CONNECTICUT YANKEE ATOMIC POWER COMPANY

BERLIN, CONNECTICUT
P.O. BOX 270 HARTFORD, CONNECTICUT 06141-0270

TELEPHONE
203-665-5000

November 6, 1985

Docket No. 50-213
A04547

Dr. Thomas E. Murley
Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

Gentlemen:

Haddam Neck Plant
Response to December 13, 1984 Order Modifying License

The purpose of this letter is to provide Connecticut Yankee Atomic Power Company's (CYAPCO) response to Section IV.C of the Order modifying the operating license which was issued on December 13, 1984(1)

Background

On December 13, 1984, the NRC Staff issued a Notice of Violation and Proposed Imposition of Civil Penalty and Order Modifying License to CYAPCO. These actions were a result of inspections conducted concerning the circumstances associated with the failure of the reactor cavity seal at the Haddam Neck Plant on August 21, 1984.

Subsequent to the issuance of the subject Notice of Violation (NOV) and Order Modifying License, the Staff granted an extension to January 28, 1985 for responding to the Order Modifying License.(2) By letter dated January 7, 1983,(3) CYAPCO confirmed with the Staff our mutual understanding that the extension for responding to January 28, 1985 applied not only to the Order Modifying License but also to the Notice of Violation.

(1) J. M. Taylor letter to W. G. Counsil, dated December 13, 1984, Order Modifying License and Notice of Violation and Proposed Imposition of Civil Penalty, Docket No. 50-213, EA-84-115.

(2) J. M. Taylor letter to W. G. Counsil, dated December 26, 1984.

(3) W. G. Counsil letter to J. M. Taylor, dated January 7, 1985.

8512090238 851106
PDR ADOCK 05000213
S PDR

By letter dated January 28, 1985,[4] CYAPCO responded to the subject Notice of Violation and the Order Modifying License. The response to the order outlined a comprehensive plan to review design changes and the design change process utilized at Haddam Neck. The letter also included a description of other on-going initiatives within the Northeast Utilities/CYAPCO organization that are related to our overall plan for improving the design change and safety review process.

By letter dated February 6, 1985[5], CYAPCO transmitted the resumes of the Plant Design Change Task Group members. This completed our response to the Order.

By letter dated March 22, 1985[6], CYAPCO described the interim corrective actions on the design change control process which were implemented in February 1985.

By letter dated April 23, 1985,[7] the NRC Region I Administrator accepted the program plan, the qualifications of the Task Group members and the interim corrective actions.

By letters dated April 11[8] and June 21,[9] 1985, the Plant Design Change External Review Group provided the Regional Administrator with status reports discussing the progress of their review and the schedule of activities.

Final Report

In accordance with Section IV.B of the Order, the Plant Design Change External Review Group transmitted the Group's Final Report on September 6, 1985[10]. Of the 355 Plant Design Change Requests (PDCR) and 20,294 Work Permits/Orders reviewed during the period in question only one PDCR raised an

---

(4) W. G. Counsil letter to J. M. Taylor and Dr. T. E. Murley, dated January 28, 1985.

(5) W. G. Counsil letter to Dr. T. E. Murley, dated February 6, 1985.

(6) W. G. Counsil letter to Dr. T. E. Murley, dated March 22, 1985.

(7) T. E. Murley letter to J. F. Opeka, dated April 23, 1985.

(8) D. E. Vandenburgh letter to Dr. T. E. Murley, dated April 11, 1985.

(9) D. E. Vandenburgh letter to Dr. T. E. Murley, dated June 21, 1985.

(10) D. E. Vandenburgh letter to Dr. T. E. Murley, dated September 6, 1985.

immediate safety concern. The NRC was promptly notified and License Event Report 85-017[11] was submitted by CYAPCO. Justification for continued operation was provided and long term corrective actions will be supplied by November 12, 1985 in a follow-up report. Detailed listings of other deficiencies were identified in the Connecticut Yankee Plant Design Change Task Group (CYPDCTG) Final Report which accompanied the External Review Group's Final Report.

Report Conclusions

In general, the CYPDCTG final report concluded that throughout the period of review, design changes have been made with concern for both quality and safety. In several instances, the identified deficiency was not related to the change itself, but to the original design basis of the system being modified.

