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January 13, 1994

Docket No. 87-213
B14710

RE: Generic Letter 87-02;
US1 A-46 Completion

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Haddam Neck Plant
US1 A-46 Walkdown Summary Report and
Proposed Expansion of Licensing Basis for
Verification of Equipment Seismic Adequacy

Gentlemen:

In Generic Letter (GL) 87-02,⁽¹⁾ the NRC Staff set forth the process for resolution of US1 A-46 and encouraged nuclear power plant licensees to participate in a generic program. In Supplement 1 to GL 87-02,⁽²⁾ the Staff required a response to include a statement regarding commitment to Generic Implementation Procedure (GIP)-2, a schedule for the implementation of the GIP, and submission of a report summarizing the results of the US1 A-46 program. By letter to the NRC Staff dated September 21, 1992,⁽³⁾ Connecticut Yankee Atomic Power Company (CYAPCO) committed to implement GIP-2, including the clarifications, interpretations, and exceptions in SSER-2, and to communicate to the NRC Staff any significant or programmatic deviations from GIP guidance.

- (1) H. R. Denton to All Holders of Operating Licenses Not Reviewed to Current Licensing Criteria or Seismic Qualification of Equipment, "Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (US1) A-46 (Generic Letter 87-02)," dated February 19, 1987.
- (2) J. G. Partlow to All Unresolved Safety Issue (US1) A-46 Plant Licensees Who are Members of the Seismic Qualification Utility Group (SQUG), "Supplement No. 1 to Generic Letter (GL) 87-02 that Transmits Supplemental Safety Evaluation Report No. 2 (SSER No. 2) on SQUG Generic Implementation Procedure, Revision 2, As Corrected on February 14, 1992, (GIP-2)," dated May 22, 1992.
- (3) J. F. Opeka letter to the U.S. Nuclear Regulatory Commission, "Haddam Neck Plant, Millstone Nuclear Power Station, Unit Nos. 1 and 2, Plant-Specific Response to Supplement 1 to Generic Letter 87-02," dated September 21, 1992.

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Also, CYAPCO agreed to submit the Haddam Neck Plant Safe Shutdown Equipment List (SSEL) Report, the Relay Report, and the Seismic Evaluation Report within 180 days following completion of the Cycle 17 refueling outage.

USI A-46 final walkdowns for the Haddam Neck Plant were completed during the Cycle 17 refueling outage. This letter forwards the agreed upon reports, and summarizes the results of the USI A-46 program at the Haddam Neck Plant. This letter also confirms that no significant or programmatic deviations from the GIP guidance were made during the USI A-46 resolution process. Also, this submittal provides CYAPCO's plans to modify the Haddam Neck Plant seismic licensing basis to adopt the GIP-2, including the clarifications, interpretations, and exceptions identified in SSER-2, as one method, in addition to the current licensing basis methods, for verifying the seismic adequacy of plant electrical and mechanical equipment.

USI A-46 REPORTS

Section 2.2.8 of GIP-2, Part I, provides for a plant-specific summary report to be submitted to the NRC Staff, including a proposed schedule for future modifications and replacements, where appropriate, at the completion of the walkdowns. Further, GIP-2, Part II, Section 9, provides for SSEL, Relay Evaluation, Seismic Evaluation and Completion Reports. CYAPCO committed, in the September 21, 1992, letter to provide the NRC Staff with each of these reports. However, the Completion Report is not to be submitted until all planned actions for resolution of USI A-46 have been completed. Accordingly, all of the reports necessary at this stage of the A-46 resolution are attached. This letter constitutes the Summary Report.

A-46 Safe Shutdown Equipment List (SSEL) Report (Attachment No. 1):

Plant electrical and mechanical equipment was selected for evaluation under the A-46 program, and included in the A-46 SSEL in accordance with the provisions of GIP-2, Section 3. The use of the GIP-2 methodology resulted in the inclusion and evaluation of safety and non safety related equipment beyond that necessary to safely shutdown the plant in the event of an earthquake as currently defined in the Haddam Neck Plant licensing basis. However, this expanded list of A-46 evaluated equipment was required to satisfy the specifications of GIP-2.

Of the safety related equipment identified in the A-46 SSEL, some of it is subject to other specific seismic commitments, including the seismic aspects of 10 CFR Part 50, Appendix R, Regulatory Guide 1.97, and other possible specific commitments. The remainder of the safety related A-46 SSEL equipment is subject to the seismic licensing basis requirements of the Updated Final Safety Analysis Report (UFSAR). The current submission of this A-46 SSEL does not alter any previous licensing commitment or design basis for the Haddam Neck Plant, but will provide support to possible future licensing actions as further explained in this letter.

