July 30, 2002

Mr. J. Alan Price, Site Vice President - Millstone
C/O Mr. D. A. Smith, Manager - Licensing
Dominion Nuclear Connecticut, Inc.
Rope Ferry Road
Waterford, Connecticut 06385

SUBJECT: MILLSTONE POWER STATION UNITS 2 AND 3 - NRC INSPECTION REPORTS 50-336/02-04 AND 50-423/02-04

Dear Mr. Price:

On June 29, 2002, the NRC completed inspections at your Millstone Units 2 & 3 reactor facilities. The enclosed reports document the inspection findings which were discussed on July 18, 2002 with you and other members of your staff.

These inspections 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 these inspections, the inspectors identified one Unit 2 issue of very low safety significance (Green). This issue was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it 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. If you deny this Non-Cited Violation, you should provide a response with the basis for your denial, within 30 days of the date of these inspection reports, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Millstone facility.

The NRC has increased security requirements at Millstone 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 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 monitor overall security controls and will issue temporary instructions in the near future to verify by inspection the licensee's 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 enclosures 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/

Brian J. McDermott, Chief
Projects Branch 6
Division of Reactor Projects

Docket Nos.: 50-336, 50-423
License Nos.: DPR-65, NPF-49

Enclosures:
(1) NRC Inspection Report 50-336/02-04
Attachment 1: Supplemental Information

(2) NRC Inspection Report 50-423/02-04
Attachment 1: Supplemental Information

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ENCLOSURE 1

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket No.:	50-336
License No.:	DPR-65
Report No.:	50-336/02-04
Licensee:	Dominion Nuclear Connecticut, Inc.
Facility:	Millstone Power Station, Unit 2
Location:	P. O. Box 128 Waterford, CT 06385
Dates:	May 12, 2002 - June 29, 2002
Inspectors:	S. M. Schneider, Senior Resident Inspector P. C. Cataldo, Resident Inspector, Unit 2 K. M. Jenison, Senior Project Engineer, Division of Reactor Projects
Approved by:	Brian J. McDermott, Chief Projects Branch 6 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000336-02-04; Dominion Nuclear Connecticut, Inc.; on 05/12-06/29/02; Millstone Power Station; Unit 2. Fire Protection.

The inspection was conducted by resident and regional inspectors. The inspection identified one green issue, which was a Non-Cited Violation. The significance of most findings is indicated by the color (Green, White, Yellow, Red) 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 in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector Identified Findings

Cornerstone: Mitigating Systems

- **Green**. The licensee did not maintain a 3-hour rated fire barrier as described in the plant Fire Hazards Analysis. Specifically, the inspectors identified a penetration into the north wall of the west DC switchgear room that had not been sealed.

  The inspectors determined that the safety significance of the degraded fire barrier was very low since it did not separate redundant safe shutdown equipment. The failure to maintain a 3-hour rated fire barrier as described in the Fire Hazards Analysis is a non-cited violation of License Condition 2.C.(3) to Facility Operating License DPR-65. This violation is documented in the licensee's corrective action program as CR-02-07000 (Section 1R05.1).

B. Licensee Identified Violations

A violation of very low safety significance, which was identified by the licensee has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and its corrective action tracking number are listed in Section 4OA7 of this report.

TABLE OF CONTENTS

SUMMARY OF FINDINGS ii

TABLE OF CONTENTS iii

SUMMARY OF UNIT 2 STATUS 1

1. REACTOR SAFETY 1
- 1R04 Equipment Alignment 1
- 1R05 Fire Protection 1
- 1R07 Heat Sink Performance 3
- 1R11 Licensed Operator Requalification 4
- 1R13 Maintenance Risk Assessments and Emergent Work Evaluation 4
- 1R15 Operability Evaluations 5
- 1R16 Operator Work-Arounds 5
- 1R19 Post Maintenance Testing 6
- 1R22 Surveillance Testing 8
- 1R23 Temporary Plant Modifications 10

4. OTHER ACTIVITIES [OA] 10
- 4OA1 Performance Indicator Verification 10
- 4OA6 Meetings, including Exit 11
- 40A7 Licensee Identified Violations 11

SUPPLEMENTAL INFORMATION 12
- Key Points of Contact 12
- List of Items Opened, Closed and Discussed 12
- Partial List of Documents Reviewed 12
- List of Acronyms Used 13

Report Details

SUMMARY OF UNIT 2 STATUS

The Unit operated at essentially 100% power for the duration of the inspection period with the exception of two scheduled power reductions, that were performed on June 1, 2002, in order to support turbine control valve testing.

