U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
REGION IV

Report No. 99900521/79-01 Program No. 51200

Company: Bechtel Power Corporation
Los Angeles Power Division
P. O. Box 60860, Terminal Annex
Los Angeles, California 90060

Inspection Conducted: February 26-March 1, 1979

Inspectors: R. H. Brickley 3/8/79
R. H. Brickley, Principal Inspector, Date
Vendor Inspection Branch

Approved by: for Lou L Brown 3/8/79
C. J. Hale, Chief, Program Evaluation Date
Section, Vendor Inspection Branch

Summary

Inspection on February 26-March 1, 1979 (99900521/79-01)

Areas Inspected: Implementation of the requirements of Title 10 CFR 50, Appendix B, in the areas of design inspection, and action on previous inspection findings. The inspection involved twenty-eight (28) inspector-hours on site by one NRC inspector.

Results: In the two (2) areas inspected there were no unresolved items identified in any of the areas, no deviations identified in one of the areas, and the following identified in the remaining area.

Deviation: Action on Previous Inspection Findings - Failure to revise a procedure by January 29, 1979, as committed in the Bechtel response to inspection report 99900521/78-03.

Details Section

A. Persons Contacted

*A. G. Coutoumanos, Supervisor, Quality Assurance
A. P. Ibe, Mechanical Group Supervisor
*R. L. Rogers, Project Engineer
T. G. Wineteer, Nuclear Group Supervisor

*Denotes those present at the exit interview.

B. Action on Previous Inspection Findings

(Closed) Deviation (Report No. 78-03) Two (2) examples of failure to follow procedures controlling changes and addendums to specifications. The inspector verified the actions taken as committed in the Bechtel response dated January 15, 1979, with respect to example B of the enclosure to Report No. 78-03. With respect to example A of the enclosure, it was found that the procedure had not been revised by January 29, 1979, as committed. A revision to the procedure had been issued on February 26, 1979, authorizing the Project Engineer to grant a time extension for incorporation of Specification Change Notices; however, no provisions had been made for documentation of this authorization. (See Enclosure: Notice of Deviation.)

On March 1, 1979, prior to the conclusion of the inspection, Procedure Change Request/Notice No. 11-28 was issued against Section 11 of the Project Internal Procedures manual allowing the Project Engineer to grant the time extension and requiring documentation of this action on a Specification Change Notice and Authorization. In addition, an interoffice memorandum dated March 1, 1979, notifies all projects that NRC inspection action items should be entered on the project engineering tracking system to assure that commitments made in response to inspection findings are implemented on time. In view of these corrective actions and preventive measures, no further written response to this deviation is required.

C. Design Inspection

1. Objectives

The objective of this area of the inspection was to select a single component, system, structure, or major part of one of these and verify that:

a. Design inputs are identified and include all applicable requirements; documented; reviewed and approved; specified

on a timely basis and in necessary detail; prepared, processed, and controlled in accordance with applicable procedures; accurate in specifying design requirements, particularly design codes and standards; and distributed to those responsible for preparing production designs and associated documents.

b. Design calculations, and their review and approval, have been performed as prescribed by procedures.

c. Final design documents have accurately transcribed design input in accordance with procedures.

d. Internal and external design interface responsibilities and activities have been performed in accordance with procedures.

e. Verification of the design has been properly and effectively performed as prescribed by procedures, including design review (including checking), alternate calculations, and qualification testing, where applicable.

f. Changes to the design, through all design activities from input to output, have been performed in accordance with procedure requirements.

2. Method of Accomplishment

The preceding objectives were accomplished by an examination of:

a. Appendix 17A (Bechtel Quality Program) and Section 6.4. (Nuclear Service Water and Component Cooling Water Systems) of the project (No. 9510) PSAR to identify the programmatic requirements for design control and the technical requirements established for design of the Nuclear Service Cooling Water System (NSCWS).

b. Part C (Engineering), Sections 1 (Scope and Intent), 4 (Bechtel Drawings), 8 (Procurement), 9 (Design Calculations), 10 (Design Control), and 20 (Design Review), of the Project Reference Manual to verify that these procedures implement PSAR requirements and cover the activities specified in C.1 above.

c. Design Basis Numbers DC-1202 (Nuclear Service Cooling Water System), DC-1202-A (Nuclear Service Cooling Towers), DC-1202-B (NCSW Makeup Water System), DC-1202-C (Leak Detection for

the Nuclear Service and Component Cooling Water Systems), and DC-1017 (Stress Analysis Criteria) of the project Design Manual to verify that it addressed the requirements of Section 6.4 of the PSAR and covered the items specified in C.1.a. above.

