U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-213/80-07

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 Plant

Inspection at: Haddam, Connecticut

Inspection conducted: April 28-29 and May 5-June 7, 1980

Inspectors: R. Keimig for — 8-27-80
J. H. Smith, Sr. Resident Inspector — date signed

R. Keimig for — 8-27-80
R. P. Zimmerman, Resident Inspector, Millstone Nuclear Power Station — date signed

_____ — _____
date signed

Approved by: R. Keimig — 8-27-80
R. R. Keimig, Chief, Reactor Projects Section No. 1, RO&NS Branch — date signed

Inspection Summary:

Inspection on April 28 and 29 and May 5-June 7, 1980 (Report No. 50-213/80-07)
Areas Inspected: Routine, regular and backshift inspection by the resident inspector (48 hours). Areas inspected included: accessible areas of the turbine and primary auxiliary buildings, the primary containment, and the control room; investigation of an event which resulted in a radioactive gas release from the site; spent fuel shipments; and, licensee action on previous inspection items.
Results: Of the six areas inspected, no items of noncompliance were identified in five areas; one apparent item of noncompliance was found in one area (Infraction - Failure to adhere to Technical Specification limits regarding noble gas release rates, Details, Paragraph 9).

Region I Form 12
(Rev. April 77)

DETAILS

1. Persons Contacted

The below listed technical and supervisory personnel were among those contacted:

N. A. Burnette, Operations Supervisor
H. E. Clow, Health Physics Supervisor
R. L. Eppinger, Reactor Engineer
J. H. Ferguson, Station Services Superintendent
R. H. Graves, Station Superintendent
J. M. Levine, Engineering Supervisor
R. P. Traggio, Unit Superintendent

The inspector also interviewed other licensee personnel during the course of the inspection including management, clerical, maintenance, operations, health physics and engineering personnel.

2. Status of Previous Inspection Items

(Closed) Unresolved Item (213/79-02-01):

Refueling procedure inadequacies. The inspector reviewed the current refueling procedure, FP-CYW-R9, and the refueling requirements of the Technical Specifications (TS).

a. Paragraph 9.2.10.A.27 of the refueling procedure presently requires that refueling prerequisites be reverified after an interruption in fuel handling activities.

b. The present refueling procedure, in conjunction with TS requirements, adequately satisfies the requirement for continuous neutron monitoring during fuel bundle insertion.

This item is considered resolved.

(Closed) Unresolved Item (213/79-02-02):

Delivery vehicle survey sheets not referenced in the radioactive material receipt procedure. The subject licensee procedure, RAP 6.3-5, "Receipt of Radioactive Materials," has been revised to incorporate vehicle survey sheets. The inspector had no further questions on this item.

3. Spent Fuel Shipments

On April 28-29 and May 14, 1980, the inspectors observed the licensee's preparations for shipment of spent reactor fuel to the Battelle Columbus Facility, West Jefferson, Ohio (Shipment Numbers 0-80-10 and 0-80-15). The inspector verified the completion of administrative requirements prior to shipment which included:

-- the presence of a trained driver and escort to travel in the transport vehicle;

-- the transport vehicle was equipped with an immobilization device and a workable radiotelephone and CB radio;

-- placement of seals on the shipping cask; and,

-- personnel knowledge of the shipment Routing Plan and Transportation Emergency Plan.

The inspectors witnessed the preliminary radiation exposure readings taken by licensee personnel and reviewed results of smear surveys taken at various locations on the cask and trailer. In order to satisfy the radiation exposure requirements for shipment 0-80-10, the licensee fastened lead shielding to an existing metal screen which surrounded the cask. No shielding was required for shipment 0-80-15. Shipment 0-80-10 departed the site at 1:30 PM, May 1, and shipment 0-80-15 at 12:45 PM, May 14, 1980. Both shipments received Connecticut State Police escort.

No items of noncompliance were identified.

4. New Fuel Receipts

a. Scope

The procedures and documentation related to the receipt of new fuel assemblies for Core X were reviewed by the inspector.

b. Documents Reviewed

-- SNM 1.4-1, Revision 4, Receipt and Removal of New Fuel from Carrier.

-- SNM 1.4-2, Revision 7, Removing New Fuel from Shipping Container.

-- SNM 1.4-3, Revision 3, New Fuel Detail Inspection.

-- RAP 6.3-5, Revision 4, Receipt of Radioactive Materials.