The most frequent source of identified deficiencies was the seismic qualification of equipment. The most signficant deficiencies identified in the CYPDCTG final report are: a) incomplete consideration of charging system outleakage in post-accident release analyses and Technical Specifications, b) inconsistent seismic qualification of the service water system and portions of CVCS; c) potential degradation of containment isolation under certain post-accident conditions, and d) inability of the plant to achieve cold shutdown utilizing only seismically qualified equipment.

Also, the CYPDCTG concluded that existing procedural controls over the design change process are effective. Only a few deficiencies that occurred in past design changes have not been addressed adequately in current design change procedures. A significant improvement in PDCR packages with time was noted.

Report Recommendations

The CYPDCTG recommendations for improvements in the design change process were primarily in the areas of:

1. Control of design basis information.
2. Training of engineers on the design change process.
3. The definition of "Plant Design Change".
4. The documentation of activities that may not be controlled under PDCR's.
5. The need for a more integrated review process.
6. Specific procedure improvements for clarity and consistency.

The CYPDCTG findings and recommendations were summarized in Tables 5, 6, 7 and 8 of the CYPDCTG Final Report.

---

(11) R. H. Graves letter to NRC Document Control Desk, dated August 14, 1985.

Improvement Plans

A plan for improvements based on evaluation of the CYPDCTG findings and recommendations is provided as Attachment 1. The plan includes (1) action items to be performed and (2) a schedule for completion of each specific action item which has not already been completed. To date, the completed action items have adopted the recommendations of the final report.

Special Reports

During the course of this review, two additional design change problems were identified to the CYPDCTG for consideration.(12) One of these design changes affected the Haddam Neck Plant, and the other design change concerned Millstone Unit No. 2. The CYPDCTG completed its review of these two plant design changes and provided the following reports to the NRC by letter dated October 11, 1985(13):

- "Special Report - Connecticut Yankee PDCR 713," dated August 30, 1985
  PDCR 713 involved modifications to the computer room and associated smoke detectors.

- "Special Report - Millstone Unit 2 PDCR 2-8-85," dated September 11, 1985
  PDCR 2-8-85 involved modifications to the pressurizer pressure control system.

The recommendations of these special reports are summarized in Attachment 2. A plan for improvements based on evaluation of the CYPDCTG findings and recommendations is included in Attachment 2 and will be included in the plan to address the CYPDCTG findings and recommendations discussed in Attachment 1.

Summary

In summary, the plans described in Attachments 1 and 2 provide our response to Section IV.C of the Order. The results of the planned evaluations and reviews discussed in Attachments 1 and 2 will be documented, filed and available for future review. CYAPCO hereby requests the NRC review and approve the attached plans in accordance with the Order.

---

(12) E. C. Wenzinger letter to R. J. Schmidt, dated July 19, 1985 (Docket No. 50-213), and E. C. Wenzinger letter to R. J. Schmidt, dated August 14, 1985 (Docket No. 50-336).

(13) J. F. Opeka letter to E. C. Wenzinge., dated October 11, 1985.

If you have any questions or comments, please let me know.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

J. F. Opeka

J. F. Opeka
Senior Vice President

E. J. Mroczka

By: E. J. Mroczka
Vice President

Attachments

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Then personally appeared before me E. J. Mroczka, who being duly sworn, did state that he is a Vice President of Connecticut Yankee Atomic Power Company, Licensee herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Licensee herein and that the statements contained in said information are true and correct to the best of his knowledge and belief.

Sheila M. Oates

Notary Public
My Commission Expires March 31, 1986

Docket No. 50-213

Attachment 1

Connecticut Yankee

Improvement Plan

November, 1985

Deficiencies in Specific Plant Design Changes

TABLE 5

Deficiency No. 1: PDCR No. 294 RHR Purification Flow Valve Reach Rod

Piping is not seismically qualified.

Response:

The piping around valve RH-V-874A will be analyzed. The seismic qualification of the RHR system has previously been identified as Issue 1.04 in the Integrated Safety Assessment Program. The analysis and schedule for modifications (if required) will be completed by January 31, 1987.

Deficiency No. 2: PDCR No. 306 Containment Fan Filter Timers

No procedure to ensure continued proper functioning of the timers.

Response:

A surveillance procedure will be established by January 15, 1986.

Deficiency No. 3: PDCR 326 Fire Suppression System

Seismic evaluation of fire suppression system located above safety related equipment.