1. REACTOR SAFETY
(Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity)

1R04 Equipment Alignment

a. Inspection Scope

The inspectors performed a partial system alignment check on the "B" reactor building closed cooling water (RBCCW) heat exchanger during preventive maintenance activities on the "C" RBCCW heat exchanger. The inspectors verified that the heat exchanger was correctly aligned for operation in accordance with Surveillance Procedure (SP) 2611D, Form 2611D-002, Revision 029-02, "RBCCW System Alignment Checks, Facility 2," and system piping and instrumentation diagram (P&ID) 25203-26022, Sheet 1, "RBCCW System, RBCCW Pmps & Heat Exchangers."

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Auxiliary Building DC Equipment Room "B" (West), Fire Area A-21

a. Inspection Scope

The inspectors reviewed the Millstone Unit 2 Fire Hazard Analysis, associated engineering evaluations, fire-fighting strategies, and the Appendix R Compliance Report for the DC Switchgear Room, Fire Area A-21. The inspectors walked down the area to assess licensee control of transient combustibles and ignition sources, the material condition of fire protection systems and features, and the material condition and operational status of fire barriers.

b. Findings

The inspectors identified a non-cited violation of License Condition 2.C.(3) to Facility Operating License DPR-65 which involved a degraded fire barrier penetration in the north wall of the West DC switchgear room. The issue was determined to be of very low safety significance (Green).

During a barrier integrity walkdown of the west DC Switchgear Room, Fire Area A-21, the inspectors viewed the fire barrier from the opposite side in the auxiliary building

within Fire Area A-12A. The inspectors identified a 4" penetration in the concrete block wall that extended through the entire wall, with a steel plate installed on the DC switchgear side. The inspectors determined that a temperature probe from the Boric Acid Batch Tank Chemical Addition Tank extends some distance into the penetration due to the constraints of the batch tank probe location relative to the block wall. The licensee evaluated this condition and concluded that the penetration configuration did not meet the 3-hour fire rating established for this wall. Specifically, the penetration did not contain grout along the 24" traverse in accordance with the applicable seal design documents. The inspectors verified that the licensee entered the applicable action statement of the Technical Requirements Manual and had established a compensatory fire watch to address the inoperable fire barrier.

The inspectors determined that the fire barrier had been inoperable since at least July of 1998, based on a documented inspection of the penetration performed in accordance with SFP-17, Revision 0, "Fire Penetration Seal Inspections." However, based on available information contained in the surveillance data sheet, as well as the guidance contained in the inspection procedure, the inspectors concluded that the inspection did not identify the degraded seal. Additionally, the inspectors reviewed completed surveillances that documented the calibration of the temperature probe. The inspectors determined that the steel plate is unbolted from the wall to allow for the removal of the probe, and neither the surveillance procedure nor the work order that facilitates the surveillance identifies the requirement to have grout in the penetration to achieve the applicable 3-hour fire rating. The inspectors verified that the licensee entered this adverse condition into their corrective action program for resolution as CR-02-07000.

The inspectors determined that the unsealed penetration into the fire barrier was more than minor based on the finding having greater significance than a similar issue described in Manual Chapter 0612, "Power Reactor Inspection Reports", Appendix E, "Examples of Minor Issues", Section 2e. Specifically, the required penetration seal material was missing and therefore could not perform its function. The inspectors evaluated the significance of the finding in accordance with Manual Chapter 0609, Appendix F, "Determining Potential Risk Significance Of Fire Protection And Post-Fire Safe Shutdown Inspection Findings". The inspectors determined that the missing penetration seal material represented a degradation of a fire protection feature or defense-in-depth element which provided a 3-hour fire barrier separation that enclosed one safe shutdown (SSD) train of vital DC switchgear. The inspectors also determined that the degraded barrier did not affect or separate redundant SSD trains of vital DC power. Therefore, the finding screens out as having very low safety significance (Green).

