May 9, 2002

Mr. Michael A. Balduzzi
Senior Vice President
and Chief Nuclear Officer
Vermont Yankee Nuclear Power Corporation
185 Old Ferry Road
P.O. Box 7002
Brattleboro, Vermont 05302-7002

SUBJECT: VERMONT YANKEE - NRC INSPECTION REPORT 50-271/02-02

Dear Mr. Balduzzi:

On March 30, 2002, the NRC completed an inspection at your Vermont Yankee facility. The enclosed report documents the inspection findings which were discussed on April 11, 2002, with you and members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the inspectors identified four issues of very low safety significance (Green), one of which was determined to involve a violation of NRC requirements. However, because of its safety significance and because the issue has been entered into your corrective action program, the NRC is treating this issue as a non-cited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy, issued May 1, 2000, (65FR25368). If you contest this NCV, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Resident Inspector at Vermont Yankee.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of your response to these advisories and your ability to respond to terrorist attacks with the capabilities of the current design basis threat (DBT). On February 25, 2002, the NRC issued an Order to all nuclear power plant licensees, requiring them to take certain additional interim

compensatory measures to address the generalized high-level threat environment. With the issuance of the Order, we will evaluate VY's compliance with these interim requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Clifford J. Anderson, Chief
Projects Branch 5
Division of Reactor Projects

Docket No. 50-271
License No. DPR-28

Enclosure: Inspection Report 50-271/02-02

Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-271

Licensee No. DPR-28

Report No. 50-271/02-02

Licensee: Vermont Yankee Nuclear Power Corporation

Facility: Vermont Yankee Nuclear Power Station

Location: Vernon, Vermont

Dates: February 17 - March 30, 2002

Inspectors: Brian J. McDermott, Senior Resident Inspector
Edward C. Knutson, Resident Inspector
Paul R. Frechette, Physical Security Inspector

Approved by: Clifford J. Anderson, Chief
Projects Branch 5
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000271-02-02, on 02/17-03/30/2002; Vermont Yankee Nuclear Power Station; Vermont Yankee Nuclear Power Corporation; Equipment Alignment, Operator Work-Arounds, Surveillance Testing.

This inspection was performed by the resident inspectors and a security specialist from the NRC Region I office. The inspection identified four Green findings, one of which was also determined to involve a non-cited violation. The significance of a finding is indicated by its color (Green, White, Yellow, Red), as determined using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at: http:/www.nrc.gov/reactors/operating/oversight.html.

A. Inspector Identified Findings

Initiating Events

- **Green.** The inspector identified that the control room operators failed to maintain cognizance of the steam jet air ejector (SJAE) system alignment. During a control panel walkdown the inspector found that the manual pressure control valve for the SJAE steam supply failed while in standby and this problem had not been detected by the operators. The failure to perform adequate control panel walkdowns for this system was attributed to poor human performance.

  The undetected failure of the manual pressure control valve was considered more than minor because if uncorrected, a more significant plant transient (i.e., a loss of condenser vacuum and manual reactor scram) would result from a failure of the automatic pressure control valve. A Phase 3 SDP evaluation determined that the finding was of very low safety significance (Green) based on a conservative failure frequency estimate for the automatic pressure control valve and consideration of the remaining mitigating equipment. The failure had no actual effect on plant operation because the automatic pressure control valve operated properly throughout the period when the manual pressure control valve was unavailable. (Section 1R04)

Mitigating Systems

- **Green.** The inspector identified a non-cited violation of Technical Specification 6.4, "Procedures" during the high pressure coolant injection (HPCI) system quarterly surveillance test. The operating crew failed to trip the HPCI turbine when the HPCI turbine vibration monitor on control panel 9-3 indicated vibration levels that exceeded the limit specified in the surveillance procedure. The operating crew's failure to follow procedures was attributed to poor human performance.

