

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-213/85-16

Docket No. 50-213

License No. DPR-61

Priority -

Category C

Licensee: Connecticut Yankee Atomic Power Company
P. O. Box 270
Hartford, Connecticut 06101

Facility Name: Haddam Neck Nuclear Power Plant

Inspection At: Haddam, Connecticut

Inspection Conducted: July 22 - 26, 1985

Inspectors: ^{cl} for S. V. Pullani
S. V. Pullani, Fire Protection Engineer

8/19/85
date

Approved by: C. J. Anderson
C. J. Anderson, Chief, Plant Systems Section

8/19/85
date

Inspection Summary: Inspection on July 22-26, 1985 (Report No. 50-213/85-16)

Areas Inspected: Routine, unannounced inspection of the Fire Protection/Prevention Program including: program administration and organization; administrative control of combustibles; administrative control of ignition sources; other administrative controls; equipment maintenance, inspection and tests; fire brigade training; periodic inspections and quality assurance audits; and facility tour. The inspection involved 42 inspector-hours on site and 8 inspector-hours in office by one region based inspector.

Results: Of the eight areas inspected, no violations or deviations were identified. Two items remained unresolved at the end of the inspection (see Sections 2.7.1 and 2.8 of this report).

DETAILS

1.0 Persons Contacted

1.1 Connecticut Yankee Atomic Power Company (CYAPC)

*J. Beauchamp, QA/QC Supervisor
*T. Bransfield, Associate Engineer
*J. Delawrence, Acting Engineering Supervisor
*J. Ferguson, Unit Superintendent
*R. Graves, Station Superintendent
P. L'Heureux, Assistant Engineering Supervisor
R. Mulligan, Senior Training Instructor
M. Smith, Assistant Engineer
N. Young, Shift Supervisor

1.2 Northeast Utilities Service Company (NUSCO)

*M. Hornyak, Engineering QA Specialist
*T. Kazukynas, Fire Protection Specialist
A. Patrizz, Jr., Fire Protection Specialist
*J. Roncioli, Supervisor, Fire Protection
G. Van Nordennyn, Licensing Engineer
L. Vara, Senior Fire Training Instructor

1.3. Nuclear Regulatory Commission (NRC)

P. Swetland, Senior Resident Inspector

*Denotes those present at the exit interview.

2.0 Fire Protection/Prevention Program

The inspector reviewed several documents in the following areas of the program to verify that the licensee had developed and implemented adequate procedures consistent with the Fire Hazard Analysis (FHA), Final Safety Analysis Report (FSAR), and Technical Specifications (TS). The documents reviewed, the scope of review, and the inspection findings for each area of the program are described in the following sections.

2.1 Program Administration and Organization

The inspector reviewed the following licensee documents:

- Technical Specifications, Section 6, Administrative Controls
- ADM 1.1-69, Fire Protection and Preventive Program (FPPP), Revision 5
- NEO 2.14, Nuclear Plant Fire Protection Program, Revision 0

The scope of review was to ascertain that:

- a. Personnel were designated for implementing the program at the site; and
- b. Qualifications were delineated for personnel designated to implement the program

No unacceptable conditions were identified.

2.2 Administrative Control of Combustibles

The inspector reviewed the following licensee documents:

- ADM 1.1-57, Control of Combustible Materials, Flammable Liquids and Gases, Revision 2
- QA 1.2-2.4, House Keeping Requirements, Revision 8

The scope of review was to verify that the licensee had developed administrative controls which included:

- a. Special authorization for the use of combustible, flammable or explosive hazardous material in safety-related areas;
- b. Prohibition on the storage of combustible, flammable or explosive hazardous materials in safety-related areas;
- c. The removal of all wastes, debris, rags, oil spills or other combustible materials resulting from the work activity or at the end of each work shift, whichever is sooner;
- d. All wood used in safety-related areas to be treated with flame retardant;
- e. Periodic inspection for accumulation of combustibles;
- f. Transient combustibles to be restricted and controlled in safety-related areas; and
- g. Housekeeping to be properly maintained in areas containing safety-related equipment and components.

No unacceptable conditions were identified.

2.3 Administrative Control of Ignition Sources

The inspector reviewed the following licensee documents:

- ADM 1.1-56, Control of Ignition Sources, Revision 2

- ACP 1.2-5.1, PMMS Trouble Reporting System and Automated Work Order, Revision 24

The scope of review was to verify that the licensee had developed administrative controls which included:

- a. Requirements for special authorization (work permit) for activities involving welding, cutting, grinding, open flame or other ignition sources and that they are properly safeguarded in areas containing safety-related equipment and components; and
- b. Prohibition on smoking in safety-related areas, except where "smoking permitted" areas had been specifically designated by plant management.

No unacceptable conditions were identified.