Response:

The fire suppression piping which is located above safety related equipment will be seismically analyzed. The analysis and schedule for modifications (if required) will be completed by July 30, 1986.

Deficiency No. 4: PDCR 326 Fire Suppression System

Impact of fire suppression fluids sprayed on safety related equipment.

Reponse:

In 1983, the Nuclear Regulatory Commission issued an I&E Information Notice (83-41) entitled "Acutation of Fire Suppression Systems Causing Inoperability of Safety-Related Equipment". This notice highlighted several examples where actuation of fire suppression systems caused damage or inoperability to systems important to safety. Based on this concern, NU initiated an evaluation for the three operating plants to determine if any fire suppression system could cause damage or incapacitate shutdown systems.

The evaluation was comprehensive and involved verification walkdowns, drawing reviews, verification of fire system designs, installation and operating characteristics, plant procedures and a final determination of its impact on safe shutdown systems. The report for CYAPCO concluded that operation and/or failure of fire suppression systems had no impact on safe shutdown capability. One exception was noted and corrective action in terms of a hardware

modification is scheduled to be implemented during the January 1986 refueling outage. The report is entitled "Inadvertent Operation/Rupture of Fire Protection Equipment" dated January 1984, and a copy is available for your review.

This deficiency is resolved.

Deficiency No. 5: PDCR 333 Combustible Gas Detection System

No procedures to establish maintenance and calibration of the system.

Response:

Maintenance and calibration procedures will be established by July 2, 1986. Further details on this deficiency were provided in our August 30, 1985 letter.(1)

Deficiency No. 6: PDCR 344 - Containment Isolation Reset Modification

Inadequate training plan and procedures to adequately identify all steps to clear SI/HCP block.

Response:

Procedures and training plans will be upgraded by May 2, 1986.

Deficiency No. 7: PDCR 347 Reactor Coolant System Venting System

Uncertainty of ability of valves to function with water.

Response:

The reactor vessel and pressurizer non-condensible gas vent system isolation valve design will be evaluated to determine the effects of passing water flow. The evaluation will be completed by February 28, 1986 and a schedule of modifications (if any) will then be determined.

Deficiency No. 8: PDCR 347 Reactor Coolant System Venting System

Failure to test valves against full differential pressure.

Response:

The reactor vessel and pressurizer non-condensible gas vent system isolation valves will be evaluated to confirm the ability to open and close against full differential pressure. The evaluation will be completed by February 28, 1986.

(1) J. F. Opeka letter to Dr. T. E. Murley, dated August 30, 1985.

In-situ or prototype testing will be performed by July 2, 1986 to support the evaluation.

Deficiency No. 9: PDCR 347 Reactor Coolant System Venting System

Failure of AOP 3.2-22 to utilize revised calculations on venting times.

Response:

AOP 3.2-22 will be revised by July 2, 1986.

Deficiency No. 10: PDCR 347 Reactor Coolant System Venting System

Failure to verify actual plug movement in surveillance tests.

Response:

Surveillance procedures will be revised by July 2, 1986.

Deficiency No. 11: PDCR 368 RCP Seal Water Supply Valves

Uncertainty of seismic qualification of the RCP seal water system.

Response:

The requirement for RCP operation in post accident conditions will be verified and the seal water piping system will be seismically analyzed. Analysis and modifications (if required) will be combined with evaluations regarding PDCR 380 whenever possible. The analysis will be completed by January 31, 1987.

Deficiency No. 12: PDCR 317 TMI 2.1.8 Additional Equipment to Follow Course Accidents

Inconsistent procedures as related to calculations.

Response:

Procedures will be clarified by May 2, 1986.

Deficiency No. 13: PDCR 380 - RCP Component Cooling Water and Seal Water Isolation Modification.

Inadequate dose analysis and Tech. Spec. treatment of charging system outleakage.

Response:

CYAPCO has implemented necessary administrative controls to monitor and limit the combined leakage from the RHR and charging systems to less than three liters per hour. This will ensure that the actual leakage from all sources is within that assumed in the radiological analysis. Additionally, CYAPCO will

submit a license amendment request to formalize the above mentioned administrative measures by January 31, 1986. This deficiency was discussed in LER 85-17 submitted August 14, 1985.(2)

Deficiency No. 14: PDCR 380 - RCP Component Cooling Water and Seal Water Isolation Modification

Unevaluated impact of modification as related to reduced containment integrity.

