PSNH PUBLIC SERVICE
Company of New Hampshire

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

September 27, 1982

SBN-334
T.F. B4.2.7

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Thomas T. Martin, Director
Division of Engineering and Technical Programs

References: (a) Construction Permit CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
(b) USNRC letter, dated August 24, 1982, "Inspection No. 50-443/82-06," Thomas T. Martin to W. C. Tallman

Subject: Response to Inspection No. 50-443/82-06

Dear Sir:

As required pursuant to the provisions of 10CFR2.201, we hereby submit the following response to Reference (b). Attachment A includes a reiteration of the identified violations, the corrective steps which have been taken to resolve the violations and to avoid their recurrence, and the date when full compliance will be achieved. Also provided, as Attachment B, are the results of actions which we have taken, or plan to take to enhance the design and construction programs in those areas where perceived weaknesses were identified.

We take exception to your statement that the findings of this inspection indicate that a "significant weakness" exists in our design and construction program. It is our position that this conclusion cannot be supported by the inspection results, either taken individually or in total. We do agree that improvements can be made to the design and construction programs, and we have continually strived to enhance the already strong and effective programs now in place.

We also take exception to your conclusions concerning management's aggressiveness in pursuing and resolving problems. The one area of substance which was identified, that concerning deficiencies in a portion of the welding program, was identified by the Permittee and vigorous corrective actions were taken, both at the site and home office, to ensure compliance with the program. When monitoring of corrective actions showed additional improvements were necessary, further corrective actions were initiated in a timely manner. In addition, we do not feel that appropriate recognition was given to the Permittee's increased (daily) surveillance of weld monitoring, the increased frequency of audit verification processes of weld monitoring, and material identification and control activities to ensure a quality product.

We believe that if your evaluation had focused on the significance of those violations and programmatic weaknesses identified by the inspection team, as well as the strengths in the program, it would show the Seabrook Quality Assurance Program to be viable, effective, and continuously improving.

We trust this information is satisfactory. Should you have any further questions, please feel free to contact us.

Very truly yours,

W. P. Johnson

W. P. Johnson
Vice President

AMS/fsf

ATTACHMENT A

A. NRC Notice of Violation: (443/82-06-01)

10CFR50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by and performed in accordance with documents which include appropriate acceptance criteria. UE&C Corporate Standard No. II-3 "Qualification and Certification of Inspection, Testing and Surveillance Personnel" requires that the qualification of such personnel shall be documented in an appropriate form which includes the activities they are qualified to perform.

Contrary to the above, as of June 30, 1982, Certification of Level 2 surveillance personnel failed to identify the discipline or activity for which they were qualified.

This is a Severity Level V Violation (Supplement II) applicable to Docket No. 50-443.

Response

Corrective Action Taken and Results Achieved

UE&C Procedure 2-2 has been revised, requiring that Quality Assurance Engineers be certified in "Civil/Structural Surveillance" rather than "Surveillance" as had previously been the case.

In addition, UE&C Procedure VT-76 is being reviewed to assure that it complies with SNT-TC-1A, 1975. Quality Assurance Engineers will be certified Level II rather than Level IIR.

Corrective action will be completed by October 29, 1982.

B. NRC Notice of Violation: (443/82-06-02)

10CFR50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documents which include appropriate acceptance criteria.

Contrary to the above, on June 21, 1982, waterstops installed in the walls of Unit 2 fuel storage building were observed to have encroached on the reinforcing steel and the pertinent drawings and specifications provided no specific installation requirements.

This is a Severity Level V violation (Supplement II) applicable to Docket No. 50-443.

Response

Corrective Action Taken and Results Achieved

UE&C has issued an Engineering Change Authorization (ECA 01/3591A) which revises Drawing No. F101696 to include installation requirements for waterstop material.

Corrective action was completed by July 14, 1982.

C. NRC Notice of Violation: (443/82-06-03)

10CFR50, Appendix B, Criterion III states that design control measures shall provide for verifying or checking the adequacy of design. The verifying or checking process shall be performed by individuals other than those tho performed the original design, and the design changes shall be subject to design control measures commensurate with the controls applied to original design.

Contrary to the above, on July 2, 1982, Engineering Change Authorizations were initiated, dispositioned, and approved by one individual on more than one occasion, and a Request for Information containing design change information was issued without proper verification, checking, or review.

This is a Severity Level IV violation (Supplement II).

Response

Corrective Action Taken and Results Achieved

The individual who had incorrectly processed the ECAs has been retrained to assure that he is knowledgeable of the procedure requirements.

ECAs which had been initiated, dispositioned and approved by one individual have been reviewed and resigned subsequent to receiving telephone approval/concurrence by the appropriate design personnel from Home Office engineering. None of the affected ECAs required revision.

Corrective action was completed by September 20, 1982.

D. NRC Notice of Violation: (443/82-06-04)

10CFR50, Appendix B, Criterion III states that design control measures shall provide for verifying or checking the adequacy of design. The design changes, including field changes, shall be subject to control measures commensurate to the original design, and be approved by the organization that performed the original design.

