

ORGANIZATION: BECHTEL POWER CORPORATION
LOS ANGELES POWER DIVISION
NORWALK, CALIFORNIA

REPORT NO.:	99900521/82-05	INSPECTION DATE(S)	12/13-16/82	INSPECTION ON-SITE HOURS:	24
CORRESPONDENCE ADDRESS: Bechtel Power Corporation Los Angeles Power Division ATTN: Mr. L. G. Hickelman, V.P. and Gen. Mgr. P. O. Box 60680, Terminal Annex Los Angeles, CA 90060					
ORGANIZATIONAL CONTACT: Mr. R. L. Patterson, QA Manager TELEPHONE NUMBER: (213) 807-2381					
PRINCIPAL PRODUCT: Architect Engineering Services.					
NUCLEAR INDUSTRY ACTIVITY: The Los Angeles Power Division of the Bechtel Power Corporation is the architect engineer (AE) for nine domestic reactor units. Fifty percent of the total personnel (approximately 6,700) are assigned to activities in connection with these units and two modification/repair/service type contracts.					
ASSIGNED INSPECTOR:	<u>W. R. Costello</u> <i>fr</i>			<u>2-12-83</u>	Date
OTHER INSPECTOR(S):					
APPROVED BY:	<u>C. J. Hale</u> <i>fr</i>			<u>2-12-83</u>	Date
INSPECTION BASES AND SCOPE:					
A. <u>BASES</u> : 10 CFR Part 50, Appendix B.					
B. <u>SCOPE</u> : Follow up on previous inspection concerns and two potential 10 CFR Part 50.55(e) reports from Arizona Public Service Company which covered the following: (1) condensate storage tank was designed by a scale-down method without new calculations being performed for seismic response and (2) design calculation error in refueling water tank seismic response.					
PLANT SITE APPLICABILITY: The contents of this report relate to the following docket: 50-528, 50-529, 50-530, 50-361, 50-362; 50-424, and 50-425.					

DESIGNATED ORIGINAL

Certified By Kheanne Clark

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A. VIOLATIONS:

None

B. NONCONFORMANCES:

None

C. UNRESOLVED ITEMS:

The adequacy of the design of the condensate storage tank and refueling water tank was not provided by the measures established in that errors were identified in calculations 13-CC-CT-010 and 13-CC-CT-015. Subsequent checkers and reviewers, all of whom reviewed and signed these calculations as being adequate, failed to identify the calculation and assumption errors. Both calculations are being redone to determine the safety significance of these errors and will be completed by February 1983. During the next regular inspection this matter will be reevaluated to determine: (1) the safety significance of the calculation and assumption errors, and (2) if present procedural requirements are adequate to prevent future errors of this type.

D. OTHER FINDINGS OR COMMENTS:

1. Follow Up On Previous Areas of Inspection:

- a. During the 79-02 inspection in the area of audits, a concern was expressed regarding the effectiveness of the new system for identification of deviations. This system was initiated by Revision 13 to QADP 5.1, which required the use of corrective action requests only and deleted the use of quality assurance findings (QAF's).

The elimination of QAF's has simplified procedural requirements and made it easier to control and track required corrective action.

This item is considered closed.

- b. During the 81-02 inspection in the area of design change control, it could not be determined what document provided the current status of design specification changes on the Palo Verde Nuclear project.

CEBUS is the official status document for specifications and it is updated monthly. Purchasing also publishes a working document for

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their own use entitled "Open Bill of Material and Specification Status Report/Heckle Sheet." This is also published monthly and is for the internal use of purchasing and is not considered an official status document.

This item is considered closed.

- c. During the 82-02 inspection in the area of design corrective action, a concern was expressed regarding the practice of allowing more than 10 Specification Change Notices (SCN) to accumulate against a specification before incorporation into the specification.

The Project Administrator is now issuing a weekly SCN status report. This report is being circulated to all of the cognizant engineers. As soon as 10 SCN's become outstanding against a specification, a design review notice (DRN) is initiated for the necessary specification revision.

This item is considered closed.

- d. During the 82-04 inspection in the area of design document control, a concern was expressed that the AE and Nuclear Steam Supply System (NSSS) documents required in the AE/NSSS interface did not have adequate design change accountability and that there was not adequate assurance that both parties had thoroughly reviewed and concurred in them. Bechtel does not issue a single list of all the AE and NSSS documents that require AE/NSSS joint approval prior to a design change. Bechtel has assigned responsibility to the Nuclear/Environmental Chief Engineer to assure that the AE/NSSS interface is adequately defined, coordinated, and recorded. In the Vogtle project this is defined in C2, C4, and C5 of the VNP Project Reference Manual.

This item is considered closed.

2. Condensate Storage Tank Design:

Arizona Public Service Company issued a potential 10 CFR Part 50.55(e) report as a result of the Torrey Pines Technology independent evaluation of Palo Verde Nuclear Generating Station. This evaluation requested that the design of the condensate storage tank (CST) be reevaluated.