Response:

The requirement for RCP operation in post accident conditions will be verified and the CCW and seal injection systems piping analyzed accordingly. The analysis will be combined with PDCR 368. Modifications (if any) will be identified and a schedule for implementation will be developed by January 31, 1986.

Deficiency 15: PDCR 380 - RCP Component Cooling Water and Seal Water Isolation Modification

Inadequate procedures to assure prompt manual valve closure.

Response:

Procedures will be upgraded by May 2, 1986.

Deficiency No. 16: PDCR 380 - RCP Component Cooling Water and Seal Water Injection Modification.

Seismic qualification of isolation valves and associated piping.

Response:

See response to Deficiency No. 11.

Deficiency No. 17: PDCR 380 - RCP Component Cooling Water and Seal Water Injection Modification.

Faulty logic for activation of valve FCV-608.

Response:

The control logic for the CCW return flow control valve will be reviewed to determine if a high flow signal will keep the valve closed. Modifications (if any) will be identified and a schedule for implementation will be completed by March 28, 1986.

(2) R. H. Graves letter to NRC Document Control Desk dated August 14, 1985, transmitting LER 50-213/85-017-00 entitled "Post-LOCA Release Paths Outside Containment."

Deficiency No. 18: PDCR 380 - RCP Component Cooling Water and Seal Water Isolation Modification.

Potential release path from contanment via seal return line and relief valve CH-RV-332.

Response:

See response to Deficiency No. 13.

Deficiency No. 19: PDCR 380 - RCP Component Cooling Water and Seal Water Isolation Modification

Resolution of CYPDCTG Report "Containment Piping Penetrations"

Response:

The current configuration of each containment penetration will be reviewed to determine compliance to isolation criteria. Deficiencies 11, 16 and 18 will be included. The analysis and identification of modifications (if any) and exemption requests will be completed by July 30, 1986.

Deficiency No. 20: PDCR Nos. 384/401 - Automatic Initiation of Auxiliary Feedwater

Questionable design basis analysis of the AFW system.

Response:

The AFW system design basis will be evaluated in more detail. It is noted that our letter dated September 20, 1985 provides considerable detail on the current AFW system design.(3) This evaluation will be completed and modifications (if any) will be identified by August 31, 1986.

Deficiency No. 21: PDCR 388 - Primary Vent Stack Ring

Evaluate the means of accomplishing cold reactor shutdown following a seismic event utilizing only seismically qualified and protected equipment.

Response:

CYAPCO will evaluate the need to achieve cold shutdown in light of design basis, SEP, accident analyses, and current operating procedures by July 30, 1986 and identify modifications (if any) required in the evaluation. Responses to Deficiency 25 & 36 will be included in the evaluation. The Staff position as defined in the January 19, 1981 letter(4) will be considered during this evaluation.

---

(3) J. F. Opeka letter to J. A. Zwolinski, dated September 20, 1985.

(4) D. G. Eisenhut letter to All Licensees of Operating Plants and Applicants for Operating Licenses and Holders of Construction Permits, dated January 19, 1981, entitled "Information Regarding the Program For Environmental Qualification of Safety-Related Electrical Equipment (Generic Letter 81-05).

Deficiency No. 22: PDCR 418 - PORV and Block Valve Logic Modification

Failure to seismically qualify relays and mounting.

Response:

The seismic qualification of the PORV and Block valve relays and their mounting on the Main Control Board will be evaluated and modifications (if any) will be identified by July 30, 1986.

Deficiency No. 23: PDCR 436 Upgrade of Spent Fuel Building North Crane CR5-1A

Upgrade both fuel handling cranes equipment and QA classifications and refueling manipulation to QA Category I.

Response:

The need to upgrade the cranes to QA Category I (safety related) will be evaluated and modifications (if any) will be identified by August 31, 1986.

Deficiency No. 24: PDCR 443 - Flood Protection Requirements

Failure to test or verify adequacy of cooling of service water pumps with flood protective covers in place.

Response:

Inservice testing or heat load calculations will be performed by July 2, 1986.

Deficiency No. 25: PDCR 459 Re-evaluation of Safety Related Piping

Re-evaluate scope of project to ensure safe reactor shutdown to cold conditions following a seismic event.

