

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-271/90-14

Docket No. 50-271

License No. DPR-28

Licensee: Vermont Yankee Nuclear Power Corporation  
RD 5, Box 169, Ferry Road  
Brattleboro, Vermont 05301

Facility Name: Vermont Yankee Nuclear Power Station

Inspection At: Vernon, Brattleboro, Vermont; and King of Prussia

Inspection Conducted: October 2-24, 1990

Inspectors:

S. K. Chaudhary

S. K. Chaudhary, Sr. Reactor Engineer

12/6/90

date

Approved by:

E. H. Gray

E. H. Gray, Chief, MPS, Engineering Branch

12/17/90

date

Inspection Summary: Inspection conducted on October 2-24, 1990  
(Report No. 50-271/90-14)

Areas Inspected: Special announced inspection of the licensee's followup of concerns transmitted by the NRC to the licensee regarding harassment and intimidation of, and retaliation against Quality Control inspectors for identifying and reporting quality related problems.

Results: It was determined that the licensee has performed adequate follow-up in majority of the areas of concerns; however, one concern was not fully developed, followed-up and resolved. One violation, and two unresolved items were also identified.

## 1.0 Background

In the early part of September, 1990, the NRC:RI received allegations of inadequate quality control program implementation by one of the Vermont Yankee contractors who was responsible for fabrication, installation, and quality control inspection within the scope of his contract. Because, the allegations did not involve the licensee's organization and personnel, and the licensee had the overall responsibility to oversee that an adequate and effective QC program was implemented by its contractors, the Region I Allegation Review Panel recommended that a summary of concerns expressed in the allegation be sent to the licensee for an expeditious investigation and resolution. The NRC, however, would review and evaluate the licensee's investigation, findings, and any corrective actions for validity, adequacy, and effectiveness. On September 27, 1990, the NRC transmitted to the licensee a summary of five concerns as interpreted and understood by the NRC from the allegations.

## 2.0 Scope

The scope of this inspection included a review and evaluation of the licensee's followup actions in regards to the concerns transmitted by the NRC for validity and adequacy of findings, and effectiveness of corrective action, if any. The findings of the NRC with respect to each of the concerns are described in paragraph 3.0 of this report.

## 3.0 Concerns and Findings

### 3.1 Allegation

"Quality Control (QC) inspectors at both the Brattleboro fabrication shop and at the Vermont Yankee site are allegedly being harassed and intimidated to suppress safety concerns because of production pressure."

#### 3.1.1 Findings

The inspector reviewed the licensee's followup actions, and the conclusions reached by the licensee. The licensee concluded that there was no indication of instances where safety concerns were suppressed because of production pressure. The conclusions, however, further stated that there appeared to exist 1) a work environment that did not foster a proper quality perspective, 2) raised questions regarding the independence of the QC organization in the minds of QC inspectors, and 3) noted instances of interference or undue oversight of QC inspections.

The inspector however, noted that the licensee had very narrowly defined the meaning of "suppression" of safety concern. In the licensee's interpretation, suppression of a safety concern occurs only when a safety concern is not allowed to be voiced under a threat of retaliation, and this pressure of retaliation must conclusively be

proven. However, it is widely known that harassment and pressure are not always overtly applied and generally a subtle threat of job loss is as effective as any such overt threat.

Furthermore, the licensee has not thoroughly investigated the circumstances surrounding the job loss of the two QC inspectors. The licensee has concluded that the QC inspectors were terminated from the job due to: "...unavailability of work in the fabrication shop; their failure to clear security background checks, thus unable to work at VY site (still in process no final determination)..." (sic); and the budget totally expended for mobilization. The above conclusion by the licensee is based on a handwritten note by the contractor's QA Manager on the same day (September 12, 1990) the inspector's were terminated. The licensee did not investigate that if such terminations by the contractor had been a past practice and uniformly applied in all cases, and what was the rationale for choosing these two particular inspectors. The licensee also did not establish when the decision for staff reduction was made.