  The failure to implement a required procedure step during the operation of safety-related equipment was considered to be more than a minor issue because it could be a precursor to a more significant event. However, the inspector determined this issue was

of very low safety significance (Green) based on a Phase 1 SDP evaluation. This issue did not represent an actual loss of safety function because local vibration test equipment did not indicate a HPCI turbine vibration problem. Because the finding is of very low safety significance and was captured in the licensee's corrective action program, this finding is being treated as a non-cited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. (Section 1R22)

- **Green.** The HPCI turbine vibration monitor on control panel 9-3 has provided suspect indication during at least two quarterly surveillance tests. The surveillance procedure provides explicit criteria for tripping the HPCI turbine based on the indication provided by the vibration monitor. Based on the monitor's strip chart data, the absence of work order requests and/or event reports, and the lack of procedural guidance, the inspector concluded that this vibration monitor has been a long standing operator work around.

  Operator acceptance of this degraded support instrument for safety related equipment was considered to be more than a minor issue because it could be a precursor to a more significant event. However, the inspector determined this issue was of very low safety significance (Green) based on a Phase 1 SDP evaluation. The issue did not represent an actual loss of safety function and there was no actual degradation of the HPCI turbine. (Section 1R16)

Barrier Integrity

- **Green.** The inspector identified that the drywell floor drain sump fill timer had failed and that this problem had not been identified by the control room operators. The inspector concluded that the operators failed to perform an adequate control panel walkdown for this system and that this failure could be attributed to poor human performance. An operability determination prepared by VY concluded that the drywell leakage detection system can be considered operable based on other control room alarms and instrumentation.

  The undetected failure of the drywell floor drain sump fill timer was considered more than minor because there was degradation of a system required for the detection of leakage inside the primary containment. However, the inspector determined this issue was of very low safety significance (Green) based on a Phase 1 SDP evaluation. The remaining control room alarms and control panel instrumentation provide sufficient redundant information such that operators would have been alerted to excessive leakage inside containment, and therefore the drywell leakage detection system remained operable. (Section 1R04)

B. Licensee Identified Findings

None.

Report Details

Summary of Plant Status: Vermont Yankee (VY) operated at 100 percent power during most of the inspection period, with several exceptions. In response to indications of additional fuel clad defects, power was reduced to approximately 60 percent on three occasions for power suppression testing. As a result of this testing, three additional fuel clad defects were identified, bringing the current total to five. Two additional control rods (for a total of four) were fully inserted to suppress power generation in the suspect fuel bundles. On March 21, in response to the fifth defect, VY reduced their maximum power for steady state operation to 91 percent to enhance the management of the operational stresses on the fuel cladding. Throughout the period, the concentration of radioactive materials in the offgas system and the reactor coolant remained significantly below VY's administrative limits and Technical Specification (TS) requirements.

1. REACTOR SAFETY

Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness [REACTOR - R]

1R04 Equipment Alignment

.1 Steam Jet Air Ejector Steam Supply

a. Inspection Scope

The inspector reviewed the status of the steam supply to the main condenser steam jet air ejectors (SJAEs) during a routine control room tour.

b. Findings

Green. The inspector identified that the control room operators failed to maintain cognizance of the steam jet air ejector (SJAE) system alignment. During a control panel walkdown the inspector found that the manual pressure control valve for the SJAE steam supply failed while in standby and this problem had not been detected by the operators. The failure to perform adequate control panel walkdowns for this system was attributed to poor human performance.

Motive steam is supplied to the SJAEs through either an automatic pressure control valve (PCV) or a manual PCV. On February 21, with the automatic PCV in service, the inspector noted that the manual PCV position indication showed the valve was full open but its demand signal was calling for the valve to be full closed. At the time of this discovery, the manual valve was considered available for use and the discrepant control panel indication had not been identified by the operators. An investigation by VY maintenance personnel found that a gasket on the manual PCV's air operator had failed and that the valve had failed in the open position, as designed. The control room operators are responsible for maintaining cognizance of the alignment and condition of plant equipment, as required by Administrative Procedure AP 0151, "Responsibilities and Authorities of Operations Department Personnel."