Response:

See response to Deficiency No. 21

Deficiency No. 26: PDCR 486 Terry Turbine Steam Control

Inadequate consideration of operability with loss of control air.

Response:

Automatic initiation with loss of control air may cause the turbines to overspeed and result in a turbine trip and loss of auxiliary feedwater. The scenario will be analyzed and modifications (if any) will be identified by March 28, 1986.

Deficiency No. 27: PDCR 486 Terry Turbine Steam Control

Incomplete consideration of error analysis in verifying the capacity of the system.

Response:

System capacity testing will be performed by July 2, 1986.

Deficiency No. 28: PDCR 592 Charging Pump

Failure to assess impact of change of pump curve on DBA.

Response:

The evaluation of the effect of the change in pump performance on the small break LOCA analysis will be completed by April 30, 1986. The evaluation of the effect of the change in pump performance on the feed and bleed analysis will be completed by January 31, 1986.

Deficiency No. 29: PDCR No. 592 Charging Pump

Failure to assess degraded voltage operability of main lube oil motor.

Response:

Degraded voltage conditions will be evaluated and modifications (if any) will be identified by January 31, 1986.

Deficiency No. 30: PDCR 592 Charging Pump

Failure to upgrade several procedures.

Response:

Procedures will be upgraded by July 2, 1986.

Deficiency No. 31: PDCR 626 Replacement of Foxboro Feedwater Flow Transmitters

Failure to establish the uncertainty of flow measurement.

Response:

Flow measurment uncertainty will be established and included in surveillance procedures and accident analyses by May 1, 1986.

Deficiency No. 32: PDCR No. 626 Replacement of Foxboro Feedwater Flow Transmitters

Failure to determine seismic adequacy of the Hagen flow transmitters.

Response:

The seismic adequacy of the Hagen flow transmitters, which supply a reactor trip function, and associated sensing lines will be determined. The analysis will be completed and modifications (if any) will be identified by July 30, 1986.

Deficiency No. 33: PDCR 634 Replacement of Foxboro Pressure Transmitters PT 403 & 404

Failure to seismically qualify instrument tubing.

Response:

Instrument tubing will be analyzed for seismic capability by August 31, 1986 and modifications needed (if any) will be identified.

Deficiency No. 34: PDCR 634 Replacement of Foxboro Pressure Transmitters PT403 and PT404.

Failure to clarify Reg. Guide 1.97 submittal.

Response:

The Reg. Guide 1.97 report for Connecticut Yankee was submitted on May 31, 1984. This submittal will be revised by September 30, 1986 if the analysis results of Deficiency No. 33 determine the instruments are not fully seismically qualified.

Deficiency No. 35: PDCR 653 Vital Inverter Cabinet Ventilation

Failure to conduct seismic analysis on cabinets with actual components locations.

Response:

Seismic analyses using actual component locations will be completed by February 28, 1986 and will identify any needed modifications.

Deficiency No. 36: PDCR 660 Relief Valve for Spent Fuel Pool Heat Exchanger

Failure to perform complete seismic analysis of service water system.

Response:

See response to Deficiency No. 21.

Deficiency No. 37: PDCR 684 Replacement of RCS Loop RTDS

Incomplete review of acceptance limits for the RTD's.

Response:

A sensitivity study will be performed to determine if the acceptance band for the RTD's is appropriate for all power levels, and to determine its acceptability considering three loop operation, and the most limiting design basis event. The study and identification of modifications (if any) will be completed by August 31, 1986.

Deficiency No. 38: PDCR 684 Replacement of RCS Loop RTD's

Failure to conduct response time tests.

Response:

Response time testing will be conducted on RTD's installed during the 1986 refueling outage as soon as practical following the 1986 outage. The actual date for performing the test will be governed by the duration of the outage.

Design Change Process Recommendations
Table 6

Recommendation 1:

Expand scope of controlled documentation to include design bases, classifications, and other information.

Response:

The updated FSAR for Connecticut Yankee will include controlled documentation for the design bases, classifications, system descriptions and other information. The updated FSAR will be completed and submitted in accordance with our October 11, 1985 letter.(1)

Recommendation 2:

Improve timeliness and quality of "as built" documentation updating.

Response:

A plan to address this recommendation will be developed by February 28, 1986.

Recommendation 3:

Provide training on the plant modification process.

