November 7, 2002

Mr. Jay K. Thayer
Site Vice President - Vermont Yankee
Entergy Nuclear Vermont Yankee, LLC
P.O. Box 0500
185 Old Ferry Road
Brattleboro, Vermont 05302-0500

SUBJECT: VERMONT YANKEE - NRC INTEGRATED INSPECTION REPORT 50-271/02-06

Dear Mr. Thayer:

On September 28, 2002, the NRC completed an inspection at your Vermont Yankee facility. The enclosed report documents the inspection findings which were discussed on October 10, 2002, with Mr. Mike Balduzzi and other 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. No findings of significance were identified during this inspection.

The NRC has increased security requirements at the Vermont Yankee Nuclear Power Station in response to terrorist acts on September 11, 2001. Although the NRC is not aware of any specific threat against nuclear facilities, the NRC has issued an Order and several threat advisories to commercial power reactors to strengthen licensees' capabilities and readiness to respond to a potential attack. The NRC continues to inspect the licensee's security controls and its compliance with the Order and current security regulations.

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 50-271/02-06
Attachment: Supplementary Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.	50-271
Licensee No.	DPR-28
Report No.	50-271/02-06
Licensee:	Entergy Nuclear Vermont Yankee, LLC
Facility:	Vermont Yankee Nuclear Power Station
Location:	Vernon, Vermont
Dates:	June 30 - September 28, 2002
Inspectors:	Edward C. Knutson, Senior Resident Inspector (Acting) Julian H. Williams, NRC Consultant Brian J. Fuller, Resident Inspector, Nine Mile Point NPS Thomas F. Burns, Reactor Inspector Thomas Hipschman, Reactor Inspector William Raymond, Senior Resident Inspector, Pilgrim NPS George W. Morris, Reactor Engineer Joseph T. Furia, Senior Health Physicist Frank J. Arner, Senior Project Engineer Todd H. Fish, License Examiner Gregory C. Smith, Senior Physical Security Inspector Paul R. Frechette, Security Inspector
Approved by:	Clifford J. Anderson, Chief Projects Branch 5 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000271-02-06, Entergy Nuclear Vermont Yankee LLC; on 06/30/02-09/28/02; Vermont Yankee Nuclear Power Station; Resident Inspector Report.

This inspection was conducted by the resident inspectors and region-based specialists in the areas of radiation protection, security, and operator licensing. This inspection identified no significant findings. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector Identified Findings

None

B. Licensee Identified Findings

None

Report Details

Summary of Plant Status:

Vermont Yankee (VY) operated at 100 percent power for most of the inspection period, with the exception planned power reductions for control rod pattern adjustments. On September 12, VY commenced a gradual power reduction due to fuel depletion. As a result, reactor power had been reduced to 94 percent by the close of the inspection period.

1. REACTOR SAFETY

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

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors reviewed VY Technical Evaluation (TE) 2002-008, "Service Water (SW) Temperature Limit during Hybrid Operation of the Circulating Water System." This TE provides the basis for operation of the SW system with inlet temperature higher than the design limit specified in the Final Safety Analysis Report (FSAR) during conditions of high outdoor temperature and certain alignments of the circulating water system. In conducting this review, the inspectors referenced the general guidance in NRC Inspection Procedure 71111, Attachment 1, "Adverse Weather."

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Partial System Walkdown

a. Inspection Scope

The inspectors performed partial system walkdowns (visual inspections) of several risk significant systems 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 inspectors referenced the general guidance in NRC Inspection Procedure 71111, Attachment 4, "Equipment Alignment." The inspectors observed valve positions, the availability of power supplies, and the general condition of selected components in the following systems:

- On July 9, the reactor core isolation cooling system due to increased risk significance during maintenance on the "C" reactor feed water pump.

- On August 26, the high pressure coolant injection system due to increased risk significance during maintenance on the reactor core isolation cooling system.

- On September 14, the inspector observed valve and switch positions, the availability of support systems, and the general condition of selected components on the "A" and "B" emergency diesel generators (EDGs) due to their safety significance.

b. Findings

No findings of significance were identified.