The undetected failure of the manual pressure control valve was considered more than minor because if uncorrected, a more significant plant transient (i.e., a loss of condenser vacuum and manual reactor scram) would result from a failure of the automatic pressure control valve. Because the finding had the potential to increase the likelihood of a reactor scram with subsequent degradation to a mitigating system (main steam bypass valves), the finding did not screen out in Phase 1 of the SDP. The Phase 2 SDP could not be directly applied because the Phase 2 SDP Worksheets did not clearly address the inspection finding of concern. Specifically, the finding and the postulated failure of the automatic PCV would not directly render the main condenser unavailable for decay heat removal. Additionally, only the main steam turbine bypass valves of the power conversion system would be adversely affected assuming a loss of main condenser vacuum. Therefore, in accordance with guidance contained in Inspection Manual Chapter 0609, Appendix A, "Significance Determination Of Reactor Inspection Findings For At-Power Situations," a Phase 3 SDP analysis was performed.

The sequences considered for risk assessment were similar to those used in the SDP phase 2 worksheets for transients without the power conversion system. The failure frequencies for the automatic pressure control valve and the remaining mitigating equipment were modified to reflect the characteristics of the finding. Additional credit was given for other available mitigating equipment such as the mechanical vacuum pump, the motor driven feedwater pumps, condensate pumps and control rod drive pumps. The exposure time of the finding was assumed to be 66 days which was one half the time period from the last time the backup steam supply PCV to the SJAE was verified to be available. Based on a conservative estimate of risk, this finding was determined to be of very low (Green) risk significance. The failure of the manual PCV had no actual effect on plant operation because the automatic PCV operated properly throughout the period when the manual PCV was unavailable. No violation of regulatory requirements occurred. This issue was entered in VY's corrective action program as Event Report (ER) 2002-0309.
(FIN 50-271/02-02-01)

.2 Drywell Floor Drain Sump Fill Timer

a. Inspection Scope

During a control room panel walkdown on February 19, the inspector identified that the drywell floor drain sump fill timer had failed and this problem had not been identified by the control room operators. This timer is part of the drywell leakage detection system and is designed to alert operators to a potentially significant increase in drywell leakage. The timer circuit initiates a control room alarm when the drywell floor drain pump is required to start more than once in a set period of time. Reference documents for evaluation of this condition included:

- Technical Specification 3.6.C
- VY Updated Final Safety Analysis Report, Sections 4.10 and 10.16

b. Findings

Green. The inspector identified that the control room operators failed to identify a problem with the drywell floor drain system during their control panel walkdown. The inspector found that the drywell floor drain fill timer had failed early on the morning of February 19 and this had not been identified by the control room operators during their morning panel walkdowns. The failure to perform adequate control panel walkdowns for this system was attributed to poor human performance. An operability determination prepared by VY concluded that the drywell leakage detection system can be considered operable based on other control room alarms and instrumentation.

The undetected failure of the drywell floor drain sump fill timer was considered more than minor because it degraded a system required for the detection of leakage inside the primary containment. A feature of this system failed and this problem was not identified by the operators during their control panel walkdowns. However, the inspector determined this issue was Green (of very low safety significance) based on a Phase 1 SDP evaluation. The remaining control room alarms and control panel instrumentation provide sufficient redundant information such that operators would have been alerted to excessive leakage inside containment, and therefore the drywell leakage detection system remained operable. No violation of regulatory requirements occurred. This issue was entered in VY's corrective action program as ER 2002-0297.
(FIN 50-271/02-02-02)

.3 Routine Observations

a. Inspection Scope

The inspector performed a partial system walkdown (visual inspection) to verify system alignment and to identify any discrepancies that would impact system operability. Observed plant conditions were compared with the standby alignment of equipment specified in VY's system operating procedures. In addition, the inspector referenced the general guidance in NRC Inspection Procedure 71111, Attachment 4, "Equipment Alignment."

