

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

Region I

Report No. 50-271/79-20

Docket No. 50-271

License No. DPR-28 Priority -- Category C

Licensee: Vermont Yankee Nuclear Power Corporation

25 Research Drive

Westborough, Massachusetts 01581

Facility Name: Vermont Yankee Nuclear Power Station

Inspection at: Vernon, Vermont

Inspection conducted: November 19-21, 1979

Inspectors: William Ferguson for
T. Foley, Reactor Inspector

01/14/80

date signed

date signed

date signed

Approved by: D. L. Capton for

D. L. Capton, Chief Nuclear Support
Section 1, Reactor Operations and Nuclear
Support Branch

1-18-80

date signed

Inspection Summary:

Inspection on November 19-21, 1979 (Report No. 50-271/79-20)

Areas Inspected: Routine, unannounced inspection by a regional based inspector of pipe support and restraint system surveillance and the Inservice Inspection Program for class 1 and 2 restraints. The inspection involved 21 inspector-hours on site by one NRC regional based inspector.

Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

The technical and supervisory level personnel listed below were contacted.

- *R. Burke, Engineering Support Supervisor
- *W. Conway, Plant Superintendent
- *J. Gianfrancesco, Maintenance Technical Assistant
- *D. Girroir, Engineering Assistant
- *W. Limberger, Engineering Assistant
- R. Mossei, Associate Engineer
- *W. Murphy, Assistant Plant Superintendent
- J. Pelletier, Maintenance Supervisor

The inspector also interviewed several other licensee personnel during the course of this inspection. These employees included operations, engineering, maintenance, and health physics personnel.

* Denotes those present at the exit interview.

2. Pipe Support and Restraint Surveillance

a. Documents Reviewed

The inspector reviewed the following procedures and records relating to pipe support and restraint surveillances to determine compliance with regulatory requirements.

- O.P. 5203 Rev. 5 Shock Suppressors
- Maintenance Department Instruction 79-29 dated September 28, 1979
- VYOPF 5203.01 Shock Suppressor Inspection Sheet data performed on September 26, 1979 and November 2, 1979.
- VYOPF 5203.02 Shock Suppressor Test Sheet data performed on March 25, 1979, November 1, 1979 and September 18, 1978.

- Fluid Viscosity Analysis dated October 10, 1979 by J. Gianfrancesco for snubbers RR-19, RR-34, RR-13 and MS-15.
- Inservice Inspection Program for Vermont Yankee Nuclear Power Corporation, Vermont Yankee Unit 1 Program Description and Examination Schedule
- Nuclear Services Division, Inservice Inspection Visual Examination and data sheets completed during the October 1979 refueling outage
- NRC letter dated July 9, 1979 to R. H. Groce, Licensing Engineer Yankee Atomic Electric Company

With the exception of the items listed below, the inspector identified no significant problems.

- (1) During the review of OP 5203, "Shock Suppressors," the inspector noted that the procedure did not address the orientation of snubbers during the visual surveillance as described by the technical specification basis 4.6.I. The licensee's representative stated that snubber orientation is noted during the visual surveillance check, and is recorded in the "Physical Condition" column on the surveillance data sheet if an orientation problem exists. He further stated that OP 5203 "Shock Suppressor" procedure would be revised to incorporate a specific check for snubber orientation prior to the next scheduled snubber surveillance. During a tour of the facility the inspector did not observe any snubbers that were misoriented.

This item is unresolved pending the incorporation of a specific check for snubber orientation. (271/79-20-01)

- (2) Reviewing the results of snubber functional testing VYOPF 5203.02 "Shock Suppressor Test Sheets", the inspector noted that the visual surveillances of March 25, 1979 and November 11, 1979 both declared snubber RR-13 inoperable. Each time the RR-13 snubber was subsequently verified to be inoperable by a functional test using the snubber test machine. It was also noted that the causes for failure were, in one case, leaking mechanical joints on the snubber, and in the other case, due to the Lenz Tee "O" ring seal leaking. The inspector informed the licensee's representative that these conditions existing on snubber RR-13 appeared to be more than coincidence and may be indications of a trend. The licensee's representative agreed to increase the surveillance inspection interval

for snubber RR-13. It was stated that RR-13 would be visually inspected at the next cold shutdown and that if significant leakage was noted, the snubber would be replaced as soon as possible. This matter will be reviewed during a future NRC inspection (271/79-20-02).