Response:

1. Familiarization of PDCR requirements, design inputs, safety evaluations, and all associated PDCR NEO procedures will be stressed in the NEO Procedure Familiarization Course starting November 30, 1985.

2. Detailed PDCR training will be conducted by supervisors in departmental sessions. Students will be instructed in how their department is to perform the specific steps necessary to implement the PDCR and associated procedures. Training will be completed by July 31, 1986.

Recommendation 4:

Revise NEO3.03, "Preparation, Review, and Disposition of Plant Design Change Requests", to address PDCRs of general scope and PDCRs not completed.

Response:

NEO3.03 will be revised and issued by March 15, 1986.

(1) J. F. Opeka letter to H. L. Thompson, Jr., dated October 11, 1985.

Recommendation 5:

Expedite the implementation of NEO8.04, "Safety Evaluation of Proposed Changes to Station Procedures"

Response:

NEO 8.04 will be issued by January 31, 1986.

Recommendation 6:

Evaluate the effectiveness of the QA program to ensure compliance with process procedures.

Response:

An engineering assurance program will be developed and implemented as a NUSCO QA function by April 1, 1986.

Recommendation 7:

Develop a more effective definition of "plant design change".

Response:

A Task Force will be appointed to develop and review this and other related issues. NEO 3.03 will be revised and reissued by November 30, 1986.

Recommendation 8:

Perform a technical review of specified categories of Automated Work Orders.

Response:

See response to Recommendation 7.

Recommendation 9:

Develop a simplified means to document plant design changes that are "remote to safety" or "equivalent component".

Response:

See response to Recommendation 7.

Recommendation 10:

Attempt to streamline PDCR process.

Response:

See response to Recommendation 7.

Recomendation 11:

Revise NEO3.03 to prohibit unrelated changes on a single PDCR.

Response:

See response to Recommendation 4.

Recommendation 12:

Provide improved multi-discipline reviews and integration.

Response:

A plan to address this recommendation will be developed by February 28, 1986, with the intent of completing implementation of the plan by December 31, 1986.

Recommendation 13:

Provide guidance/training on the interface needs/reviews on technical documents.

Response:

A new NE&O procedure on "Interface Controls" will be developed and implemented by April 1, 1986. This procedure will provide the mechanism for the guidance/training to satisfy this recommendation. This procedure will also provide the mechanism to delete the interface control requirements now specified in the project assignment procedure.

Recommendation 14:

Improve incorporation of system interaction criteria and secondary effects in design changes.

Response

See response to Recommendation 12.

Recommendation 15

Develop controlled documentation for the impact of location dependent issues (e.g., seismic, fire protection, flooding, EEQ).

Response:

A plan to address this recommendation will be developed by February 28, 1986.

Recommendation 16:

Develop means to evaluate the cumulative effects of a number of minor changes (e.g., core boring, control board additions).

Response:

See response to Recommendation 12.

Recommendation 17:

Develop an NEO level procedure on project descriptions, perhaps elevating GEC Procedure 2.07.

Response:

A new NE&O procedure on "Project Descriptions" will be developed and implemented by April 1, 1986.

Recommendation 18:

Address the recommendations in Table 7 on specific procedure changes.

Response:

Refer to the following recommendations for Table 7 and their responses.

Procedure Deficiencies

Table 7

Recommendation 1: Procedure 5.05

1. Design verification can be performed using independent review, alternate calculation or testing. This procedure should be revised to require a decision and indication of the method of design verification.

2. Some items do not seem appropriate for the checklist, Figure 7.1. For example, 31, and 32 appear to address questions raised after the document review has been completed. Review each item on the list for appropriateness and revise as necessary.

3. Clarify the application of the design input documentation requirements. For example, refer to NEO 5.05 in step 6.2.3.4 of NEO 3.03.

Response:

NEO Procedure 5.05 will be revised to address the above recommendations and the revised procedure will be issued by February 1, 1986.

Recommendation 2: Procedure 3.03

1. Clarify the application of the design input documentation requirements. For example, refer to NEO 5.05 in step 6.2.3.4 of NEO 3.03.

2. Step 6.2.2.2 of 7.02 specifies walkdown criteria be determined in the PDCR. However, this is not specified in NEO 3.03. Revise either 7.02 or 3.03 to be consistent.

Response:

NEO Procedure 3.03 will be revised to address the above recommendations and the revised procedure will be issued by March 15, 1986.