d. Drawing Numbers 1X4DB133-1 (P&ID, NSCWS), Revision 0, dated January 26, 1979, 1X4DB133-2 (P&ID, NSCWS), Revision 0, dated January 31, 1979, 1X4DB134 (P&ID, NSCWS), Revision 1, dated 1979, 1X4DB135-1 (P&ID, NSCWS), Revision 0, dated November 27, 1978, 1X4DB135-2 (P&ID, NSCWS), Revision 0, dated January 27, 1979, 1X4DB149 (Flow Diagram, Cooling Water Systems, Systems 1202, 1203, 1217), Revision F, dated June 12, 1978, 1X5DN086-1 (Control Logic Diagram, NSC Tower Transfer Pumps), Revision 0, dated February 15, 1979, 1X5DN090-1 through -5 (Control Logic Diagram, NSCWS Auxiliaries and Alarms), all Revision 0, and 1X5DN087-1 through -4 (Control Logic Diagram, NSCW Pumps), all Revision 0, dated February 15, 1979, to verify that they were prepared in accordance with Section 4 of the Project Reference Manual and covered the items specified in C.1.c., C.1.d., and C.1.f. above.

e. Specification Numbers X4AF02 (NSCW Pumps and Transfer Pumps), Revision 2, dated August 17, 1978, and X4AD02 (NSC - Towers and Associated Equipment), Revision 0, dated June 28, 1972, to verify that they were prepared in accordance with Section 8 of the Project Reference Manual and covered the items specified in C.1.c., C.1.d., C.1.e., and C.1.f. above.

f. Design Calculation Numbers X4C1202S05 (Performance of NSW and CCW Systems), Revision C, dated August 1, 1978, X4C1202W11 (Variation of Flow Rate through the NSCWS with NSCWS Cooling Tower Basin Water Level Variation), Revision A, dated August 1, 1978, X4C1202S06 (Miscellaneous Uses of NSC Water), Revision A, dated August 1, 1978, X4C1202W12 (NSWS - Constant Heat Loads and Flows), Revision D, dated August 1, 1978, X4C1202W09 (NSW Cooling Towers - Finding Month of Highest Water Usage), Revision A, dated August 1, 1978, X4C1202W17 (NSW Cooling Tower Maximum Heat Load and Data for Containment Coolers), Revision 0, dated December 20, 1976, 4XC1202W15 (Cold Weather NSCW Temperature), Revision 0, dated December 17, 1976, X4C1202P03 (Transfer Pumps - NSCW Basins), Revision C, dated November 23, 1976, and X4C1202L01 (NSC Tower Blowdown Line), Revision 0, dated November 12, 1976, to verify that they were prepared in accordance with Section 9 of the Project Reference Manual and covered the items specified in C.1.b. and C.1.e. above.

3. Findings

a. There were no deviations or unresolved items identified in this area of the inspection.

b. Part C (Engineering) of the Project Reference Manual was found to commit to Bechtel's generic program for design control. Paragraph 1.3 of Section 1 (Scope and Intent) was found to contain the following statement: "In general, these procedures conform to the basic standards published in the Bechtel Engineering Department Procedures (EDP's). Where deviation does occur, it is for the purpose of complying with special project requirements and has the approval and concurrence of engineering management."

c. The design of this system provides a thirty (30) day cooling capacity plus 10% margin with two (2) trains operating for the first day and with one train operating for the next twenty-nine (29) days following an accident. If both trains are operated continuously, the cooling tower basins will provide a 21.6 day cooling capacity. If two-train operation and use of onsite power are needed for the full 21.6 days following a LOCA, makeup water form either internal or external sources will be required.

d. The combined capacity of both cooling tower basins, utilizing one to provide makeup water to the other via transfer pumps, is sufficient to sustain one train operation for the thirty (30) days following a LOCA.

D. Exit Interview

An exit interview was held with management representatives on March 1, 1979. In addition to those individuals indicated by an asterisk in paragraph A, those in attendance were:

J. E. Bashore, QA Manager
W. A. Brandes, Engineering Manager
I. R. Caraco, Vice President and General Manager
M. Z. Jeric, Project Engineer
B. L. Lex, Project Manager
R. A. Snyder, Project QA Engineer

The inspector summarized the scope and the deviation identified during the inspection. Management comments were generally for clarification only, or acknowledgement of the statements by the inspector.