License Condition 2.C.(3) to Facility Operating License DPR-65, specifies that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report and as approved in the Safety Evaluation Report. The Fire Hazards Analysis identifies the north wall of the west DC switchgear room as a 3-hour rated fire barrier separating the fire area from adjacent areas. The inspectors determined that the failure to maintain the 3-hour rated barrier since at least July of 1998, is a violation of License Condition 2.C.(3) to Facility Operating License DPR-65 (**NCV 50-336/02-04-01**). This violation is associated with an inspection finding that is characterized by the significance determination process as

having very low safety significance (Green) and is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as CR-02-07000.

.2 "A" and "B" Emergency Diesel Generator Rooms, Auxiliary Building (Fire Areas A-15 and A-16), and West 480 Volt Load Center Room, Turbine Building (Fire Area T-6)

a. Inspection Scope

The inspectors performed walkdowns of the following plant areas to assess licensee control of transient combustibles and ignition sources, the material condition of fire protection systems and features, and the material condition and operational status of fire barriers:

- "A" Emergency Diesel Generator Room, Auxiliary Building, 14 Foot Elevation (Fire Area A-15)
- "B" Emergency Diesel Generator Room, Auxiliary Building, 14 Foot Elevation (Fire Area A-16)
- West 480 Volt Load Center Room, Turbine Building, 36 Foot Elevation (Fire Area T-6)

The inspectors reviewed the following related licensee documents:

- Applicable Fire Protection engineering evaluations
- Unit 2 Fire Hazards Analysis
- Fire Hazards Analysis Boundary Drawings

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors observed the inspection of the "A" reactor building closed cooling water (RBCCW) heat exchanger, performed in accordance with maintenance procedure MF 2701J-096, Revision 7, "Service Water Cooled Heat Exchangers Subject To GL 89-13." The inspectors reviewed the inspection results against the pre-established acceptance criteria contained within the procedure, and verified that all acceptance criteria had been satisfied. The inspectors verified that adverse conditions identified by the licensee were appropriately entered into the licensee's corrective action program.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed licensed operator requalification training activities in the simulator for a Once Through Cooling scenario to identify any discrepancies in the training and to assess the licensed operator performance and the training evaluators' critique. The inspectors also conducted a review of the simulator board configurations as compared to Unit 2 control room board configurations to ensure fidelity and consistency between the two boards. The inspectors reviewed the following related licensee documents:

- Unit 2 Simulator Physical Fidelity Report
- Nuclear Simulator Engineering Manual 4.12, "Simulator Physical Fidelity Report", Revision 8
- MP-14-OPS-GDL02, "Operations Standards", Revision 5. Attachment 6, "Qualification and Training"
- Unit 2 Simulator Training and Requalification Schedule
- Once Through Cooling Training Scenario

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors verified the conduct and adequacy of scheduled maintenance risk assessments for plant conditions affected by the conduct of the following scheduled maintenance and testing activities:

- High Pressure Safety Injection pump and valve surveillance testing
- Motor Driven Auxiliary Feedwater pump surveillance testing
- Turbine Driven Auxiliary Feedwater pump surveillance testing combined with scheduled Containment Sump Outlet valve stroke testing and "C" Reactor Building Closed Cooling Water heat exchanger inspection and maintenance
- "A" Containment Spray pump operational test combined with "B" Service Water pump and strainer maintenance and testing

The inspectors utilized the Equipment Out of Service (EOOS) quantitative risk assessment tool to evaluate the risk of the above plant configurations and compared the result to the licensee's stated risk. The inspectors also verified that the licensee entered appropriate risk categories and implemented risk management actions as necessary.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed an operability determination associated with the partial blockage of sensing line to a pressurizer level transmitter to ensure that operability was justified and that pressurizer level indication remained available to maintain pressure level within its programs band and no unrecognized increase in risk had occurred. The inspectors also reviewed compensatory measures to ensure that the compensatory measures were in place and were appropriately controlled. The inspectors reviewed the following related licensee documents:

