

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/92026(DRS)

Docket No. 50-255

License No. DPR-20

Licensee: Consumers Power Company
1945 West Parnall Road
Jackson, MI 49201

Facility Name: Palisades Nuclear Generating Plant

Inspection At: Palisades site, Covert, MI 49043

Inspection Conducted: November 23-24, 1992

Inspector:

Isa Yin
Isa Yin

12/15/92
Date

Approved By:

Bruce L. Burgess
Bruce L. Burgess, Chief
Operational Programs Section

12/15/92
Date

Inspection Summary

Inspection on November 23-24, 1992 (Report No. 50-255/92026(DRS))

Areas Inspected: Routine, announced inspection of licensee configuration control project (CCP) implementation, status, and corrective actions.

Results: The CCP was implemented in accordance with the licensee's schedule. The Writer's Guide for the Design Basis Document incorporated all of the past concerns raised by the inspector. The inspection identified that some of the significant, safety-related CCP findings were not evaluated in a timely manner. One violation was issued regarding a lack of measures to ensure that changes to procedures are controlled and of good quality (Paragraph 6.b).

DETAILS

1. Persons Contacted

Consumers Power Company (CP)

R. D. Orosz, Nuclear Engineering and Construction Manager
T. J. Palmisano, Operations Manager
T. A. Buczwinski, Engineering Program Manager
P. M. Donnelly, Plant Safety and Licensing Director
J. Kuemin, Licensing Administrator
B. L. Harshe, Supervisory Engineer
R. A. Vincent, Plant Safety Engineering Administrator
J. Blewett, Project Engineer
V. A. Meincke, Staff Engineer

U. S. Nuclear Regulatory Commission

J. Heller, Senior Resident Inspector

2. Introduction

This was the third inspection of CP's Configuration Control Project (CCP). The CCP which consisted of a Design Basis Documentation (DBD) program and a Safety System Design Confirmation (SSDC) program. The first inspection was conducted in March through May 1990, and the findings were documented in Inspection Report (IR) 50-255/90010. The second inspection was conducted in April and May 1991, and reported in IR 50-255/91010. The purpose of these inspections was to followup on the results of Consumer Power Company's CCP program that resulted from the issuance of CAL-RIII-86-002 on May 21, 1986. The scope of this inspection included a review of CCP completion status, assessment of the program, and followup of the licensee's corrective measures for the safety issues identified by the CCP process.

3. CCP Scope and Implementation

Phase I

In 1986 the licensee responded to NRC concerns raised during a safety system functional inspection conducted on the high pressure safety injection system; by conducting an operational readiness review for the auxiliary feedwater system. Evaluation and testing were extended to other plant systems. These activities were documented in a Phase I Preliminary Assessment Report, dated August 12, 1987.

Phase II

The scope was developed in 1987, and the work was scheduled for completion before the end of 1992. The status of the DBDs and SSDCs was as follows:

- Mechanical Systems

Component cooling water, service water and control room HVAC were completed, and containment spray was scheduled for completion in December, 1992.

- Nuclear Steam Supply Systems

All CE supplied systems including the reactor coolant, reactor protection, high pressure safety injection, low pressure safety injection, control rod drive, and chemical and volume control were completed.

- Electrical Systems

All systems with Emergency Diesel Generator and DC power supplies were completed. With the exception of emergency lighting and pressurizer heater emergency power, all systems with AC power supplies were completed. The licensee also completed the 345 KV switchyard DBD. The remaining AC power and a grid stability study will be completed in December 1992.

Except for containment spray and control room HVAC, scheduled for 1993, all SSDCs for Phase II work were completed. No SSDCs were planned for the 345 KV switchyard, grid stability, and emergency lighting. The SSDC for pressurizer heater power was included in the 2400 V design confirmation study.

The inspector concluded that the scope of the licensee's review was extensive, and would meet the corporate completion schedule discussed previously with the NRC (second quarter of 1993).

Phase III

Phase III DBD development and SSDC reviews included containment heat removal, electric and I&C separation and isolation, auxiliary building HVAC, main steam, feedwater, condensate, fire protection, radwaste, and spent fuel cooling. The work was scheduled and funded for 1993 to 1996.

4. DBD Writer's Guide

During this inspection, the inspector reviewed the revised procedure, "Writer's Guide for Preparation of System Design Basis Documents," Revision 4, dated September 1992, and determined that the licensee had appropriately addressed previous NRC comments.

5. Resolution of CCP Findings

a. Significance of Finding

The licensee classified each CCP identified discrepancy into three categories: Category I for minor problems, Category II for issues where additional information was needed to determine significance, and Category III for major problems. Category III discrepancies were addressed through the formal corrective action system. In accordance with the licensee program, all discrepancies were evaluated for operability concerns prior to assigning a Category.

During the April 1990 NRC inspection, the inspector observed a large number of Category IIs, and questioned the licensee's timeliness for determining safety significance. During May 1991 inspection, the number of Category IIs were significantly reduced. During the present inspection, the inspector identified 155 open Category IIs issued since June 1989. The licensee stated that they had developed and implemented an evaluation system in February 1991. This system was based largely on engineering judgement to assess the importance of all the Category IIs as follows:

Priority I - A design document that supported or defined technical specification (TS) safety limits, LCOs, limiting system setpoints or surveillance requirements. These documents demonstrated that T.S. addressed system, structure or component (SSC) performed their safety function.