.2 Full System Walkdown

a. Inspection Scope

The inspectors performed a complete system walkdown of the 125V DC electric distribution system batteries, battery charger components and switchboards to confirm that key system components were properly aligned, consistent with plant drawings, and in good material condition. The inspectors also reviewed the system health reports, maintenance rule performance data, calculations, corrective action reports, FSAR section 8.6, VY's design basis document, and interviewed the systems and design engineers to identify any outstanding issues that would challenge the operability of the system. The inspectors performed a complete walkdown of the 125V DC electric distribution system in accordance with NRC Inspection Procedure 71111.04. This activity involved verification of equipment alignment through in-plant observations and review of plant records to assess the material condition of the system.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors 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 inspectors 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 July 19, the torus room due to safety significance.
- On August 2, the reactor building 280' elevation due to safety significance.
- On August 8, the reactor building 252' elevation north due to safety significance.
- On August 20, the west switchgear room due to safety significance.

- On August 26, the cable vault due to increased risk significance during maintenance on the reactor core isolation cooling system.
- On September 7, the east switchgear room due to safety significance.
- On September 13, the control room due to its risk significance.
- On September 14, the emergency diesel generator rooms due to safety significance.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

.1 External Flood Protection

a. Inspection Scope

The inspectors reviewed VY's analyses of potential flooding caused by external events, and flooding mitigation measures including design features and procedures. The inspectors performed a visual inspection to verify the installation of flood protection design features and to determine if additional flooding risks existed. The following documents were reviewed during this inspection: VY Topical Design Basis Document for External Events, VY IPEEE, FSAR Section 2.4, "Hydrology and Biology", and Operating Procedure OP 3127, "Natural Phenomena".

b. Findings

No findings of significance were identified.

.2 Internal Flood Protection

a. Inspection Scope

The inspectors performed an inspection of the high pressure coolant injection (HPCI) system to assess its susceptibility to internal flooding. The inspection was performed in accordance with NRC inspection procedure 71111.06, "Flood Protection Measures." Documents that were reviewed included FSAR sections 2.4 and 6.4, the VY topical design basis documents for internal flooding and external events, and the VY IPEEE.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors observed preventive maintenance on the "A" reactor building closed cooling water (RBCCW) heat exchanger during the week of July 15. Guidance contained in NRC Inspection Procedure 71111, Attachment 7, "Heat Sink Performance," and industry guidance were referenced during this inspection. The inspectors discussed RBCCW heat exchanger performance monitoring with the cognizant system engineer, and discussed the service water system chemical treatment program with the VY program development team.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

.1 Biennial Review

a. Inspection Scope

The following inspection activities were performed using NUREG-1021, Rev. 8, “Operator Licensing Examination Standards for Power Reactors,” Inspection Procedure Attachment 71111.11, “Licensed Operator Requalification Program,” and NRC Manual Chapter 0609, Appendix I, “Operator Requalification Human Performance Significance Determination Process (SDP),” as acceptance criteria.

The inspectors reviewed documentation of operating history since the last requalification program inspection. Documents reviewed included NRC inspection reports, licensee event reports, and licensee deficiency reports. The inspectors also discussed facility operating events with the resident staff. The inspectors did not detect operational events that were indicative of possible training deficiencies.

The operating tests for the week of June 17, 2002, were reviewed for quality as well as how much test item overlap existed between exam weeks.

The inspectors observed the dynamic simulator exams and job performance measures (JPMs) being administered. These observations included facility evaluations of crew and individual performance on the dynamic simulator exam.

Simulator performance and fidelity were reviewed for conformance with the reference plant control room. The inspectors also reviewed simulator deficiency reports.

A sample of records for requalification training attendance, license reactivations, and medical examinations were reviewed for compliance with license conditions and NRC regulations.

Instructors, and training/operations management as well as a sample of individual licensed operators were interviewed for feedback regarding the implementation of the licensed operator requalification program.

On August 21, 2002, the inspector conducted an in-office review of licensee requalification exam results for the complete 2002 annual testing cycle. The inspection assessed whether pass rates were consistent with the guidance of NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The biennial written exam was not administered this exam cycle. The inspector verified that:

- Crew pass rate was greater than 80%. (Pass rate was 100%)
- Individual pass rate on the dynamic simulator test was greater than or equal to 80%. (Pass rate was 100%)
- Individual pass rate on the walk-through test was greater than or equal to 80%. (Pass rate was 100%)
- Overall pass rate among individuals for all portions of the exam was greater than or equal to 75%. (Pass rate was 100%)

b. Findings

No findings of significance were identified.