On March 18, the inspector observed valve positions, the availability of power supplies, and the general condition of selected components on the "A" Emergency Diesel Generator (EDG) due to its increased risk significance during maintenance on the "B" EDG.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Routine Observations

a. Inspection Scope

The inspector toured plant areas important to safety in order to assess VY's control of transient combustibles and ignition sources, and the material condition and operational status of fire protection systems, equipment, and barriers. The inspector identified fire areas important to plant risk based on the Fire Protection Program and the Individual Plant Examination of External Events (IPEEE). Additional plant areas were selected based on their increased significance due to ongoing plant maintenance. The inspection elements identified in NRC Inspection Procedure 71111, Attachment 5, "Fire Protection," were used in evaluating the following plant areas:

- On February 22, the "A" residual heat removal (RHR) system corner room due to safety significance.
- On March 11, the service water (SW) pump room, diesel driven fire pump room, and diesel fuel storage area due to safety significance.
- On March 13, the 345kV switchyard relay house due to safety significance.
- On March 13, the reactor building 280' level in the area of the reactor recirculation system motor-generators due to safety significance.
- On March 18, the east switchgear room due to increased risk significance during the "B" EDG maintenance period.
- On March 19, the "A" EDG room due to increased risk significance during the "B" EDG maintenance period.

b. Findings

No findings of significance were identified.

.2 Temporary Instruction (TI) 2515/146, Hydrogen Storage Locations

a. Inspection Scope

NRC Inspection Manual TI 2515/146, "Hydrogen Storage Locations," was performed to verify VY's compliance with applicable fire protection codes and license commitments pertaining to potentially hazardous conditions created by the proximity of the hydrogen storage locations to risk-significant structures, systems, and components.

VY identified an example where the facility is not in full compliance with the National Fire Protection Association code NFPA 50A, "Standard for Gaseous Hydrogen Systems at Consumer Sites." This nonconforming condition was documented in the corrective action system as ER 1997-1498 and an operability assessment was written. A plant modification that will resolve the nonconforming condition has been installed and completion of the project is scheduled for May 2002. The specific observations made by VY in 1997 and by the inspector during review of this TI will be forwarded to the NRC Office of Nuclear Reactor Regulation via separate correspondence. The inspection requirements of TI 2515/146 have been satisfied, this TI is closed.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspector observed simulator training for one operating crew to assess the performance of the licensed operators and the evaluation by VY's training staff. The inspector's assessment was in accordance with NRC Inspection Procedure 71111, Attachment 11, "Licensed Operator Requalification Program."

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspector reviewed VY's implementation of the Maintenance Rule for structures, systems and components that exhibited performance problems. The inspector also reviewed a sample of risk significant systems to verify proper identification and resolution of maintenance rule-related issues. NRC Inspection Procedure 71111, Attachment 12, "Maintenance Rule Implementation," and VY Program Procedure PP 7009, "10 CFR 50.65, Maintenance Rule Program," were used as references during this inspection. VY's performance monitoring for the following systems and/or assessments of component failures were reviewed during this inspection period:

- The neutron monitoring system due to a series of local and average power range monitor system problems.
- The auxiliary steam system due to an undetected degradation of the backup pressure control valve, PCV-35.
- The primary and secondary containment systems due to questions concerning the adequacy of the secondary containment airlock door surveillance testing.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

a. Inspection Scope

The inspector reviewed one planned and two emergent maintenance activities based on the guidance in NRC Inspection Procedure 71111, Attachment 13, “Maintenance Risk Assessment and Emergent Work Control.” VY procedures AP 0125, "Equipment Release" and AP 0172, "Work Schedule Risk Management - Online," were used as criteria to assess VY's activities.

- Trouble shooting of a local power range monitor malfunction that was causing spurious downscale signals.

- The planned LCO maintenance period for the "B" EDG. The inspector attended the inter-discipline pre-job brief and reviewed the LCO maintenance plan.