Contrary to the above, on July 2, 1982, Nonconformance Reports containing design change information were not reviewed for technical adequacy of dispositions ("accept-as-is"; "repair") by original design group.

This is a Severity Level IV violation (Supplement II).

Response

Corrective Action Taken and Results Achieved

UE&C Field Procedure FACP-1 has been revised and requires Home Office concurrence on all "Accept-As-Is" and "Repair" dispositions. Additionally, UE&C has revised QA-15 requiring the use of a "Review Board Response Form" for all UE&C NCRs which require Engineering or Westinghouse dispositions.

Prior to March 1982, Design Change Notices (DCNs) were issued listing NCRs as affected documents when it was determined that document changes were required. This system permitted the NCRs to be tracked via the Project Change Log System.

Currently, the Nonconformance Review Board Form (NRBRF) includes an affected documents section in which specifications, drawings, etc. can be listed when it is determined than an NCR disposition results in required changes to these documents. The NRBRF list is maintained and tracked by the Site Change Coordinator.

Corrective action will be completed by September 30, 1982.

E. NRC Notice of Violation: (443/82-06-05)

10CFR50, Appendix B, Criterion VI states that measures shall be established to control the issuance of documents affecting quality such that they are distributed to and used at the location where the prescribed activity is performed.

Contrary to the above, on June 30, 1982, the ECA change log (Log #8) issued on June 23, 1982 was not distributed and was not in use by project personnel at the controlled drawing station.

This is a Severity Level IV violation (Supplement II).

Response

Corrective Action Taken and Results Achieved

The correct issue of the site Engineering ECA Change Log was issued as soon as it was noted that an incorrect issue was being utilized. Future revisions will be put in use as soon as they are issued.

Corrective action was completed by June 23, 1982.

F. NRC Notice of Violation: (443/82-06-06)

10CFR50, Appendix B, Criterion IX requires that measures shall be established to assure that special processes, including welding, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes,... ASME Section III NA-4133.9 directs that welding be controlled in accordance with the rules of this Section and be accomplished by qualified personnel using qualified procedures. ASME Section IX QW-100.1 states in part, "The WPS is intended to provide direction for the welder."

Contrary to the above, during the period June 21 to July 2, 1982, P-H welders and welding foremen were found not to be knowledgeable of nor trained in the ASME WPS documents.

This is a Severity Level IV violation (Supplement II).

Response

Corrective Action Taken and Results Achieved

UE&C has directed site contractors to provide ongoing training of welders and foremen in the essential parameters of the Welding Procedure Specification and to assure that welding procedures are accessible to welding personnel.

Although training will be ongoing, present personnel completed training by September 7, 1982.

G. NRC Notice of Violation: (443/82-06-07)

10CFR50, Appendix B, Criterion XVIII requires that follow-up action, including reaudit of deficient areas, shall be taken where indicated. The ASME III Code, paragraph NA-4133.8 requires that follow-up action, including reaudit, be made of deficient areas. Pullman Power Products Corporate Field Nuclear QA Program Manual, ASME Section III, Division I, dated March 1, 1982, paragraph 18.6.1, states, "Whenever deficiencies are noted in an audit report, immediate corrective action shall be initiated."

Contrary to the above, during the period June 21 through July 2, 1982, a review of Pullman-Higgins Internal Auditing Reports Nos 7035-1-81, 7035-2-81 and 7035-1-82 disclosed that two successive audits identified weld monitoring as deficient. The third audit failed to follow-up these audit findings.

This is a Severity Level IV violation (Supplement II).

Response

Corrective Action Taken and Results Achieved

A meeting of UE&C, Yankee Atomic Electric Company and Pullman-Higgins management was held on July 26, 1982 at Seabrook. The attendees discussed the results of the Construction Assessment Team inspection and the P-H overall performance at the site. An Action Item List was developed covering areas that need improvement and/or corrective action. The list includes the weld monitoring condition identified above. A follow-up meeting was held on August 26, 1982.

All P-H welding personnel have had weld activities monitored by Quality Control personnel and P-H Corporate Quality Assurance performed an audit of the weld monitoring activities.

Corrective action was completed by September 15, 1982.

H. NRC Notice of Violation: (443/82-06-09)

10CFR50, Appendix B, Criterion XVI requires that in the case of significant condition adverse to quality the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. United Engineers and Constructors Quality Assurance Program, Section 17.1.13, requires that handling and storage instructions shall provide for protective environment to prevent damage or deterioration of the material or equipment. Westinghouse Nuclear Service Division Manual, Volume II, requires electrical equipment be placed in "B" level storage with special attention to preventing dust and dirt from entering the equipment.

Contrary to the above, on June 24, 1982, the Westinghouse electrical equipment stored in place at the 75 foot elevation of the control building and the "A" and "B" level warehouses was not being maintained in a "B" level configuration and dust and dirt had infiltrated the equipment. These conditions were identified in Nonconformance Report No. 843, dated February 20, 1981, but corrective actions did not preclude recurrence.

