Regulatory Guide 1.97 instrumentations available. Most of the Regulatory Guide 1.97 instrumentation is available. The EOPs remain functional and beneficial without the remaining Regulatory Guide 1.97 instrumentation installed. Consistency will be maintained between control board changes and related procedures.	N/A
<u>III. Other Items - Recommendations</u>		
a. Modifications planned to resolve HEDs should be described and completion schedule commitments provided. A supplement to the Summary Report will be needed to provide descriptions and schedules for modification plans resulting from feasibility studies.	The Supplement to the Summary Report will provide additional detail of proposed modifications needed to resolve HEDs. The Supplement will also contain an updated schedule for design modifications already identified and those that might be developed due to the results of feasibility studies.	February 1986

NRC RECOMMENDATION/SUGGESTION	NPPD PROBABLE RESOLUTION/ACTION	ESTIMATED COMPLETION DATE
b. The details of NPPD's verification process for HED corrections should be included.	A verification documentation process will be developed and followed to ensure that HEDs corrected by design modification are resolved, and that no new HEDs are created by implementation of the design modifications. This process will be described in the Supplement to the Summary Report.	June 30, 1985 - Development of a verification documentation process.
c. An updated schedule for NUREG-0737, Supplement 1, activities should be included. This update shows inter-relationships among these tasks.	The Supplement to the Summary Report will provide an updated schedule for NUREG-0737 activities showing the integration effort for these activities.	February, 1986
IV. <u>NRC Suggestions</u>		
a. Copies of survey checklists, task analysis worksheets, and other DCRDR documentation should be obtained from General Electric and organized into a working file for use by NPPD team members and individuals and organization responsible for HED correction modifications and other related efforts.	A DCRDR working file will be created and kept at Cooper Nuclear Station.	June 30, 1985
b. HED records should be upgraded so the written documentation alone is adequate to provide non-DCRDR team members a clear understanding of each HED.	The format and content used to document the HEDs will be reviewed and recommendations made.	June 30, 1985

NRC RECOMMENDATION/SUGGESTION	NPPD PROBABLE RESOLUTION/ACTION	ESTIMATED COMPLETION DATE
c. Any portions of the Control Room Survey that are repeated or updated should make use of the NUREG-0700 checklists.	As previously stated, NUREG-0700 will be used as a guideline in conducting another control room survey. Further control room surveys or updates will use NUREG 0700 as a guideline.	N/A
d. Further coordination of SPDS, PMIS, DCRDR, Reg. Guide 1.97, and EOPs at the working level should be considered.	A functional plan for total integration of these various activities will be developed and reviewed.	July 30, 1985
e. The operating experience review should be extended to include experience at other BWRs similar to Cooper.	The operating experience review from the Summary Reports of other similar BWR-4s will be reviewed and evaluated.	July 30, 1985
f. Human factors engineering principles should be applied to the design of the CNS remote shutdown capability, including the remote shutdown panels.	Human factor engineering principles will be incorporated into the design of the remote shutdown panel.	1986 Refueling Outage - Planned installation of the remote shutdown capability.
g. Design conventions and nomenclature applied to remote shutdown equipment should be consistent with those used in the control room.	Design conventions and nomenclature applied to remote shutdown equipment will be consistent with those used in the control room.	1986 Refueling Outage - Planned installation of the remote shutdown capability.