Further inspector review of VYOPF 5203.02 "Shock Suppressor Test Sheets" indicated that during the refurbishing of several functionally tested snubbers, cylinder wall scoring had been identified requiring the cylinder walls to be reground in order to prevent seal damage and potential piston seal leakage. The licensee's representative stated that the cylinder wall scoring could have resulted at the time of manufacture or caused by an unknown mechanism. The inspector informed the licensee's representative that the mechanism of scoring should be determined and the cause corrected. Additionally, if it is determined that the scoring was caused by the manufacturing process, the licensee should notify the vendor and the NRC Regional office. The licensee's representative agreed and stated that an evaluation would be performed on the cylinder wall scoring to determine the cause and mechanism by which the scoring is occurring. This item will be reviewed during a future NRC inspection (271/79-20-03).

3. Tour of Accessible Areas

- a. The inspector observed Control Room operation and conducted a tour of the Reactor Building (including Corner Rooms), HPCI Room, RICI Room, torus area, RHR pump room and CRD pump area. In addition, a tour was conducted of the Turbine Building, Condenser Bay area and Feed Pump area.

(1) Operation

The inspector observed various alarm conditions received and acknowledged by the Control Room Operator on duty. These conditions were discussed with the Shift Supervisor who was knowledgeable of the alarms and actions required by the Control Room Operator. Continuous alarms were identified and the reasons for these were known to operating personnel. These conditions were also discussed at the exit interview conducted November 21, 1979. The inspector also verified by spot checks that the operating shift met requirements of Section 6 of the Technical Specifications with regard to numbers and licenses. The inspector also witnessed a shift turnover on November 20, 1979 to verify that continuity of system status was maintained.

(2) Pipe Support Observation

During the tour of the facility the inspector observed the general condition of support components including hangers clamps, braces, brackets, turnbuckles, lugs, clevis and support base plates, and visually verified the following:

- adequacy of hydraulic fluid levels
- piston and reservoir vents were clear
- snubbers were installed in the correct location
- nuts, bolts, washers and fasteners were properly installed
- snubbers were correctly oriented
- no visible signs of fluid leaks
- no observable deterioration or corrosion
- support plates, extension rods and connecting points were not bent, deformed or loose
- piston rod positions conformed to recorded data
- spring hanger indicators show the appropriate "hot" "cold" position.

The inspector identified to the licensee's representative snubber RHR-188 which appeared to be in the locked up or frozen condition and the clevis fitting appeared to be mechanically bound by the pipe clamp bracket. The licensee issued a maintenance work request which required adjusting the pipe clamp.

Upon re-examination by the inspector with the appropriate design drawings, the snubber and related support assembly appeared to be in a functional condition and in conformance with the design drawing.

The inspector also independently performed measurements of several supports and compared these measurements to Grinnell design drawings. This inspection identified four supports which did not entirely conform with the design drawings. Further review, however, revealed that Earthquake Engineering Systems (EES) personnel on site responding to IEB-79-14 for Vermont Yankee, had previously identified, documented and evaluated these discrepancies. Further, the "as built" drawings being drawn by EES personnel reflected the correct status of these supports. The inspector had no further questions in this area.

4. Surveillance of Class 1 and 2 Supports

ASME Section XI IWB 2500 BK2 and IWC 2520 CE2 both require support settings of constant and variable spring type hangers, snubbers and shock absorbers to be verified. The licensee's procedure for visual examination of supports has no requirement for verifying support settings of hangers, snubbers or other types of pipe supports. The general condition of the support is recorded on the data sheets and in some cases a load setting is also recorded, however, no evaluation of the adequacy of the support setting is made.

The licensee's program for verifying class 1 and 2 supports does not require implementation until January 1980. However, the licensee's representative stated that the visual examination procedure would be revised to incorporate an evaluation of the adequacy of the support settings recorded. This matter will be reviewed during a future NRC inspection (271/79-20-04).

5. Review of Licensee Event Report

The inspector reviewed Licensee Event Report (LER 79-26) to verify that:

- The report accurately describes the event;
- The safety significance is as reported;
- The report is accurate as to cause;
- The report satisfies requirements with respect to information provided and timing of submittal;
- Corrective action is appropriate;
- Action has been taken.

No inadequacies were identified.

6. Unresolved Items

Unresolved items are those items for which further information is required to determine whether they are acceptable or items of noncompliance. Unresolved items are contained in Paragraph 2 of this report.

7. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on November 21, 1979 and summarized the scope and findings of the inspection as they are detailed in this report. During this meeting, the unresolved item was identified.