This is a Severity Level IV violation (Supplement II).

Response

Corrective Action Taken and Results Achieved

The conditions identified have been corrected with the exception of "cleaning prior to energization" which is covered by a Startup Test Procedure. Additionally, UE&C has increased their surveillance of in-place stored equipment to prevent recurrence of this condition.

Corrective action was completed by July 29, 1982.

I. NRC Notice of Violation: (443/82-06-10)

10CFR50, Appendix B, Criterion IX, requires that nondestructive testing be controlled and accomplished in accordance with applicable codes and specifications. Pullman-Higgins procedure, IX-RT-1-W77, Revision 3, invokes the ASME Section III Code, NC 5320 for acceptance criterior for radiography. ASME Section III Code, NC 5320, states that the following types of discontinuties are unacceptable: Incomplete fusion or lack of penetration.

Contrary to the above, on June 29, 1982, field weld CS-369-10 F1006 was reexamined by radiography and found to contain incomplete fusion.

This is a Severity Level IV violation (Supplement II).

Response

Corrective Action Taken and Results Achieved

Field weld F1006 plus six inches of pipe on either side of the weld was removed, the weld re-xrayed, examined with ultrasonic's and then cross-sectioned in the area of interest. The following results were noted:

1. Single wall x-ray revealed the original indication plus some additional areas. This information was used to mark the weld prior to sectioning.

2. The ultrasonic inspection results were not useful due to interference from weld root geometry.

3. The cross-sectioned weld revealed a slag inclusion approximately half way up in the weld. Its orientation in the weld would have lined it up adjacent to the edge of the root bead as it was observed in the radiograph taken.

Although this occurrence is considered an isolated incident, the following actions are being taken to prevent recurrence:

1. Pullman-Higgins will re-review 10% of the previously accepted radiographs of similar weld geometry.

2. Pullman-Higgins will retrain film interpreters as necessary to assure their capability to correctly review radiographs.

3. Pullman-Higgins will provide a secondary review of radiographs prior to turning them over to the Owner.

It is expected that these corrective actions will be completed by December 31, 1982.

ATTACHMENT B

Significant Program Weaknesses

During the inspection certain areas were identified as being weak and requiring improvement. Corrective action taken to strengthening these areas is described below.

1. Contractor Interface Incident Reports are used to initiate design control documents such a Engineering Change Authorizations and Nonconformance Reports. There is no positive control to assure that these documents are issued.

Corrective Action Taken

An Interim Procedure Change was issued revising UE&C Procedure FACP-2 requiring site contractors to list documents such as NCRs or ECAs issued as a result of Contractor Incident Interface Report (CIIRs). UE&C will issue and maintain a log listing open CIIRs to engineering and site contractors.

Corrective action was completed on June 28, 1982.

2. Site staff engineering is responsible for evaluating Nonconformance Reports for reportability under 10CFR50.55(e). Interviews conducted with six staff engineers in two disciplines disclosed that they were not familiar with the criteria for reportability.

Corrective Action Taken

A. UE&C conducted two training sessions during July 1982 to define the requirements of 10CFR50.55(e) and the method for reviewing documents for potential significant deficiencies.

B. UE&C Procedure FACP-1 has been revised to include specific requirements for internal reporting and processing of potential 50.55(e) deficiencies.

C. UE&C Site Engineering re-evaluated all NCRs dating from August 1, 1981 in accordance with 10CFR50.55 (e) reportability criteria. No reportable deficiencies were noted.

3. Nonconformance Report trending is performed by United Engineers and Constructors for recurring adverse conditions. The trend analysis does not consider reports beyond the preceding month.

Corrective Action Taken

UE&C Field Quality Assurance personnel have expanded their trend analysis to include data from preceding months.

ATTACHMENT B

Significant Program Weaknesses (Cont.)

4. Audit reports of the piping subcontractor revealed several specific problems which, when viewed collectively, indicated a programmatic weakness. These were identified by the licensee's audit program circa mid-1981. Although efforts to resolve these problems have been initiated, they have been ineffective.

Corrective Action Taken

YAEC has and continues to pursue a rigorous program of corrective action with Pullman-Higgins. Problems have been identified and action taken to prevent recurrence. When the need for additional improvements are deemed necessary by YAEC, appropriate requirements are imposed on P-H. In addition, Yankee has augmented its program of surveillances and audits to assure P-H compliance with program requirements.

YAEC, UE&C and P-H management have and will continue to meet and discuss quality problems as they arise and will continue to insist on meaningful corrective action so as not to jeopardize the quality of safety-related equipment and systems.

5. The electrical subcontractor has developed procedures to train supervisors and formen who work with safety-related equipment, however, the procedure permits them to begin working before they have completed the training.

Corrective Action Taken

Yankee and UE&C have developed a "Seabrook Site Training Specification" which requires that contractor's training coordinators assure that training programs include provisions that preclude individuals from assuming responsibility until such time that adequate training has been completed. Yankee and UE&C surveillance personnel will verify compliance.