2.4 Other Administrative Controls

The inspector reviewed the following licensee documents:

- Technical Specifications, Section 6, Administrative Controls
- ADM 1.1-69, Fire Protection and Prevention Program (FPPP), Revision 5
- ACP 1.2-3.1, Preparation, Review and Disposition of Plant Design Change Request (PDCRs), Revision 18
- ENG 1.7-13, Construction Implementation of Operating Plant Modifications, Revision 0
- ENG 1.7-16, Performance of Fire Protection Reviews, Revision 0
- NEO 2.14, Nuclear Plant Fire Protection Program, Revision 0

The scope of review was to verify that the licensee had developed administrative controls which require that:

- a. Work authorization, construction permit or similar arrangement is provided for review and approval of modification, construction and maintenance activities which could adversely affect the safety of the facility;
- b. Fire brigade organization and qualifications of brigade members are delineated;
- c. Fire reporting instructions for general plant personnel are developed;
- d. Periodic audits are to be conducted on the entire fire protection program; and

- e. Fire protection/preventive program is included in the licensee's QA Program.

No unacceptable conditions were identified.

2.5 Equipment Maintenance, Inspection and Tests

The inspector reviewed the following randomly selected documents to determine whether the licensee had developed adequate procedures which established maintenance, inspection, and testing requirements for the plant fire protection equipment:

- * • PM 9.5-109, Checking Proper Operation of Heat Sensors in Charcoal Filters, Revision 2
- SUR 5.5-18, Cable Vault Fire Protection System - Weighing of CO₂ Bottles (TS 4.15. B.1.a), Revision 4
- * • SUR 5.5-19, PAB Charcoal Filter Fire Protection System - Weighing of CO₂ Bottles (TS 4.15.B.1.a), Revision 4
- SUR 5.5-20, Cable Vault CO₂ System - Flow Test, Valve and Ventilation Damper Test (TS 4.15.B.1.b), Revision 4
- * • SUR 5.5-22, Switchgear Room Fire Protection System - Checking Halon Bottles Full (TS 4.15.C.1.a), Revision 4
- * • SUR 5.5-23, Switchgear Room Fire Protection System - System Test (TS 4.15.C.1.b), Revision 4

In addition to reviewing the above documents, the inspector reviewed the maintenance/inspection/test records of the items identified by an asterisk (*) to verify compliance with Technical Specifications and established procedures.

No unacceptable conditions were identified.

2.6 Fire Brigade Training

2.6.1 Procedure Review

The inspector reviewed the following licensee procedures:

- NEO 2.14, Nuclear Plant Fire Protection Program, Revision 0
- CO-IHS-06, Fire Brigade Instruction/Practice, Revision 2
- CO-IHS-07, Fire Brigade Training/Drills, Revision 1

- TR 1.6-1.17, Industrial Health & Safety VIII General Employee Fire Training/Retraining, Revision 3
- TR 1.6-1.18, Industrial Health & Safety VI Fire Brigade Instruction/Practice, Revision 3
- TR 1.6-1.20, Industrial Health & Safety IX Fire Watch Training, Revision 2
- TR 1.6-1.22, Emergency Response Drills/Exercises, Revision 6
- TR 1.6-1.23, Industrial Health & Safety VII Fire Brigade Training/Drills, Revision 2
- TR 1.6-1.24, Industrial Health & Safety X Fire Department Training, Revision 1

The scope of review was to verify that the licensee had developed administrative procedures which included:

- a. Requirements for announced and unannounced drills;
- b. Requirements for fire brigade training and retraining at prescribed frequencies;
- c. Requirements for at least one drill per year to be performed on a "back shift" for each brigade;
- d. Requirements for local fire department coordination and training; and
- e. Requirements for maintenance of training records.

No unacceptable conditions were identified.

2.6.2 Records Review

The inspector reviewed training records of fire brigade members for calendar years 1984 and 1985 to ascertain that they had successfully completed the required quarterly training/meeting, semiannual drill, and yearly hands-on fire extinguishment practice.

The inspector noted that the licensee had made a commitment to upgrade the fire training to meet the quarterly training/meeting requirements of 10 CFR 50, Appendix R, Paragraph III.I.1.d, and to address the concern identified in a previous inspection finding 83-22-02. This commitment is documented in a licensee's internal memorandum TR-84-302, dated August 16, 1984. The inspection finding

was satisfactorily addressed by this commitment. The finding had been previously closed in Resident Inspector's report 85-01.

No unacceptable conditions were identified.

2.7 Periodic Inspections and Quality Assurance Audits

2.7.1 Annual Audit

The inspector reviewed the reports of the following annual audits:

- A20020 performed on November 23, 1983 - January 16, 1984
- A60218, performed on November 7 - December 20, 1984

The scope of review was to verify that the audits were performed in accordance with TS 6.5.2.8.i and the audit findings were being resolved in a timely and satisfactory manner.