The inspector considered the above observation significant in light of the discussion with VY higher management when the inspector was informed that the contractor was looking for more QC inspectors to carry the inspection load, and in fact tried to call one of the terminated inspectors back to work within approximately two weeks, but after the inspector had made an allegation of retaliation.

The allegation of harassment and intimidation on the part of QC inspectors was based on the QC inspectors perception of their previous dealings with the contractor QA/QC and project management personnel, the immediate disagreement being the adequacy of the Safety Relief Valve (SRV) accumulator tank fabrication (contractor NCRs 188, 190, and 191), and in the QC inspectors' opinion, inadequate disposition of related NCRs.

The NRC inspector further noted that the QC inspectors terminated on September 12, 1990 were the same inspectors who had initiated NCRs 188 and 190 regarding the nonconformance of SRV tank and repairs on the tank without an approved repair procedure. The licensee did not establish that the NCR 188 was inadequately dispositioned, and there was a question of acceptability of SRV tank. To evaluate the nonconformance in the SRV tank, the licensee initiated a Yankee NCR 90-10.

Although, the licensee accepted the SRV tank "as-is", the NCR 90-10 did conclude that the contractor's resolution of NCR 188 was inadequate, and the persistence of the QC inspectors in initiating NCR 191 was instrumental in establishing the fact of repair without an approved procedure. The contractor's NCRs 188 and 191 were initiated on September 11, and 12, 1990, respectively. The two QC inspectors involved with the initiation of these NCRs were terminated on September 12, 1990.

### 3.1.2 Conclusion

Based on the above findings the inspector concluded that the licensee's followup was inadequate to resolve if the QC inspectors were being harassed and intimidated by their employer, and if there was retaliation against the QC inspectors for identifying safety concerns.

## 3.2 Allegation

Documentation of QC activities may have been falsified on records.

### 3.2.1 Findings

The licensee has concluded from their investigation that there is no deliberate or willful practice of misrepresenting QC inspections; however, the administrative practices and controls were confusing and inconsistent.

The inspector reviewed the licensee's followup actions, back-up documentation, and discussed the conclusions with the licensee's responsible engineering and management personnel to determine the adequacy of the followup and the validity of the conclusions.

### Conclusions

Based on the above review and discussions the inspector has determined that the licensee's conclusions are valid, and there is no apparent evidence of willful falsification of QC records.

## 3.3 Allegation

The rework of an ASME Section VIII vessel (i.e., small accumulators) was performed without a procedure.

### 3.3.1 Findings

The results of the licensee's investigation has confirmed that the accumulator vessel rework associated with contractor NCRs 188 and 191 was performed without approved procedures as required by the contractor's QA Manual.

The inspector reviewed the licensee's followup actions and discussed the conclusions with cognizant licensee personnel. The inspector determined that the licensee provided adequate follow-up to the problem and the results of the investigation were proper. The NRC inspector, however, noted that the inspectors who were involved with the NCRs 184, 188, and 191, were terminated on September 12, 1990. (see paragraph 1 of this report)

However, to evaluate the acceptability of the fabrication of SRV Accumulator tanks 13A and 13C, the licensee initiated NCR (90-10), and determined that the tanks were, in fact, fabricated under Section VIII of ASME code, rather than the applicable Section III of the code that requires an approved fabrication procedure. The fabrication of these tanks without an approved procedure is a violation of 10 CFR 50, Appendix B, criterion V (50-271/90-14-01).

### 3.3.2 Conclusions

Based on the above, the inspector concluded that the licensee's followup actions were adequate to resolve the specific concern. However, the violation may indicate a weakness in licensee oversight of contractor activities.

## 3.4 Allegation

The qualification of a Quality Control supervisor was questioned.

### 3.4.1 Findings

Based on the results of the licensee's investigation, they have concluded that all contractor QC Supervisors are qualified in accordance with the requirements established by the contractor. However, the licensee has not yet established the adequacy and validity of the qualification of one QC supervisor. The licensee is still in the process of reviewing documentation to determine if the QC supervisor has engaged in any inspection, test, or review of test results outside the authority of the certification.