Recommendation 3: Procedure NEO 5.11

Add documentation indicating whether or not there is an impact on the safety or environment reviews on Figure 7.2.

Response:

No action necessary. This recommendation has been implemented.

Recommendation 4: Procedure NEO.5.15

Develop and release in a timely manner.

Response:

No action necessary. This recommendation has been implemented.

Recommendation 5: Procedure NEO 7.01

1. Resolve conflict between parallel review specified in step 6.16 and sequential review shown in the flow chart for OUES and QC.

2. Reword step 6.2.4 to clarify the timing of inspection requirements. The wording implies that inspection is completed prior to approval of work order.

3. Define Unit Engineer as indicated in step 6.4

4. Step 6.16 is performed by the Job Supervisor while the flow chart shows that it is performed by the originator. Resolve this conflict.

5. Add requirement for the appropriate QC group and the Design group to be responsible for verification of "As Builts".

6. Resolve conflicting definition of when turnover occurs.

Response:

NEO Procedure 7.01 will be revised to address the above recommendations and the revised procedures will be issued by February 1, 1986.

Recommendation 6: Procedure NEO 7.02

1. Define the requirements for a pre-construction meeting that is shown in the flow chart.

2. Step 6.2.2.2 of 7.02 specifies walkdown criteria be determined in the PDCR. However, this is not specified in NEO 3.03. Revise either 7.02 or 3.03 to be consistent.

3. Resolve conflicting definition of when turnover occurs.

Response:

NEO Procedure 7.02 will be revised to address the above recommendation and the revised procedure will be issued by April 1, 1986.

Recommendation 7: Procedure NEO 7.03

1. Revise to include review and approval of test procedures.

2. Revise as necessary to include NUSCO managers/supervisors in the Instruction Section to reflect the Responsibility Section.

3. Clarify the definitions for Retest, Pre-Operation Test, Phase I Test and Phase II Test to indicate the distinction between the terms.

4. Reorder as necessary the substeps in Step 6.3.

5. Clarify the term "ultimate acceptance".

6. Resolve conflicting definition of when turnover occurs.

Response:

NEO Procedure 7.03 will be revised to address the above recommendations and the revised procedure will be issued by April 1, 1986.

PART I - WORK PERMITS/ORDERS INVOLVING DESIGN CHANGES OF POTENTIAL SAFETY SIGNIFICANCE

TABLE 8

Open Items

Work Permit Number	Description of Change	Required Evaluation
IC0429	Relocated charging pump discharge pressure gauge	Seismic Evaluation
MA0051	Installed 1/2" drain valve on seal water relief valve return piping	Seismic Evaluation
MA0821	Changed manual steam generator blowdown valve to another model	Seismic Evaluation
MA0831	Installed non-seismic monitor stand near seismic equipment	Seismic Evaluations or remove monitor stand
MA1102	Installed small tank in Safety Injection Cubicle	Seismic Evaluation
MA4604	Changed manual reactor vessel vent valve to heavier model	Seismic Evaluation
CY840104	Changed steam generator level isolation valve to another model	Seismic Evaluation
CY8404526	Replaced HPSI recirc. line pressure gauge with higher range gauge	Evaluate consequences
CY8406242	Seal welded a plug on RHR relief valve - No post weld heat treatment	Verify that post weld heat treatment is not required.

Response:

The required evaluations will be completed by June 30, 1986 except for Work Permit Number CY8406242 which will be completed by February 28, 1986.

PART II - WORK PERMITS/ORDERS INVOLVING POTENTIAL DESIGN CHANGES

TABLE 8

Open Items

Work Permit Number	Description of Work Permit/Order	Action
MA0693 MA2174 MA2176 MA2424 MA2822 MA2851	These 6 WP's involved plugging of Emergency Diesel Generator Heat Exchange Tubes - Total number of plugged tubes could not be determined	Inspect Heat Exchangers to determine total number of tubes plugged and if design basis is invalidated.
IC0080	Hook up RTD on Polar Crane	Containment entry required to evaluate work performed. Shutdown Required
IC0203	Relocated gauges on service water to CAR fan pressure sensing lines	"
IC0444	Installed sirens in Containment	"
MA0065	Installed gates on S. G. skirts	"
MA0136	Modified grating and ladders near RCP's	"
MA0220	Welded unistrut to polar crane	"
MA1189	Cable modifications to CAR fan	"
MA1485	Installed light changing fixture on polar crane	"
MA1816	Elec. Change due to relocation of spray valve air compressors	"
CY8405888	Installed handrails around steam generators	"
CY8406326	Replace PORV air pressure gauge with different model.	"
CY8408165	Drill & tap holes in RCP's	"
CY8409197	Resupport SG vent line	"
CY8400453 CY8400454 CY8400455	Replace pressurizer steam sample isol. valves with different valves	Not yet performed and inside containment. Review prior to work for PDCR requirement.
CY8409926	Modify Rx Cavity Railing	Not yet performed and inside containment. Review for potential secondary effects.