- OD MP2-010-02, Revision 0, Partial Blockage of Sensing Lines to Pressurizer Level Transmitters
- CR-02-04694, Letdown Flow Controller Has Been Placed in Manual to Control Excessive Flow and Back Pressure Perturbations
- Millstone Unit 2 Shift Turnover Report dated June 18, 2002
- CR-02-06706, Compensatory Action Was Inadvertently Suspended

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors reviewed an operator work around condition that existed when operators removed the automatic steam generator blowdown isolation function from a steam generator (SG) blowdown valve and shut the valve. The automatic blowdown function was causing the SG blowdown valve to cycle resulting in spurious steam jet air ejector (SJAE) radiation monitor alarms. The inspectors evaluated the operator work around to determine if there was any affect on human reliability in responding to an initiating event. The inspectors reviewed the following related licensee documents:

- Unit 2 Operator Workaround Management Summary
- Site Engineering Memorandum dated June 14, 2002, Primary to Secondary Leak Monitoring
- CR-02-06575, Spike on SJAE Radiation Monitor
- Common Operating Procedure 200.9, Revision 002, Operational Performance Status

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

.1 "A" Enclosure Building Filtration System (EBFS) Fan and Heater Maintenance

a. Inspection Scope

The inspectors reviewed automated work orders associated with maintenance on the EBFS fan and heater. The inspectors verified that the selected post-maintenance tests adequately demonstrated that the "A" EBFS would continue to perform its required safety function. The inspectors also verified that the selected post-maintenance tests were appropriate for the maintenance activity that was conducted. The inspectors also verified that identified deficiencies were entered into the licensee's corrective action program for resolution. The inspectors reviewed the following related licensee documents:

- EBFS Automated Work Orders
- Vibration Test Data
- MP-20-WP-GDL40, Revision 001, Pre- and Post-Maintenance Testing
- CR-02-07378, Post Maintenance Acceptance Criteria for Breaker Resistance Was Not Met

b. Findings

No findings of significance were identified.

.2 "C" Reactor Building Closed Cooling Water (RBCCW) Heat Exchanger Maintenance

a. Inspection Scope

The inspectors reviewed automated work orders (AWO) M2-01-14701, M2-01-15651, and M2-02-00577, associated with "C" RBCCW Heat Exchanger inspection and valve repair activities. The inspectors verified that the selected post-maintenance tests adequately demonstrated that the "C" RBCCW Heat Exchanger would continue to perform its required safety function. The inspectors also verified that the selected post-maintenance tests were appropriate for the maintenance activity that was conducted. The inspectors verified that identified deficiencies were entered into the licensee's corrective action program for resolution.

b. Findings

No findings of significance were identified.

.3 "A" Service Water Pump Strainer

a. Inspection Scope

The inspectors reviewed automated work orders associated with "A" Service Water Pump Strainer Maintenance. The inspectors verified that the selected post-maintenance tests adequately demonstrated that the "A" Service Water Pump and Strainer would continue to perform its required safety functions. The inspectors also verified that the selected post-maintenance tests were appropriate for the maintenance

activity that was conducted. The inspectors verified that identified deficiencies were entered into the licensee's corrective action program for resolution. The inspectors reviewed the following related licensee documents:

- AWO-M2-01-04480, "A" Service Water (SW) Pump Strainer
- SP-2612C, Revision 007-05, Service Water System Lineup and Valve Test, Facility 1
- SP-2612A, Revision 008-08, "A" Service Water Pump Test
- Individual Surveillance Test Procedure Data Forms

b. Findings

No findings of significance were identified.