### 3.4.2 Conclusions

Based on the above, the inspector concluded that the licensee's followup actions were on-going, and the licensee had not reached a final conclusion in this regard. This item remains unresolved pending licensee's completion of followup and the NRC's review of the licensee's findings. (50-271/90-14-02)

## 3.5 Allegation

Concerns were expressed regarding practices of the contractor for ensuring the traceability of heat numbers.

### 3.5.1 Findings

The licensee has concluded that no instances of indeterminate material traceability have been identified in the course of the followup of this concern; although, inconsistent work practices and procedural requirements were identified.

The inspector noted that the contractor's Material and Equipment Control Procedure, Rev. 01, dated April 26, 1985, required that all heat number transfers be "witnessed" by a QC inspector. This requirement, however, was not enforced in the fabrication shop. There are instances where the QC management explicitly instructed QC inspectors to disregard this requirement which created confusion and disagreements within the QC organization.

The inspector also noted that the contractor's current requirement of verifying heat number and material traceability program required that the traceability marking transfer be monitored on a random sampling basis; however, there was no (statistical) sampling plan or a minimum required number of observations in the program. Also, the verification of the heat number (or other transferred traceability markings) at the time of fitup and/or final QC inspection in the field only assures the existence of a number or marking. A verification of any attribute is not complete or proper if there is no reference to compare to and/or verify against the prescribed standard. "Verification" of any heat number transfer necessitates the observation of the original markings on the stock material which is compared with the markings on the material separated from stock. Any other observation or recording of heat number at the fitup or final inspection time only assures the existence of marking, not the correctness or validity of it.

Furthermore, the contractor's QA Manual does not require the documentation of the monitoring process for heat number transfer in the fabrication shop. The licensee has not verified the adequacy of the contractor's practices by tracing the material certification, heat numbers, and actual material properties to purchase orders and receiving inspection reports.

### 3.5.2 Conclusions

Based on the above, it appears that the licensee's followup actions and findings are adequate. However, this item is unresolved pending NRC's determination of the acceptability of the practice of heat number transfer without witnessing. (50-271/90-14-03)

## 4.0 Unresolved Items

Unresolved items are matters about which more information is needed to determine if the items are acceptable, deviation, or violation. Unresolved items are discussed on pages 5 and 6 of this report.

## 5.0 Exit Interview

At the conclusion of the onsite inspection on October 5, 1990, the inspector met with the licensee representatives listed in Attachment I to this report. The inspector summarized the scope and findings of the inspection at this time.

The inspector gave no written material to the licensee.

ATTACHMENT I

PERSONS CONTACTED

Vermont Yankee Power Corporation

W. P. Murphy	Senior Vice President
J. P. Pelletier	Vice President-Engineering
R. E. Sojka	Operations Support Manager
J. Kinsey	Project Engineer
R. P. Grippardi	Q.A. Supervisor

U.S. Nuclear Regulatory Commission

H. Eichenholz	Senior Resident Inspector
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DEC 17 1990

POST INSPECTION SALP DATA SHEET

1. Facility: Vermont Yankee
2. Inspector: S. Chaudhary
3. Docket No./Report No.: 50-271/90-14
4. Inspection Dates: 10/2-24/90
5. Functional Area: QA
6. Category Rating (1,2 or 3): 2
7. Inspection Hours for this Functional Area: Approx. 70 hrs.
8. Prepare a completed, typed, SALP Input. Start in the space below and continue on a separate sheet if necessary:

The licensee showed initiative in performing an expeditious investigation of the allegations forwarded from NRC:RI. Although the investigation generally was thorough, one area, harassment and intimidation - was not fully developed showing licensee's lack of experience and appreciation of the importance of the allegation.

9. Submitted by Inspector (Sign/date): *S. Chaudhary* 11/18/90
10. Approved by Section Chief (Sign/date): \_\_\_\_\_

DISTRIBUTION:

DRS Files  
DRP Section Chief for Reactor Inspected  
Sr. Resident Inspector