Response:

The required evaluations and inspections will be completed by July 2, 1986.

Part III - PDCR Reviews Requiring Future Site Inspecton

Table 8

PDCR#	Title	Action
460	Head Area Cable Support Structure (HACSS)	Perform as-built review of HACSS/Missile Shield to verify seismic design requirements were met. Requires shutdown.

Response

The review of PDCR460 will be completed by June 30, 1986.

Docket No. 50-213

Attachment 2

Connecticut Yankee

Special Reports

November, 1985

Recommendations of Special Report
Connecticut Yankee PDCR 713

Recommendation 1:

Revise Tech. Spec. 3.2.2 to clearly identify the applicable detectors in the control room. As a minimum, assure that Standard Tech Specs are definitive in this regard.

Response:

A license amendment request to revise Technical Specification 3.2.2 will be submitted by June 1, 1986. The request will clearly identify the applicable detectors in the Control Room Fire Area.

Recommendation 2:

Provide improved controlled documentation to describe the plant design bases (Ref: CYPDCTG Final Report, Table 6, Recommendation 1).

Response:

The updated FSAR for Connecticut Yankee will include controlled documentation for the design bases, classifications, system descriptions and other information. The updated FSAR will be completed and submitted in accordance with our October 11, 1985 letter.(1)

Recommendation 3:

Increase the awareness of design engineers with respect to Tech. Specs. This action could be included in the training already recommended. (Ref: CYPDCTG Final Report, Table 6, Recommendation 3).

Response:

1. Familiarization of PDCR requirements, design inputs, safety evaluations, and all associated PDCR NEO procedures will be stressed in the NEO Procedure Familiarization Course starting November 30, 1985.

2. Detailed PDCR training will be conducted by supervisors in departmental sessions. Students will be instructed in how their department is to perform the specific steps necessary to implement the PDCR and associated procedures. Training will be completed by July 31, 1986.

Recommendation 4:

Revise procedures as follows:

a. In NEO 3.03, page 1 of Figure 7.1, change "Fire Protection" to "Fire Protection QA" and "Radwaste System" to "Radwaste System QA".

b. Add an item on the Generation Fire Protection Engineering checklist to address Tech. Specs.

---

(1) J. F. Opeka letter to H. L. Thompson, Jr., dated October 11, 1985.

c. Add an item on Figure 7.1 of NEO 5.05 to address Tech. Specs.

d. Revise NEO 5.12 to include GFPE PDCR review check-off list. Revise NEO 5.05 to permit use of GFPE check-off list during PDCR verification activities.

Response:

4.a - NEO Procedure 3.03 will be revised and issued by March 15, 1986.

4.b - The item to address Technical Specifications has been added.

4.c - NEO Procedure 5.05 will be revised and issued by February 1, 1986.

4.d - 1) NEO Procedure 5.12 has been revised and issued.

2) NEO Procedure 5.05 will be revised and issued by April 1, 1986.

Recommendation 5:

Revise SUR 5.5-13 to reflect all smoke detectors.

Response:

SUR 5.5-13 will be revised by January 31, 1986.

Recommendation 6:

Assure that QA/NRB audits of Tech. Specs verify the adequacy of surveillance procedures that implement Tech. Spec. requirements.

Response:

The adequacy of surveillance procedures is verified as part of the QA/NRB audit program. Improvements were made in this area, in 1983 when the responsibility for NRB audits of Tech. Spec. was assigned to the Quality Assurance Branch and teams of "QA auditors" and "technical experts" were then utilized to perform these audits. The benefits of this change in direction have not yet been fully realized. Therefore, a new program will be established by January 15, 1986 to verify the adequacy of surveillance procedures.