.4 Reactor Protection System (RPS) Matrix and Trip Path Relay

a. Inspection Scope

The inspectors reviewed automated work orders associated with RPS Matrix and Trip Path Relay Maintenance. The inspectors verified that the selected post-maintenance tests adequately demonstrated that the RPS Matrix and Trip Path Relay would continue to perform its required safety functions. The inspectors also verified that the selected post-maintenance tests were appropriate for the maintenance activity that was conducted. The inspectors verified that identified deficiencies were entered into the licensee's corrective action program for resolution. The inspectors reviewed the following related licensee documents:

- AWO-M2-01-16000, RPS Matrix and Trip Path Relay
- SP-2401D, Revision 011-08, Reactor Protection System (RPS) Matrix Logic and Trip Path Relay Test
- SP-2401FA, Revision 002-03, RPS Channel "A" High Power Trip Test

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

.1 High Pressure Safety Injection (HPSI)

a. Inspection Scope

The inspectors reviewed licensee performance of surveillance testing of risk significant structures, systems, and components to ensure these systems are capable of performing their intended safety functions and to ensure related technical specification (TS) requirements are met. The following surveillance tests were reviewed as part of this activity:

- SP-2604A, Revision 012-05, High Pressure Safety Injection (HPSI) Pump Operability and Inservice Testing, Facility 1
- SP-2604E, Revision 011-05, HPSI System Alignment Check and Valve Tests, Facility 1
- SP-2604U.1, Revision 001-04, HPSI and CS Check Valve Tests, Facility 1

The inspectors attended test briefs, verified selected prerequisites and precautions, and verified the tests were performed in accordance with the procedural steps. The inspectors also reviewed completed data sheets and verified that TS requirements were met. The inspectors also reviewed the following related licensee documents:

- Technical Specification Surveillance Requirements
- Individual Surveillance Test Procedure Data Forms
- CR-02-06678, Wrong HPSI Pump Differential Pressure Acceptance Criteria Listed in Procedure Discussion

b. Findings

No findings of significance were identified.

.2 Auxiliary Feed Water

a. Inspection Report

The inspectors reviewed licensee performance of surveillance testing of risk significant structures, systems, and components to ensure these systems are capable of performing their intended safety functions and to ensure related technical specification (TS) requirements are met. The following surveillance test was reviewed as part of this activity:

- SP-2610A, Revision 010-03, "B" Motor Driven Auxiliary Feed Water Pump Test

The inspectors attended test briefs, verified selected prerequisites and precautions, and verified the tests were performed in accordance with the procedural steps. The inspectors also reviewed completed data sheets and verified that TS requirements were met. The inspectors also reviewed the following related licensee documents:

- Technical Specification Surveillance Requirements
- Individual Surveillance Test Procedure Data Forms
- Vibration Data Acquisition Task Qualification Report for Vibration Data Equipment Operator
- Ultrasonic Flow Testing Task Qualification Record for Ultrasonic Flow Testing Equipment Operator
- CR-02-06154, NRC Resident Noted Minimum Differential Pressure in Discussion Section Does Not Match Minimum Differential Pressure on the Associated Surveillance Form and is in Disparity With the Turbine Driven Auxiliary Feed Water Pump Surveillance

b. Findings

No findings of significance were identified.

.3 Low Pressure Safety Injection

a. Inspection Scope

The inspectors reviewed licensee performance of surveillance testing of risk significant structures, systems, and components to ensure these systems are capable of performing their intended safety functions and to ensure related technical specification (TS) requirements are met. The following surveillance tests were reviewed as part of this activity.

- SP-3608.6, Revision 013-02, Safety Injection System Valve Operability Test
- SP-2604C, Revision 010-02, Low Pressure Safety Injection (LPSI) Pump and Valve Tests, Facility 1
- SP-2606A, Revision 011-02, Containment Spray Pump Operability and Inservice Testing, Facility 1

The inspectors attended test briefs, verified selected prerequisites and precautions, and verified the tests were performed in accordance with the procedural steps. The inspectors also reviewed completed data sheets and verified that TS requirements were met. The inspectors also reviewed the following related licensee documents:

- Technical Specification Surveillance Requirements
- Individual Surveillance Test Procedure Data Forms