- Replacement of the accumulator for hydraulic control unit (HCU) 14-35 due to excessive internal leakage that developed following single rod scram time testing.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance during Non-Routine Plant Evolutions

a. Inspection Scope

The inspector assessed the control room operators’ performance during two non-routine evolutions. Specifically, the adequacy of personnel performance, procedure compliance and use of the corrective action process were evaluated using the guidance in NRC Inspection Procedure 71111, Attachment 14, “Personnel Performance Related To Non-routine Plant Evolutions and Events.” The following non-routine evolutions were observed:

- On March 8, power suppression testing to determine the location of the third clad defect.

- On March 27, power suppression testing to determine the location of the fourth and fifth clad defect. This testing differed from previous power suppression testing in that most control rod insertions were performed as single rod scrams for scram time determination.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspector reviewed a sample of operability determinations prepared by VY using the guidance in NRC Generic Letter 91-18 for evaluation of degraded or non-conforming conditions. The following plant issues were reviewed:

- Multiple fuel cladding defects and the implications of continued operation, ER 2002-0566.
- A rag found in the oil sump of the "B" EDG during maintenance, ER 2002-0520.
- Adequacy of procedures for loss of electrical bus DC-1, ER 2002-0553.

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

.1 Selected Operator Work-Arounds

a. Inspection Scope

On February 26, control room operators elected not to trip the HPCI turbine during a surveillance test when the control room instrumentation showed greater than allowable turbine vibration. The operators concluded the instrument was not providing a valid indication based on experience that caused them to doubt the instrument's reliability (see Section 1R22, Surveillance Testing). The inspector examined the reliability of HPCI turbine Vibration Monitor 23-VIB by reviewing maintenance records, the Event Report database, and the vibration monitor's strip chart.

b. Findings

Green. The inspector identified an operator work-around associated with the HPCI turbine instrumentation. The HPCI turbine vibration monitor on control panel 9-3 has provided suspect indication during at least two quarterly surveillance tests. The inspector considered this an operator work-around based on its unreliable indication and the absence of corrective action documents for this problem.

The inspector reviewed a list of maintenance work orders for HPCI turbine Vibration Monitor 23-VIB and found that the last corrective maintenance work order was initiated in 1997. A list of ERs associated with the HPCI system initiated between 1997 and the present was also reviewed. The inspector did not identify any ERs concerning the vibration monitor.

The inspector examined the strip chart record associated with Vibration Monitor 23-VIB and noted that the chart pen had been at full scale during previous surveillance tests. In particular, the strip chart indicates vibration was greater than 3 mils during essentially the entire surveillance (approximately 30 minutes) conducted on November 27, 2001.

Operating procedure OP 4120 requires the use of Vibration Monitor 23-VIB but does not provide any detail regarding the instruments settings. The inspector noted that the absence of guidance may have led to confusion regarding the expected response and proper operation of this device. However, the procedure provides explicit criteria for tripping the HPCI turbine based on the indication provided by Vibration Monitor 23-VIB. Based on the strip chart data, the absence of work order requests and/or ERs, and the lack of procedural guidance, the inspector concluded that this vibration monitor has been a long standing operator work around.

The safety significance determination for this operator work around is addressed in Section 1R22.1 of this inspection report. While this operator workaround was not a violation of regulatory requirements, the issue contributed to a non-cited violation for failure to follow a procedure described in section 1R22 of the report. This issue was entered in VY's corrective action program as ER 2002-0343.
(FIN 50-271/02-02-03)

.2 Cumulative Operator Work-Arounds

a. Inspection Scope

The inspector reviewed the cumulative effects of operator workarounds identified in VY's Workaround List dated February 25, 2002. The inspector also toured the control room and accompanied an auxiliary operator during routine rounds in the turbine building, to determine if any significant items were not on the list.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspector reviewed documentation and/or observed portions of the post maintenance testing associated with online maintenance. The review was performed using the guidance provided in NRC Inspection Procedure 71111, Attachment 19, "Post-Maintenance Testing." VY operating procedures, work documents and TS requirements were used as criteria, when applicable, for this inspection.