.2 Quarterly Review

a. Inspection Scope

On September 25, the inspectors 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 inspectors reviewed VY's implementation of the Maintenance Rule in response to degradation of an interstage seal in the "A" control rod drive pump. 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.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

a. Inspection Scope

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

- Emergent work on the "B" EDG output breaker automatic close-in function. A problem with the inputs to this function was identified on July 24, during TS-required testing in preparation for limiting condition for operation (LCO) maintenance on the "A" EDG.

- Emergent work on the main generator automatic voltage regulator. On August 11, operators observed instability in the generator output voltage and transferred voltage control to the manual regulator. Troubleshooting and maintenance was complicated by the close proximity of the manual regulator.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors 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:

- ER 2002-1737, concerning potential degradation of safety class Basler protective relays due to an error in the vendor-supplied technical information that was used in VY's procedure for commercial grade dedication.

- ER 2002-1777, concerning the failure of a turbine stop valve to cycle during a quarterly surveillance.

- ER 2002-1867, concerning the safety class circuit breaker that supplies fuel pool cooling system isolation valve V19-221, which failed its high current test.

- On September 4, reviewed VY's assessment of overall plant conditions following a lightning strike that affected numerous plant indications.

- ER 2002-203 and Engineering Evaluation SE 02-071, concerning the suitability of valve V82-150 as a primary containment isolation valve during the test and repair of primary containment atmosphere control system isolation valve V72-38A.

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspector reviewed the cumulative effects of operator work-arounds identified in VY's Work-around List as of September 19, 2002. The inspection included a review of the licensee's performance metrics for tracking and managing operator work-arounds and burdens, and the inputs to the Operator Aggregate Impact Index. The inspector toured the control room and the plant and held discussions with control room operators to evaluate the significance of the operator work-around items.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors reviewed Vermont Yankee Design Change VYDC # 2000-027 CR #3, "Main Turbine EPR [Electronic Pressure Regulator] Replacement." The review was performed using the guidance in NRC Inspection Procedure 71111, Attachment 17, "Permanent Plant Modifications." The evaluation consisted of reviewing design change documents, discussions with cognizant VY personnel, observation of an EPR modification status meeting, observation of the simulator validation of the test procedure, and observation of a demonstration of the new EPR operating as a bench test. The modification is planned for the 2002 fall outage and is to be completed in October.

This plant modification will replace the VY Main Turbine EPR electric components (a totally analog system) with a Programmable Logic Controller and analog signal

conditioning cards (a hybrid system). The VY turbine pressure regulation consists of two separate systems; the EPR system and a Mechanical Pressure Regulator (MPR) system. Normally, the EPR is in control with the MPR used as a backup should the EPR fail. The existing EPR uses electronic components that are obsolete and no longer commercially available.

In addition, the inspectors reviewed minor modification MM 2002-012, "Main Steam Line Radiation Monitoring Reactor Trip and MSIV Closure Elimination." This modification was performed after approval of TS amendment 212, which eliminated the requirement for these functions. The inspectors also observed portions of the installation of this modification, performed in accordance with work order 02-002319-000, "Implement MM 2002-012."

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors 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 July 18, testing of the diesel driven fire pump following engine overhaul.
- On August 9, testing of the "A" standby fuel pool cooling pump following motor maintenance.
- On August 15, testing of the “A” reactor building closed cooling water pump 480 VAC breaker following circuit breaker change-out.
- On August 26, testing of the reactor core isolation cooling (RCIC) system following replacement of the electronic governor module (EGM).
- On September 6, testing of the "C" residual heat removal service water (RHRSW) pump following maintenance on the pressure control valve in the RHRSW pump motor cooling supply line.
- On September 19-20, leak rate and in-service testing of the primary containment atmosphere control system isolation valve V72-38A following repair of the air operator.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors 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":

- On July 29, reactor building-to-torus vacuum breaker quarterly surveillance, performed in accordance with OP 4202.
- On July 30, "A" loop residual heat removal (RHR) and RHR service water pump quarterly surveillance, performed in accordance with OP 4124.
- On August 12, quarterly functional/calibration test of the RCIC steam line high flow differential pressure instruments and steam supply low pressure instruments, performed in accordance with OP 4364 and 4365, respectively.
- On August 13, monthly surveillance testing of the John Deere Diesel Generator, performed in accordance with OP 4127.
- On August 14, transmitter calibration of the reactor water low level scram-primary containment isolation instruments, performed in accordance with OP 4313.
- On August 30, HPCI time to rated flow test, performed in accordance with OP 4120.
- On August 30, RCIC time to rated flow test, performed in accordance with OP 4121.
- On September 16, weekly surveillance testing of the scram test switch functional test, performed in accordance with OP 4317.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