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed Temporary Modification 2-02-015, Revision 0, Temporary Power to the Unit 2 PC106 and PC104, to verify that the temporary modification did not affect the safety function of important safety systems. The inspectors reviewed the

temporary modification and its associated 10 CFR 50.59 screening against the Final Safety Analysis Report (FSAR) and Technical Specifications to ensure the modification did not affect system operability or availability. The inspectors also reviewed the following related licensee documents:

- Work Control-10, Revision 004-01, Temporary Modifications
- FSAR, Chapter 7.5.5, Plant Computer System
- CR-02-06941, Regulator Informed the Control Room that Temporary Modification 2-02-015 for the Computer Power Supply Had Not Been Updated As Required

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed licensee event reports, monthly operating reports, plant process computer power history information, and NRC inspection reports to identify significant plant power changes and plant scrams that occurred from the 3rd quarter of 2001, through the 1st quarter of 2002. The inspectors compared this information with the licensee's data reported to the NRC for the time period listed above for the following performance indicators:

- Unplanned scrams per 7000 critical hours
- Scrams with loss of normal heat removal
- Unplanned power changes per 7000 hours

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Price and other members of licensee management July 18, 2002. The inspectors asked the licensee whether any material examined during this inspection should be considered proprietary. No proprietary information was identified.

40A7 Licensee Identified Violations

The following violation of very low safety significance (green) was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCV.

Criterion XVI of 10 CFR 50, Appendix B, requires that conditions adverse to quality are promptly identified and corrected. On April 19, 2002, a 15°F inadvertent cooldown of the reactor coolant system occurred following an automatic reactor trip. The licensee identified that they had failed to implement a procedure change to an operating procedure following their investigation of a similar inadvertent cooldown event from February 11, 2000, that would have provided control room operators with specific guidance to preclude or mitigate the specific plant configuration that led to the recent inadvertent cooldown. This failure to implement a corrective action is captured in the licensee's corrective action program as CR-02-05202 and CR-02-04634. The cooldown event is bounded by the current design basis accident analysis and was effectively identified and corrected by the control room operators. Also, the required procedure changes to prevent recurrence have been completed. Therefore, the failure to promptly implement a corrective action to prevent an inadvertent cooldown is considered to be of very low safety significance and this violation is being treated as a non-cited violation.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

a. Key Points of Contact

J. Alan Price, Site Vice President - Millstone
D. Dodson, Supervisor, Regulatory Compliance-Licensing
P. Grossman, Nuclear Specialist-Nuclear Engineering
D. Hicks, Director-Nuclear Station Safety & Licensing
W. Hoffner, Manager-Nuclear Operations
P. Parulis, Manager-Nuclear Oversight

b. List of Items Opened, Closed and Discussed

Opened and Closed During this Inspection

50-336/2002-04-01	NCV	Failure to maintain fire barrier requirements described in the plant fire hazards analysis (1R05.1)

Previous Items Closed

None

Discussed

None

c. Partial List of Documents Reviewed

- FP-EV-98-0002, Potential Loss of HVAC in the East 480V Load Center Room Due to a Fire and Subsequent Fire Damper Closure in the West 480V Load Center Room, Millstone Unit 2
- FP-EV-98-0042, Separation of Millstone Unit 2 Turbine Building and Unit 1 Turnover Areas/Turbine Building (Old Evaluation #75)
- FP-EV-98-0047, Penetration Seals in the Floor of the Turbine Buildings 480V Load Center Room at Elevation 36’6" (Old Evaluation #101), Millstone Unit 2
- FP-EV-98-0052, Unsealed Steel Deck Rib Voids at the Top of the Turbine Buildings East cable Vault At Elevation 45’0" (Old Evaluation #016), Millstone Unit 2
- FP-EV-99-0002, Expansion Joints in Fire Barriers, Millstone Unit 2
- FP-EV-99-0019, The Configuration of Fire Dampers 2-HV-265 and 2-HV-333 in West 480V Switchgear Room, Auxiliary Building 36’-6" Elevation, Millstone Unit 2
- Automated Work Order (AWO) M2-02-05594, MP2 EBFS Fan Motor Exhibits Belt Related Vibration
- AWO M2-95-07885, 10 Year Preventive Maintenance (PM) for Breaker Overcurrent Test, Contact Resistance, and Meggar Check
- AWO M2-99-11205, 3 Year PM for Motor Control Center Starter Inspection, Cycling, and Cubicle Cleaning
- AWO M2-99-11324, 3 Year PM for Calibration of Timer TB091