Priority II - A design document that defined the controlling parameters or provided support for demonstrating the functionality of a SSC not addressed in TS, but supports a system addressed in TS, such as heating ventilation and air conditioning (HVAC).

Priority III, IV, and V - Design documents for SSC's with less importance.

The licensee records showed the following Priority I's, and II's still open.

<u>System Review and Revision</u>	<u>No. of Open Priority I's and II's</u>
CCW DBD Rev. 1	3 II's since April 1991
CVCS DBD Rev. 0	2 II's since October 1991
RPS DBD Rev. 0	2 I's, and 1 II since Sept. 1992
Emergency Power Systems DBD Rev. 0	1 I since Feb. 1992, and 4 IIs since Oct. 1991
Emergency Power Systems DBD Rev. 1	8 II's since July 1992
Station Power Systems DBD Rev. 0	2 II's since December 1990
Station Power Systems DBD Rev. 1	1 II since May 1991
2400 V AC SSDC Rev. 0	4 II's since February 1991

A total of 28 I's and II's

The inspector again expressed a concern about the timeliness of resolving potentially important safety related CCP findings. The licensee stated that their present program allowed one year to address Priority Is and IIs. However, after reviewing the data compiled by the inspector, the licensee agreed that the situation was unacceptable. The licensee committed to revise Administration Procedure 13.01 to require the engineering staff, assigned to the CCP, to initiate resolution for Priority Is and IIs shortly after identification. This measure would ensure that Category II items could be re-classified to Category I or III within a four to six month period.

b. Licensee Closeout of Category III Discrepancies

There were 28 Category III discrepancies identified in the CCP reviews. Deviation Reports (DRs) were written for all these findings and were forwarded to various

licensee departments for resolution. The inspector observed that ten DRs remained open. All ten open DRs had multiple issues or parts, and were partially resolved. The inspector considered licensee control of these DRs to be acceptable.

6. Review of Licensee DR Closeouts

The inspector reviewed the following completed DRs issued as a result of CCW DBD reviews and document compilation. Each DR was closed after engineering evaluation and corrective action:

a. D-PAL-91-084

The DR documented that component cooling water to high pressure safety injection, low pressure safety injection and containment spray pump seal cooling inlet and discharge solenoid valve safety injection signal (SIS) relays did not have proper physical separation inside the main control room panels. The issue was identified in April 1991, and closed in May 1991.

The inspector reviewed the engineering evaluation to accept the as found condition, and had no adverse comments.

b. D-PAL-89-032

The inspector's review of this DR identified that the licensee's administrative procedures were not sufficient to control facility changes based on DBD results.

Chronology of Events:

- 1) 1970: Licensee identified that the procured component cooling water heat exchangers were significantly under-sized.
- 2) September 10, 1979: TS amendment 51 section 3.3.2.d stated "One shutdown heat exchanger and one component cooling water heat exchanger may be inoperable for a period of no more than 24 hours."
- 3) Pre-February 1989: Standard Operating Procedure (SOP) 16, for the component cooling water system (CCW), allowed, during normal plant operation, one CCW heat exchanger to be out of service for up to 24 hours.

- 4) January 1989: The DBD program confirmed that both CCW heat exchangers were under-sized. The DBD concluded - (1) both CCWHXs were needed during power operations for primary system heat load removal and (2) at system flow rates greater than 8000 gpm tube damage would occur due to flow induced vibration (see IR 50-255/90010, paragraph 4.c).
- 5) January 1989: DR issued on the subject recommending that SOP-16 and Technical Specifications be revised to require both CCWHXs be inservice when reactor coolant is greater than 325° F.
- 6) January 1989: SOP-16, revision 6 issued requiring both CCWHXs to be in service with reactor coolant temperature above 325°F.
- 7) No Technical specification change was ever proposed.
- 8) November 1992: SOP-16, revision 8 issued to delete the requirement for both CCWHXs to be in service above 325°F.

The licensee explained that the deletion of the requirement in SOP-16 resulted from a Training Department discovery in November 1991 that it conflicted with TS 3.3.2.d. The operations department, after receiving the deviation report, discussed the matter with the licensing department, but failed to perform a detailed review of the CCW DBD and communicate with the appropriate DBD engineer. The lack of technical information, and the fact that a 10 CFR 50.59 safety evaluation was not required for the 1989 SOP-16 revision contributed to the decision by the licensee to delete the requirement.

The deletion of the CCWHX requirement from SOP-16 allowed the plant to be operated in accordance with the Technical Specifications. Operation of CCW per the requirements of the Technical Specifications would allow removal of one CCWHX for up to 24 hours. With one CCWHX inservice at full power, the CCW system would be configured in such a way that serious degradation or damage would occur to the heat exchanger potentially rendering CCW inoperable. Based on review of this event, it was evident that the licensee had not established sufficient administrative measures to control changes to procedures to maintain procedural quality, including the results of DBD reviews.

10 CFR 50, Appendix B, Criterion VI, requires that measures be established to control the issuance of documents, such as instructions, procedures and drawings, including changes, which prescribe all actions affecting quality. The failure of the licensee to establish sufficient administrative controls to ensure that changes to station operating procedures (SOP-16) include the necessary actions to maintain quality is considered a violation of 10 CFR 50, Appendix B, Criterion VI.

7. Exit Meeting

The inspector met with licensee representatives (denoted in Paragraph 1) on November 24, 1992, at the site and summarized the purpose, scope, and findings of the inspection. The inspector discussed likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents or processes as proprietary.