On August 11, operators noted instability in the main generator voltage and switched the voltage regulator from automatic to manual control. Troubleshooting identified two potentiometers in the automatic voltage regulator circuit that required replacement. Due to concern for interaction with the manual voltage regulator circuit, VY concluded that repair should be deferred until the plant was shut down. The inspectors reviewed the affect on plant operations of manually controlling main generator voltage, and reviewed VY's guidance for operating in this condition.

b. Findings

No findings of significance were identified.

Emergency Preparedness [EP]

1EP6 Drill Evaluation

a. Inspection Scope

On August 21, the inspectors observed portions of an emergency preparedness drill from the control room simulator, the Technical Support Center, and the Emergency Operations Facility. Guidance in NRC Inspection Procedure 71114, Attachment 6, "Emergency Preparedness," was used to evaluate the drill and VY's identification of problems during this training activity. The inspectors focused on the event classification and notification, and communication between the emergency response centers.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Occupational Radiation Safety [OS]

2OS1 Access Control to Radiologically Significant Areas

a. Inspection Scope

During the period from August 26-30, 2002, the inspector reviewed exposure significant work areas, high radiation areas, and airborne radioactivity areas in the plant and evaluated associated controls and surveys of these areas to determine if the controls

(i.e., surveys, postings, barricades) were acceptable. For these areas, the inspector reviewed radiological job requirements and attended job briefings to determine if radiological conditions in the work area were adequately communicated to workers through briefings and postings. The inspector also verified radiological controls, radiological job coverage, and contamination controls to ensure the accuracy of surveys and applicable posting and barricade requirements. The inspector obtained this information via: interviews with licensee personnel; walkdown of systems, structures, and components; and, examination of records, procedures, or other pertinent documents. The inspector determined if prescribed radiation work permits (RWPs), procedure and engineering controls were in place; whether licensee surveys and postings were complete and accurate; and if air samplers were properly located. The inspector conducted reviews of RWPs used to access these and other high radiation areas to identify the acceptability of work control instructions or control barriers specified. The primary focus during this inspection was work being conducted in preparation for the upcoming October 2002 refueling outage. Work observations included new fuel inspection and loading into the spent fuel pool and reactor water clean-up demineralizer/filter septa replacement. The inspector reviewed electronic pocket dosimeter alarm set points (both integrated dose and dose rate) for conformity with survey indications and plant policy. Plant technical specification (TS) 6.5 and the requirements contained in 10 CFR 20, Subpart G, were utilized as the standard for access control barriers.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls

a. Inspection Scope

The inspector reviewed work to be performed during the October 2002 refueling outage (RFO23). The inspector also reviewed current ALARA job evaluations, exposure estimates, and exposure mitigation requirements and compared ALARA plans with the results achieved. The inspector obtained this information via: interviews with licensee personnel; walkdown of systems, structures, and components; and, examination of records, procedures, or other pertinent documents. A corporate goal of not more than 105 person-rem had previously been established for RFO23, however, a review of current outage scope and discussions with plant personnel indicated that estimated outage exposures were more likely to be 80 person-rem.

A review of actual exposure results versus initial exposure estimates for work was conducted including: comparison of estimated and actual dose rates and person-hours expended; determination of the accuracy of estimations to actual results; and determination of the level of exposure tracking detail, exposure report timeliness and exposure report distribution to support control of collective exposures to determine conformance with the requirements contained in 10 CFR 20.1101(b).