The following post-maintenance testing activities were evaluated:

- On March 7, testing of the "B" standby gas treatment subsystem following fan motor maintenance.

- On March 22, the "B" EDG air compressor capacity test following internal inspection of the air receivers.

- On March 22, the "B" EDG slow start following extensive engine disassembly and maintenance.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

.1 High Pressure Coolant Injection System Quarterly Surveillance

a. Inspection Scope

On February 26, the inspector observed quarterly surveillance testing of the High Pressure Coolant Injection (HPCI) system required by TS 4.5.E. The test was performed in accordance with operating procedure OP 4120, "High Pressure Coolant Injection System Surveillance," Revision 38.

b. Findings

Green. The inspector identified a non-cited violation of TS 6.4, "Procedures" during the performance of a HPCI quarterly surveillance test. The operating crew failed to trip the HPCI turbine during a surveillance test when the indicated turbine vibration exceeded the limit specified in the surveillance procedure.

When the reactor operator started the HPCI turbine, the indication on Turbine Vibration Monitor 23-VIB went to its full scale position, an indication of at least 3 mils of vibration. After approximately four minutes the crew determined that the vibration instrument had failed and elected to continue with the surveillance test.

OP 4120 Step 23.b states, "During turbine operation. . . . Monitor TURB VIBRATION MONITOR 23-VIB during test, and TRIP turbine if vibration exceeds 2.0 mils." The operating crew did not believe the indication provided by this monitor based on previous experience and requested that maintenance personnel at the turbine use their test equipment to monitor turbine vibration (See Section 1R16 Operator Workarounds). No actual vibration problem was occurring and the operators completed the surveillance test without further complications.

The failure to implement required procedure steps during the operation of safety-related equipment was considered to be more than a minor issue because it could be a precursor to a more significant event. However, the inspector determined this issue was of very low safety significance (Green) based on a Phase 1 SDP evaluation. This issue did not represent an actual loss of safety function because local vibration test equipment did not indicate a HPCI turbine vibration problem and there was no actual degradation of the HPCI turbine. If there had been an actual problem with the turbine, the physical and

electrical separation of this system would have precluded collateral damage to the systems necessary to safely shut down the reactor.

TS 6.4, "Procedures" requires that procedures for testing be established, implemented and maintained. OP 4120, Revision 38, requires operators to trip the HPCI turbine when the level of vibration indicated on control room instrument 23-VIB exceeds 2.0 mils. Contrary to the above, on February 26 the vibration indicated on instrument 23-VIB exceeded 2.0 mils during performance of OP 4120 and the operators did not trip the HPCI turbine. This issue was entered in VY's corrective action program as ER 2002-0343.
(NCV 50-271/02-02-04)

.2 Routine Observations

a. Inspection Scope

The inspector reviewed documentation and/or observed portions of testing related to the following surveillance tests using the guidance provided in NRC Inspection Procedure 71111, Attachment 22, "Surveillance Testing":

- "B" EDG monthly surveillance on February 20, performed in accordance with OP 4126.
- Reactor core isolation cooling (RCIC) pump quarterly surveillance on February 26, performed in accordance with OP 4121.
- Residual Heat Removal Service Water (RHRSW) Pump "D" and Pump "B" full flow testing on March 13, performed in accordance with OP 4124.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Physical Protection [PP]

3PP1 Access Authorization Program

c. Inspection Scope

The following activities were conducted to determine the effectiveness of the licensee's behavior observation portion of the personnel screening and fitness-for-duty programs as measured against the requirements of 10 CFR 26.22 and the Licensees Fitness for Duty Program documents.