The A-46 SSEL report also includes the method for verifying the compatibility of the A-46 SSEL with plant operating procedures.

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Relay Evaluation Report (Attachment No. 2): This report provides the information suggested by GIP-2, Part 2, Section 9.3. A number of outliers were noted in this area, and are discussed below under "Outliers."

Seismic Evaluation Report (Attachment No. 3): This report provides the information suggested by GIP-2, Part 2, Section 9.4. Outliers were also found in this group of equipment and are discussed below under "Outliers."

OUTLIERS

Outliers, as defined by GIP-2, were identified during the walkdowns. These outliers are described in detail in the outlier evaluation sheets found in the attached Relay and Seismic Evaluation Reports. The outliers have been evaluated against the current licensing and design bases and no deviations were found. Nonetheless, we are continuing to evaluate these outliers, and if they cannot be resolved in accordance with the guidelines set forth in GIP-2, they will be incorporated into the Haddam Neck Plant Integrated Safety Assessment Program (ISAP).⁽⁴⁾ This program was established specifically for evaluating and scheduling licensing actions and improvements, including unresolved safety issues.

Incorporating unresolved outliers into the ISAP is intended to constitute implementation of GIP-2 guidance for proposing a schedule for complete resolution and future modifications or replacement of those outliers. CYAPCO does not intend to leave any outliers unresolved. However, the outliers will be further evaluated by the seismic Probabilistic Risk Assessment (PRA) which is being performed in support of the Individual Plant Examination for External Events (IPEEE) program. If deemed necessary, the ISAP program will be used to determine the priority for final resolution and modifications. It is possible that the ISAP process will assign such a low priority to an outlier, because of insignificant safety benefit, that no further action will be warranted.

PRESENT LICENSING BASIS

The licensing basis for determining the seismic adequacy of safety related equipment is summarized in the Haddam Neck Plant UFSAR Section 3.7 "Seismic Design." In general, components and systems were originally required to withstand ground accelerations of 0.03g and 0.17g (Housner spectra shape), corresponding to the equivalent of an operating basis and a safe shutdown earthquake, respectively. Amplified floor response spectra were not generated and equipment testing was not required.

LICENSING BASIS MODIFICATION

As indicated in our September 21, 1992, letter and acknowledged by the Staff in

(4) J. F. Stolz letter to J. F. Opeka, "Issuance of Amendment (TAC Nos. M67774 and M67799)," dated February 26, 1992.

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a November 25, 1992, letter,⁽⁵⁾ CYAPCO will soon expand the Haddam Neck Plant seismic licensing basis to include use of the USI A-46 methodology (as documented in GIP-2 and SSER-2) as one option for verifying the seismic adequacy of electrical and mechanical equipment covered by the GIP. This modification will leave in place the existing (i.e. pre-A-46) licensing basis for each piece of equipment. We are presently evaluating the need to change the design basis of the SSEL equipment. It is our intent that operability analyses of equipment will be conducted according to the licensing basis of each equipment item.

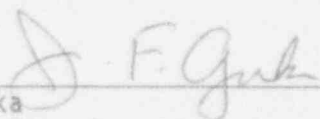
To modify the existing licensing basis, as documented in the UFSAR, to allow the use of the A-46 methodology in addition to the existing licensing basis, CYAPCO will follow the applicable regulatory requirements and will report any changes made to the UFSAR under 10CFR50.71(e).

In general, the A-46 methodology will be made available for future modifications and for new and replacement equipment as described in GIP-2, Part I, Section 2.3.4. Seismic evaluations will be performed in a systematic and controlled manner to insure that new and replacement items are properly represented in the earthquake experience or generic testing equipment classes, and that applicable caveats are met. New and replacement items will be evaluated for design changes that could affect seismic capacity as determined by application of the A-46 methodology.

If you have any questions, please contact us.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY




J. F. Opeka
Executive Vice President

cc: T. T. Martin, Region I Administrator
A. B. Wang, NRC Project Manager, Haddam Neck Plant
W. J. Raymond, Senior Resident Inspector, Haddam Neck Plant

Subscribed and sworn to before me

this 13th day of January, 1994.



Date Commission Expires: 3/31/95

(5) A. Wang letter to J. F. Opeka, "Safety Evaluation of the Haddam Neck Plant, 120-Day Response to Supplement 1 to Generic Letter 87-02 (TAC M69450)," dated November 25, 1992.