The CST design is required to resist stresses resulting from operating, accident, and extreme environmental forces. The CST design was based on the design of the refueling water tank (RWT) which has the same 50 foot

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diameter but has a height of 62 feet versus 50 feet for the CST. The decision to use just one analysis (calculation) for the RWT and scale-down for the CST was an engineering decision of the civil/structural staff. However, the CST is embedded 4.5 feet into the soil while the RWT is embedded 15 feet. The CST foundation will, therefore, be more flexible and have less damping than that indicated for the RWT. No comparison or other justification was presented in the calculation which would demonstrate that the RWT analysis could be reasonably or conservatively applied to the CST.

As a result of the Torrey Pines finding, new calculations will be made and completed in January 1983 to determine if the scaling approach used on the CST is acceptable. At that time an assessment can be made whether the CST design meets the established safety criteria.

3. RWT Calculation Error:

Arizona Public Service issued a potential 10 CFR Part 50.55(e) report as a result of an error found during a Bechtel rereview of the RWT calculation package. The rereview was made in response to the Torrey Pines evaluation of the CST design which was a scaled down version of the RWT. The error was found in the determination of the tank wall moment at the junction of the basement.

The complete RWT design is being reanalyzed by Bechtel and will be finished in February 1983. At that time an assessment can be made whether the RWT meets the established safety criteria.

This error in the RWT calculation in conjunction with the methodology used for the CST design could result in a CST that does not meet established safety criteria. This matter will be inspected further during the next inspection (see the unresolved item in C. above).

Inspector J.R. Costello

Scope/Module Followup On Previous Inspection Findings / 92702B

DOCUMENTS EXAMINED

Docket No. 99900521

Report No. 02-05

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1	2	TITLE/SUBJECT	3	4
1	3	IP-4.14 Specification Change Notice Job 10907	9/8/82	14 19
2	3	" " " " " "	10/20/82	15
3	3	IP-4.16 Preject Material Requisition and Specification	10/20/82	20
4	3	Quality Assurance Standard No. 5.1, Project Quality Assurance Audits	3/6/78	12
5	3	Quality Assurance Department Procedure No. 5.1, Preject	9/15/82	16
6	8	Quality Assurance Audits Specifications Control Log (CEBUS) Arizona Nuclear Power Project	10/22/82	-
7	8	Open Bill Of Material And Specification Status Report, Heckle Sheet Job 10907	2/26/82	-
8	3	Section 2 VNP Project Reference Manual, Nuclear Steam Supply System Design Interface Control	12/5/77	0
9	3	Section 4 VNP Project Reference Manual, Bechtel Drawings	3/8/74	2
10	3	Section 5 VNP Project Reference Manual, Supplier Data	10/13/77	4
11	8	Field Procedure Change Notice (FPCN) No. 13, Georgia Power Document	11/5/82	-

- Document Types:
1. Drawing
 2. Specification
 3. Procedure
 4. QA Manual
 5. Purchas Order
 6. Internal Memo
 7. Letter
 8. Other (Specify-if necessary)

- Columns:
1. Sequential Item Number
 2. Type of Document
 3. Date of Document
 4. Revision (If applicab)

Inspector J.R. Costello
 Scope/Module Followup on Regional Requests/02705B

DOCUMENTS EXAMINED

1	2	TITLE/SUBJECT	3	4
1	8	Deficiency Evaluation Report (DER) No. 02-56	9/30/02	0
2	8	" " " " No. 02-63	10/11/02	0
3	8	Project Evaluation - Deficiency Evaluation Report No. 02-56	10/15/02	0
4	8	" " " " " "	12/7/02	1
5	7	J.E. Mahlmeister, Bechtel/LAPP to W.A. Simon, Torrey Pines Technology; Subject Independent QA Evaluation of PFR's 005 & 021	8/13/02	-
6	7	E.E. Van Brunt, Jr, Arizona Public Service Co to D.M. Sterberg, USNRC Reg V: Subject, A 50.55(c) Potentially Reportable Deficiency Relating To Condensate Storage Tank Design	11/1/02	-
7	8	Project Evaluation - Deficiency Report No 02-63	11/15/02	-
8	7	W.A. Simon, Torrey Pines Technology to Keith L. Turley Arizona Public Service Co; Subject, Potential Finding Reports Classified as "Finding"	10/7/02	-

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1	2	TITLE/SUBJECT	3	4
9	8	Calculation No. 2426 - PFR-039, Refueling Water Tanks (RWT) / Condensate Storage Tank (CST) Prepared by General Atomic	10/4/82	-
10	8	Calculation No. 13-CC-CT-015, Refueling Water Tank	9/13/82	-
11	7	E. E. Van Brunt, Jr., Arizona Public Service Co. to D.M. Sternberg USNRC Reg V; Subject, A 50.55(c) Potentially Reportable Deficiency Relating to Design Calculation Error In Refueling Water Tank Seismic Response	12/29/82	-
12	3	IP-4.2, Design Calculations, Job 10407 (Palo Verde)	9/8/82	13
13	3	EDP-4.37, Design Calculations	10/6/80	7
14	3	IP-4.1, Design Criteria, Job 10407 (Palo Verde)	9/8/82	11
15	8	Sections 3.7.2.6 & 3.7.3.6, PVNGS FSAR	10/8/82 8/81	Amend 625
16	8	Detailed Design Criteria, Condensate Transfer And Storage System	8/18/82	-

Document Types:

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