

PSNH PUBLIC SERVICE
Company of New Hampshire

SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

May 5, 1981

SBN-158
T.F. B4.2.7

U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Attention: Mr. Eldon S. Brunner, Chief
Projects Branch No. 1

References: (a) Construction Permits CPPR-135 and 136, Docket Nos. 50-443
and 50-444
(b) PSNH Response to Inspection 50-433/80-13 and 50-444/80-13
SBN-150 dated February 13, 1981

Subject: Combined Inspection No. 50-433/80-13 and 50-444/80-13

Dear Sir:

Pursuant to receipt of your correspondence regarding the results of the subject inspection, we offer the following modified response to our submission of February 13, 1981.

NRC Notice of Violation: (80-13-03)

10CFR50, Appendix B, Criterion III states, in part, that: "Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design ..."

The Seabrook Station PSAR for Units 1 and 2 states in part, in paragraph 17.1.3 that: "Controls for changes, including field changes, shall be commensurate with the controls applied to the original document." Furthermore, the PSAR states in paragraph 17.2.3 that notification to and approval by United Engineers and Constructors (UE&C) Engineering is required for all field initiated design changes and that "UE&C Engineering will assure that the impact of the change is considered, (and) required actions documented ..."

Bethlehem Steel Drawings 016RW35AX (Revision 3) for the steam generator shield walls and 016RW38A (revision 1) for the pressurizer shield wall indicate UE&C Engineering checks and approval on September 3 and August 28, 1980 respectively, and illustrate the shield wall No. 9 rebar dowels are continuous bars out of the elevation 25' slab to the full height of the shield walls.

810 6090531

Contrary to the above, during the period of time just prior to the elevation 25' slab concrete placement, commencing on December 4, 1980, approximately one thousand shield wall No. 9 rebar dowels were cut below the required design height without documented evidence of UE&C Engineering review or approval of this field initiated change.

This is a severity Level V violation (Supplement II).

Response:

Corrective Action Taken and Results Achieved

We do not concur that the stated conditions of violation are contrary to the design control mechanisms required by 10CFR50, Appendix B, Criterion III or to the commitments indicated in the Seabrook Station PSAR paragraphs 17.1.3 and/or 17.2.3 for the following reasons.

- A. UE&C Engineering Change Authorization (ECA) 01-0619B which allows the Construction Manager to permit the cutting of rebar to facilitate certain construction operations was reviewed and concurred upon by all engineering disciplines which were involved in the original design review. The ECA was issued based upon a qualitative engineering analysis which included the following thought processes considering industry practice and history.
1. Cadweld splices are considered continuations of the rebars and the integrity of the structures is always maintained.
 2. The use of approved QA and Construction procedures insures high quality Cadweld splices capable of developing the specified minimum strengths.

Subsequent to the identification of the approximately one thousand shield wall No. 9 rebar dowels cut below the required design height, UE&C engineering reconsidered the impact of allowing construction to cut off rebar at the same elevation two feet above the containment operating slab and reached the following conclusions in addition to 1. and 2. above.

3. The impact of omitting stagger in the Cadweld splice in the walls on structural behavior and design basis forces is negligible.
4. There is no reduction in structural capacity.
5. These structural units will perform as designed.

Although we believe that the Cadweld splices are considered continuations of the rebars and the integrity of the structures is always maintained, we recognize changes in the state-of-the-art and accordingly have advised our construction forces via ECA 01/2127A to stagger Cadwelds by 24 inches whenever possible. Engineering is to be consulted when staggers cannot be achieved. The issuance of these directions via ECA 02/2127A does not constitute a weakness in the previously established provisions for the installation of additional field splices but solely represents the desire to implement restrictions that may prove to have additional benefits.