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Rules and Directives

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November 20, 2000

Rules and Directives Branch
Office of Administration
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

Subject: Public Comment on Draft Regulatory Guide DG-1098, "Safety-Related Concrete Structures for Nuclear Power Plants (Other than Reactor Vessels and Containments)," 64 Fed. Reg. 71990

Dear Sir or Madam:

Enclosed please find Bechtel Power Corporation's comments on Draft Regulatory Guide DG-1098, which was issued for public comment on September 12, 2000. In general, we believe that several of the Regulatory Positions as currently stated in the draft regulatory guide require additional justification or clarification.

Thank-you for the opportunity to review and provide comments on this draft regulatory guide. Should you have any questions on the enclosed comments, please contact me at (301) 228-6245.

Sincerely,

S.D. Routh

Stephen D. Routh
Manager of Regulatory Affairs

cc: K. Cozens (NEI)

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ADD- Ann Beranek (AFB)

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**Bechtel Power Corporation Comments on
NRC Draft Regulatory Guide DG-1098,
"Safety-Related Concrete Structures for Nuclear Power Plants
(Other than Reactor Vessels and Containments)"**

1. The guidance in DG-1098, Section B, Discussion, continues to reflect that originally delineated in Regulatory Guide 1.142 regarding mechanical connections for reinforcing bar splices. Specifically, the current acceptance criteria and guidance (in ASME NQA-2) is limited to Cadweld splices. However, alternate mechanical connection systems other than Cadweld splices are in widespread use in the construction industry. Test/qualification data and acceptance criteria for these alternate mechanical connection systems are available. Bechtel's experience with other mechanical splice systems has led us to recognize the many benefits these systems can offer (e.g., cost, ease of installation, etc.) without compromising the strength or reliability of reinforcing bar splices. We recommend that DG-1098 be revised to state the NRC's willingness to evaluate the use of these other mechanical connection systems as proposed by the industry. We would be pleased to meet with the NRC (and the ACI-ASME Joint Committee) to share our experience and discuss this issue further.

2. Regulatory Position 6 proposes to change the live load factor T_0 from 1.3 to 1.2 based on the statistical data from NUREG/CR-3315, "A Consensus Estimation Study of Nuclear Power Plant Structural Loads," May 1983. However, neither Regulatory Position 6 nor NUREG/CR-3315 provides any detailed quantitative information that would support decreasing the load factor. A detailed technical evaluation should be provided to justify the proposed load factor changes.

3. Regulatory Position 7 states that loads for malevolent vehicle assault, aircraft impact, and accidental explosion should use the same load factors as a tornado wind. A detailed technical evaluation should be provided to justify this position.

4. Regulatory Position 10.5 endorses Appendix C of ACI 349-97 with some exceptions. Specifically, it restricts the dynamic increase factor (DIF) when the dynamic load factor is higher than 1.2. However, an allowance to determine the DIF based on an analytical determination of system strain rate and use of the corresponding material resistance functions should be permitted. Bechtel believes that the NRC position is acceptable when DIFs cannot be determined by any other method. However, in those cases where the DIF can be determined, the DIF should not be restricted regardless of what the dynamic load factor may be.

5. Regulatory Position 12 endorses Appendix A of ACI 349-97. The guidance presented in Appendix A is generic and does not give any additional guidance on the design of heavily loaded steel embeds and supports in concrete for operating temperatures between 150^0F and 200^0F. Although we believe that no effects occur for concrete within this operating temperature range, no guidance exists to support this conclusion. Currently, the guidance acknowledges that there are no temperature effects below 150^0F and delineates the temperature effects above 200^0F. However, if water is entrapped in concrete structures, long-term operating temperatures between 150^0F and 200^0F could result in the water being heated enough to become steam which could crack or weaken the concrete structure. Therefore, we believe that guidance for this operating temperature range is important and that it should be included in the final guidance.