

APPENDIX A

Teledyne Engineering Services
Waltham, Massachusetts

Based on the results of a NRC inspection conducted on January 7-11, 1985, it appears that certain of your activities were not conducted in accordance with NRC requirements.

Nonconformances with these requirements are as follows:

- A. Section 5.1 of the Project QA program for Teledyne Engineering Services (TES) Project 6235C, lists Impell procedure WBNP-001 Rev 0, "Engineering Procedure for Pipe Support Design" as a required procedure for TES project 6235C. Section 6.0 of Impell procedure WBNP-001 Rev 0 states, in part, "When engineering judgement is utilized as a means of qualification for a particular segment of a calculation, it should be documented and appropriately justified in the calculation package. The justification is extremely important and must not be overlooked."

Contrary to the above, pipe support calculations performed as part of TES project 6235C, for support mark Nos. 62-2CVC-R168 and 62-2CVC-R253 did not include forces and moments resulting from piping movement when sizing the welds for the attachment of the rigid sway struts to a bolted base plate and an embedded plate. Additionally, there was no documented justification that engineering judgement was being utilized to qualify these weld calculations.

- B. Section 3.1 of the TES Quality Assurance Manual states, in part, "Design (conceptual, preliminary, final, redesign, or field engineering) includes the activity to substantiate the adequacy of a design by analysis (hand calculations, computer solutions) and/or test." Section 3.7 of the TES Quality Assurance Manual, states, in part, "Checking of the accuracy of input to and the execution of computer programs."

Contrary to the above, pipe support calculation No. 62-2CVC-R42, TES project 6235C, Watts Bar Nuclear Plant, was not adequately checked for the accuracy of input and therefore a vertical friction force was incorrectly applied at Node 9 of the GT STRUDL Model. Additionally, there was no documentation of this error with respect to the structural adequacy of the support.

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