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope

The inspector reviewed field instrumentation utilized by health physics technicians and plant workers to measure radioactivity including; portable field survey instruments, friskers, portal monitors and small article monitors. The inspector obtained this information via: interviews with licensee personnel; walkdown of systems, structures, and components; and, examination of records, procedures, or other pertinent documents. The inspector conducted a review of instruments observed, specifically verification of proper function and certification of appropriate source checks for these instruments, which were utilized to ensure that occupational exposures were maintained in accordance with 10 CFR 20.1201. The inspector also reviewed daily instrument checks performed on the health physics department's multichannel analyzer for the period of July 1 - August 27, 2002.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Physical Protection [PP]

3PP3 Response to Contingency Events

The Office of Homeland Security (OHS) developed a Homeland Security Advisory System (HSAS) to disseminate information regarding the risk of terrorist attacks. The HSAS implements five color-coded threat conditions with a description of corresponding actions at each level. NRC Regulatory Information Summary (RIS) 2002-12a, dated August 19, 2002, "NRC Threat Advisory and Protective Measures System," discusses the HSAS and provides additional information on protective measures to licensees.

a. Inspection Scope

On September 10, 2002, the NRC issued a Safeguards Advisory to reactor licensees to implement the protective measures described in RIS 2002-12a in response to the Federal government declaration of threat level "orange." Subsequently, on September 24, 2002, the OHS downgraded the national security threat condition to "yellow" and a corresponding reduction in the risk of a terrorist threat.

The inspector interviewed licensee personnel and security staff, observed the conduct of security operations, and assessed licensee implementation of the threat level "orange" protective measures. Inspection results were communicated to the region and headquarters security staff for further evaluation.

b. Findings

No findings of significance were identified.

3PP4 Security Plan Changes

a. Inspection Scope

In-office reviews were conducted of changes to the Physical Security Plan, identified as Revisions 31, 32, and 33, submitted to the NRC on March 19, 2001, July 10, 2001, and February 5, 2002, respectively, in accordance with the provisions of 10 CFR 50.54(p). The review was conducted to confirm that the changes were made in accordance with 10 CFR 50.54(p), and did not decrease the effectiveness of the plan.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed plant records to assess the accuracy and completeness of performance indicator (PI) data submitted by VY. The definitions provided in NEI 99-02, "Regulatory Assessment of Performance Indicator Guideline," Revision 2, were used to evaluate this information. The plant records reviewed by the inspectors included selected control room and chemistry logs, event reports, and maintenance rule program records. The following PIs were reviewed:

- Safety System Unavailability, Residual Heat Removal System (Q4/2001 - Q2/2002)
- Reactor Coolant System Activity (Q1/2001 - Q2/2002)
- Reactor Coolant System Identified Leakage (Q1/2001 - Q2/2002)

In addition, the inspector reviewed a listing of licensee event reports for the period January 1, 2002 through August 25, 2002 for issues related to the occupational radiation safety performance indicator, which measures non-conformances with high radiation areas greater than 1R/hr and unplanned personnel exposures greater than 100 mrem TEDE, 5 rem SDE, 1.5 rem LDE, or 100 mrem to the unborn child. Event report ER 2002-1111 documented an unplanned exposure to a worker on May 16, 2002, during the mid-cycle outage which resulted in a calculated exposure to the worker's extremity (hand) in excess of 5 rem. This item was reported as a performance indicator for the second quarter of CY 2002 under the occupational radiation safety cornerstone.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Selected Issue Problem Identification And Resolution Follow-up

a. Inspection Scope

The inspectors reviewed VY's response to the problems related to the 24 Volt DC design change, VYDC 2000-030, as recorded in non-cited violation (NCV) 50-271/2001-011-02 and documented in licensee's Event Reports ER 2001-2284, -2306, -2307, -2364, and -2578, to determine the timeliness and effectiveness of corrective actions. The inspectors interviewed engineering and operations personnel, reviewed licensee's procedure guidance and reviewed the licensee's corrective actions to ensure they had adequately addressed the problems related to this design change.

The inspectors also reviewed the licensee's corrective actions related to the problems experienced with Basler protective relay output contacts to ensure the issues documented in Event Reports ER 2001-0242, -0612 and 2002-1737 had been adequately addressed.

b. Issues and Findings

Overall, the inspectors concluded that VY developed and implemented corrective actions that appeared reasonable to address the identified problems. However, the inspectors identified two minor issues regarding the thoroughness and timeliness of VY's corrective actions.

- VY had not corrected errors with a control room drawing concerning the number and types of protective relays associated with the 24 Volt DC modification. Although the errors were identified in November 2001, they had not been corrected nor had the drawing been annotated to indicate that a change was pending, as of the time of this inspection (August 2002). This issue was considered to be of minimal risk (minor) because the drawing error had not affected the associated initiating event and mitigating system cornerstone objectives. VY issued ER 2002-1862 to resolve this item.