-- QA 1.2-7.2, Revision 4, Fuel Assembly Receipt Inspection.

c. Findings

No discrepancies were identified. The licensee's fuel receipt documents were complete and no inconsistencies were noted. The qualification of the licensee's fuel inspectors were verified to be consistent with the facility training program.

5. Refueling Preparations

a. Scope

The inspector reviewed the licensee's refueling procedure to insure that the refueling would be conducted in accordance with an approved and technically acceptable procedure.

b. Documents Reviewed

-- Refueling Procedure FP-CYW-R9 (CY SPL 10.3-14), "Refueling Procedure for Cycle IX-X, dated May 5, 1980.

c. Findings

No items of noncompliance were identified.

6. Refueling Activities

The inspector verified that refueling prerequisite plant conditions, tests, and inspections were satisfied during the course of the refueling operations. Refueling activities in the control room were witnessed also. Compliance with Technical Specifications and applicable procedures were verified. As part of the above inspection, fuel status boards were inspected for accuracy and the manning in the control room and on the refueling floor were confirmed to be in accordance with requirements.

No items of noncompliance were identified.

7. Plant Tour

a. During the course of the inspection, the inspector toured the following accessible plant areas:

-- Control Room
-- Containment Building
-- Auxiliary Building
-- Vital Switchgear Room
-- Turbine Building
-- Yard Areas
-- Fuel Handling Building
-- Security Building
-- Control Point

b. The following observations/determinations were made:

-- Radiation protection controls. Step-off pads, storage and disposal of protective clothing and control of high radiation areas were observed for adequacy in all areas toured.

-- Monitoring instrumentation. The inspector verified that selected instruments were functional and demonstrated parameters within Technical Specification limits.

-- Fluid Leaks. All areas toured were examined for evidence of excessive fluid leaks. None were found.

-- Piping vibration. All areas toured were examined for evidence of excessive piping vibration. None were indicated.

-- Plant housekeeping conditions. Observations relative to plant housekeeping identified no unsatisfactory conditions.

-- Control Room and Nuclear Plant manning. The inspector verified that control room manning requirements of the Technical Specifications were being met. In addition, the inspector observed shift turnovers to verify that continuity of systems' status was maintained.

-- Fire protection. The inspector verified that selected fire extinguishers were accessible and properly inspected, that hose stations were unobstructed, and that control over ignition sources and fire hazards was maintained.

The inspector had no questions relative to plant tours. No items of noncompliance were identified.

8. Containment Purging During Plant Operation

In accordance with a request from IE:HQ (OIE Temporary Instruction TI 2515/26), the inspector verified that the licensee received the NRR generic letter concerning purging of the containment during plant operations, and that the licensee does not improperly manually defeat safety actuation signals in order to allow containment purging during operation. Additionally, the licensee's Technical Specifications prohibit purging with the 42-inch purge valves unless the plant is in cold shutdown or refueling. These valves are manually operated at the Haddam Neck Plant.

9. Radioactive Gaseous Release from Plant Site

On May 28, 1980, at approximately 1:00 AM, the licensee reported via the Emergency Notification System that an inadvertent release of radioactive gas had occurred. The release occurred when an operator manually vented the volume control tank (VCT) to the waste gas system. The volume of gas vented from the VCT caused the waste gas surge tank relief valve to lift, releasing the gas from the plant stack. Duration of the release was approximately five minutes. Environmental Technical Specification 2.4.3.1(1), release rate for noble gases, was exceeded by a factor of 1.26. This is an item of noncompliance (213/80-07-01).

During the incident it was noted by an Auxiliary operator that the breaker for the "A" Waste Gas Compressor was open. The "B" compressor was operating, however, its capacity was insufficient to prevent actuation of the waste gas surge tank relief valve. The licensee indicated that due to the large volume of gas vented from the VCT, even if both compressors had been operating, it would not have prevented the release. The breaker for the "A" compressor was opened by maintenance personnel performing preventive maintenance on motor control centers using procedure PM 9.5-42-C, Revision 3. This procedure is lengthy and is performed over many shifts, yet there is only one place for a shift supervisor to sign. It appears that shift supervision may not have proper control over equipment which is taken out of service to perform this maintenance. The licensee has comitted to review this procedure in light of this matter and revise it as necessary to insure a more positive control by shift supervisors. The inspector will review this matter subsequent to the procedure revision. This matter is unresolved. (213/80-07-02)

10. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. An unresolved item identified during this inspection is discussed in Paragraph 9 above.

11. Exit Interview

At periodic intervals during the course of the inspection, meetings were held with senior facility management to discuss inspection scope and findings.