No unacceptable conditions were identified except as follows:

Independence of NUSCO as a Qualified Outside Firm

TS 6.5.2.8.i requires that the annual audit of the licensee's fire protection and loss prevention program shall be performed by an outside firm. The licensee's annual audit (as well as the biennial audit required by TS 6.5.2.8.h) is currently being performed by Northeast Utilities Service Company (NUSCO), which is part of Northeast Utilities (NU), which in turn, own part of the licensee's (Connecticut Yankee Atomic Power Company's) Haddam Neck Nuclear Power Plant. The inspector indicated that NUSCO may not be qualified as an outside firm.

Generic Letter 82-21, dated October 6, 1982, from the Director, Division of Licensing to all licensees, specified that the annual audit, in accordance with the Standard Technical Specification (STS) 6.5.2.8.i, may be performed by qualified utility personnel who are not directly responsible for the site fire protection program or an outside independent fire protection consultant, but the three-year audit in accordance with STS 6.5.2.8.j must be performed by an outside independent fire protection consultant. Haddam Neck Technical Specifications do not include any requirement for the three-year audit.

The licensee indicated that the NUSCO's annual audit along with the annual audit conducted by American Nuclear Insurers (ANI) would meet the intent of the STS 6.5.2.8.i and j. The licensee is in the process of submitting a TS change to revise the annual audit (TS 6.5.2.8.i) to be performed by qualified off-site licensee personnel or a qualified outside independent consultant. The licensee indicated that the TS change is expected to be submitted by August 31, 1985. The adequacy of licensee's proposed TS change is to be determined by the NRC office of Nuclear Reactor Regulation (NRR).

This is an unresolved item, pending the above licensee actions and its review by NRC (50-213/85-16-01).

2.7.2 Biennial Audit

The inspector reviewed the report of the following audits:

- A20020, performed on November 23, 1983 - January 16, 1984*
- A60218, performed on November 7 - December 20, 1984*

*These were combined annual and biennial audits.

The scope of these audits included both annual and biennial audit requirements. The review was to verify that the audits were performed in accordance with TS 6.5.2.8.h and the audit findings were being resolved in a timely and satisfactory manner.

No unacceptable conditions were identified.

2.8 Facility Tour

The inspector examined fire protection water systems, including fire pumps, fire water piping and distribution systems, post indicator valves, hydrants and contents of hose houses. The inspector toured accessible vital and nonvital plant areas and examined fire detection and alarm systems, automatic and manual fixed suppression systems, interior hose stations, fire barrier penetration seals, and fire doors. The inspector observed general plant housekeeping conditions and randomly checked tags of portable extinguishers for evidence of periodic inspections. No deterioration of equipment was noted. The inspection tags attached to extinguishers indicated that monthly inspections were performed.

No unacceptable conditions were identified except as follows:

Potential Degradation of Fire Rating of Fire Doors

Administrative Control Procedure ACP 1.0-29, Control of Fire Doors, Revision 0, Figure 1, lists 20 doors as Technical Specification Fire Doors which are required to be operable at all times in accordance with TS 3.22.F. The inspector noted that 18 of these 20 doors (i.e., except items 6 and 7 in ACP 1.0-29, Figure 1), may have degraded fire rating due to security hardware modifications, attachment of caution signs onto the doors using screws, lack of positive latching and/or more than acceptable gaps between the door leaves or the leaves and floor. Of these 18, 6 doors (i.e. items 1,8,9,10,12 and 14 in ACP 1.0-29, Figure 1) have gaps $\frac{1}{4}$ " to 1" and 1 door (items 11 in ACP 1.0-29, Figure 1) has a monorail passing through it.

The inspector determined that there was no immediate safety concern because of the presence of fire detection and suppression systems in the areas. However, these doors require an evaluation for potential degradation of their fire rating. The licensee committed to perform such an evaluation within 7 days (i.e., by August 2, 1985) and repair or replace those doors which do not meet the fire rating or institute appropriate compensatory measures (fire watches) as required by TS 3.22.F.

On August 2, 1985, the licensee informed NRC Region I Office over the telephone that they just completed such an evaluation and concluded that:

- no inoperable doors were found,
- the deficiencies will be corrected within 90 days, and
- the doors with gaps will be given top priority and will be corrected within 30 days.

This is an unresolved item, pending the above licensee actions and its review by NRC (50-213/85-16-02).

3.0 Unresolved Items

Unresolved items are matters about which more information is required to ascertain whether they are acceptable items, violations or deviations. Unresolved items disclosed during the inspection are discussed in Sections 2.7.1 and 2.8

4.0 Exit Interview

The inspector met with licensee management representatives (see Section 1.0 for attendees) at the conclusion of the inspection on July 26, 1985. The inspector summarized the scope and findings of the inspection at that time.

The inspector also confirmed with the licensee that the documents reviewed by the inspector did not contain any proprietary information. The licensee agreed that the inspection report may be placed in the Public Document Room without prior licensee review for proprietary information (10 CFR 2.790).

At no time during this inspection was written material provided to the licensee by the inspector.