- In February 2001, ER 2001-0242 identified that VY did not have the most recent revision of the vendor manual for Basler protective relays. This was notable in that the vendor manual is the source of information used for commercial grade dedication, surveillance procedures and in numerous safety class applications. In response to ER 2001-0242, VY committed to include the Basler relay manual in their controlled vendor manual program. Although this internal commitment was closed in April 2001, the manual had not been included in the controlled vendor manual program nor had the most recent revision of the manual been obtained, as of the time of this inspection. The issue was considered to be of minimal risk because the associated maintenance procedure had been revised

to reflect updated vendor test information even though the instruction manual had not been entered into the controlled manual system for safety related components. Notwithstanding this, the issue reflected an example of a weakness in control of vendor manuals. VY issued ER 2002-1845 and -1856 to resolve this item.

.2 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed a listing of licensee event reports for the period January 1, 2002 through August 25, 2002 for issues related to the occupational radiation safety. The inspector reviewed licensee self-assessments, audits and surveillances, and determined if identified problems were entered into the corrective action system for resolution. The inspector also reviewed the identification, characterization, tracking, evaluation and resolution of identified issues.

b. Findings

No findings of significance were identified.

4OA6 Exit Meeting

On October 10, 2002, the resident inspectors presented their overall findings to members of VY management led by Mike Balduzzi, Vice President Operations, 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. Key Points Of Contact

Mike Balduzzi, Vice President Operations
Kevin Bronson, Plant Manager
Fred Marcussen, Security Manager

B. List of Items Opened, Closed and Discussed

None

C. List of Documents Reviewed

Event Reports

ER 2001-0242
ER 2001-0612
ER 2001-2040
ER 2001-2284
ER 2001-2306
ER 2001-2307
ER 2001-2364
ER 2001-2506
ER 2001-2578
ER 2002-1737
ER 2002-1784
ER 2002-1845
ER 2002-1856
ER 2002-1861
ER 2002-1862
ER 2002-1870
ER 2002-1897

Procedures

AP 0009	Event Reports
AP 0028	Commitment Tracking
AP 0312	Vermont Yankee Equipment Manual (VYEM) Procedure
AP 0866	Contractor Control
AP 0867	Control of Off-Site Contracted Services
AP 0841	Procurement Technical and QA Evaluation
AP 0843	Commercial Grade Dedication
OP 2149	Normal 24 Volt DC Operation
OP 2160	Turbine Generator Support Systems Operation

Drawings

A-191353	Rev. 02, CR 14	Distribution Panel Schedule (SH DC-ECCS-B)
B-191301	Rev. 08, CR 14	Analog Trip System Control Wiring Diagram (SH 873)
G-191297	Rev. 17, CR 14	Analog Trip System, 24 Volt DC One Line Diagram
G-191372	Rev. 14, CR 14	125 V DC One Line Diagram (SH 3 of 5)

Design Change Packages

VYDC 2000-030	Replacement of ECCS Batteries with DC Power Supplies (24 Volt DC Converter) (Change Notice No. 14)

Calculations

VYC-1049	Rev. 03, CCN 3	ECCS 24 V Batteries and Associated Chargers Sizing, Short Circuit Current and Voltage Drop Calculations

D. List of Acronyms

ALARA	As Low as is Reasonably Achievable
CFR	Code of Federal Regulations
EDG	Emergency Diesel Generator
EGM	Electronic Governor Module
EPR	Electronic Pressure Regulator
ER	Event Report
FSAR	Final Safety Analysis Report
HPCI	High Pressure Coolant Injection
HSAS	Homeland Security Advisory System
IPEEE	Individual Plant Evaluation of External Events
JPM	Job Performance Measure
LCO	Limiting Condition for Operation
LDE	Lens Dose Equivalent
MM	Minor Modification
MPR	Mechanical Pressure Regulator
MSIV	Main Steam Isolation Valve
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OP	Operating Procedure
OHS	Office of Homeland Security
PI	Performance Indicator
RBCCW	Reactor Building Closed Cooling Water
RCIC	Reactor Core Isolation Cooling
RFO	Refueling Outage
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
RIS	Regulatory Information Summary
RWP	Radiation Work Permit
SDE	Shallow Dose Equivalent
SDP	Significance Determination Process

TE	Technical Evaluation
TEDE	Total Effective Dose Equivalent
TS	Technical Specification
VAC	Volt Alternating Current
VY	Vermont Yankee