Five supervisors representing the Administration, Radwaste, Operations, Chemistry and Engineering departments were interviewed on March 27 regarding their understanding of behavior observation responsibilities and the ability to recognize aberrant behavior traits. Two Access Authorization/Fitness-for-Duty self-assessments, two semi-annual Fitness for Duty performance data reports, an audit, and ERs and loggable events for the four previous quarters were reviewed, during March 26-27. Also, on March 27, five individuals who perform escort duties were interviewed to establish their knowledge level of those duties. Behavior observation training procedures and records were reviewed on March 26.

d. Findings

No findings of significance were identified.

3PP2 Access Control

a. Inspection Scope

The following activities were conducted during the inspection period to verify that the licensee has effective site access controls, and equipment in place designed to detect and prevent the introduction of contraband (firearms, explosives, incendiary devices) into the protected area as measured against 10 CFR 73.55(d) and the Physical Security Plan and Procedures.

Site access control activities were observed, including personnel and package processing through the search equipment during peak ingress periods on March 25 and 26. Two vehicle searches were observed on March 27. On March 26, testing of all access control equipment; including metal detectors, explosive material detectors, and X-ray examination equipment, was observed. The Access Control event log, staffing rosters, an audit, and three maintenance work requests were also reviewed.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

a. Inspection Scope

Physical Protection Cornerstone
The inspector reviewed the licensee's programs for gathering and submitting data for the Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment Performance Indicators. The review included the licensee's tracking and trending reports, personnel interviews and security event reports. The data was reviewed for the following performance indicators:

- Fitness-for-Duty/Personnel Reliability Program (Q2/2000 - Q4/2001)
- Personnel Screening Program (Q2/2000 - Q4/2001)
- Protected Area Security Equipment Performance Index (Q2/2000 - Q4/2001)

Initiating Events Cornerstone
The inspector reviewed plant records to assess the accuracy and completeness of the performance indicator (PI) data submitted for the Initiating Events Cornerstone. The definitions provided in NEI 99-02, "Regulatory Assessment of Performance Indicator Guideline," Revision 2 and clarifications provided by the NRC in response to Frequently Asked Questions were used to evaluate this information. The plant records reviewed by the inspector included selected control room logs, licensee event reports, and event reports in VY's corrective action process. The data was reviewed for the following performance indicators:

- Unplanned scrams per 7,000 critical hours (Q2/2001 - Q4/2001)
- Scrams with loss of normal heat removal (Q2/2001 - Q4/2001)
- Unplanned power changes per 7,000 critical hours (Q2/2001 - Q4/2001)

b. Findings

No findings of significance were identified.

4OA6 Exit Meeting

On April 11, 2002, the resident inspectors presented their overall findings to members of VY management led by Mike Balduzzi, Senior Vice President and Chief Nuclear Officer, who acknowledged the findings presented.

The inspectors asked whether any materials examined during the inspection should be considered proprietary. Where proprietary information was identified, it was returned to VY after review.

ATTACHMENT 1

SUPPLEMENTARY INFORMATION

A. List of Items Opened, Closed and Discussed

Opened and Closed

FIN 50-271/02-02-01	Undetected failure of the manual pressure control valve for the steam jet air ejectors
FIN 50-271/02-02-02	Undetected failure of the drywell floor drain sump fill timer
FIN 50-271/02-02-03	Operator Workaround - HPCI turbine vibration monitor provides spurious upscale indication
NCV 50-271/02-02-04	Failure to follow procedure during HPCI surveillance

B. List of Acronyms

AP	Administrative Procedure
CFR	Code of Federal Regulations
DBT	Design Basis Threat
DC	Direct Current
EDG	Emergency Diesel Generator
ER	Event Report
HCU	Hydraulic Control Unit
HPCI	High Pressure Coolant Injection
IPEEE	Individual Plant Evaluation of External Events
LCO	Limiting Condition for Operation
NCV	Non-Cited Violation
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
OP	Operating Procedure
PCV	Pressure Control Valve
PI	Performance Indicator
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
SDP	Significance Determination Process
SJAE	Steam Jet Air Ejector
SW	Service Water
TS	Technical Specification
VY	Vermont Yankee