- AWO M2-01-13135, 5 Year PM for Molded Case Breaker Cycling, Inspection, and Cleaning
- AWO M2-95-07753, 10 Year PM for Molded Case Breaker Overcurrent Test, Contact Resistance, and Meggar Check

d. List of Acronyms Used

AWO	automated work order
EBFS	enclosure building filtration system
EOOS	equipment out of service
FSAR	Final Safety Analysis Report
HPSI	high pressure safety injection
IST	inservice test
LPSI	low pressure safety injection
NCV	non-cited violation
P&ID	piping and instrumentation diagram
PM	preventive maintenance
PMT	post maintenance testing
RBCCW	reactor building closed cooling water
RPS	reactor protection system
SJAE	steam jet air ejector
SP	surveillance procedure
SSD	safe shutdown
TS	technical specification

ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket No.: 50-423

License No.: NPF-49

Report No.: 50-423/02-04

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Power Station, Unit 3

Location: P. O. Box 128
Waterford, CT 06385

Dates: May 12, 2002 - June 29, 2002

Inspectors: A. C. Cerne, Senior Resident Inspector, Unit 3
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Approved by: Brian J. McDermott, Chief
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SUMMARY OF FINDINGS

IR 05000423-02-04; Dominion Nuclear Connecticut, Inc.; on 05/12-06/29/02; Millstone Power Station; Unit 3. Resident Inspector Report.

The inspection was conducted by resident and regional inspectors. No findings of significance were identified. 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

No findings of significance were identified.

B. Licensee Identified Violations

No licensee violations were identified.

TABLE OF CONTENTS

SUMMARY OF FINDINGS ii

TABLE OF CONTENTS iii

SUMMARY OF UNIT 3 STATUS 1

1. REACTOR SAFETY 1
- 1R04 Equipment Alignment 1
- 1R05 Fire Protection 2
- 1R12 Maintenance Rule Implementation 3
- 1R13 Maintenance Risk Assessments and Emergent Work Evaluation 3
- 1R15 Operability Evaluations 4
- 1R19 Post Maintenance Testing 4
- 1R22 Surveillance Testing 6
- 1R23 Temporary Plant Modifications 6
- 1EP6 Drill Evaluation 7

4. OTHER ACTIVITIES [OA] 7
- 4OA1 Performance Indicator Verification 7
- 4OA6 Meetings, including Exit 8

SUPPLEMENTAL INFORMATION 9
- Key Points of Contact 9
- List of Items Opened, Closed and Discussed 9
- List of Acronyms Used 9

Report Details

SUMMARY OF UNIT 3 STATUS

The plant began the inspection period on May 12, 2002, operating at approximately 100 percent power. On June 10, following the identification of outboard seal leakage on the "B" turbine driven feedwater (TDFW) pump, operators reduced reactor power to 90%, placed the motor driven feedwater (MDFW) pump in service, and removed the "B" TDFW pump from service. Operators subsequently restored power to 100% the morning of June 11. Later that evening, operators reduced reactor power to approximately 50% and removed the MDFW pump from service due to an oil leak on that pump. Following the completion of corrective maintenance on the "B" TDFW pump, it was returned to service and operators restored reactor power to 100% on June 13. (See Section 1R13 for further discussion.)

On June 14 reactor power decreased to approximately 92% following the inadvertent closure of the "A" train moisture separator reheater steam supply valves during calibration and the subsequent operator closure of the "B" train valves to prevent uneven low pressure turbine heating. Following licensee investigation and confirmation that no actual equipment problem existed, operators restored reactor power to 100% on June 15 where it remained through the end of the inspection period, June 29.

1. REACTOR SAFETY
(Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity)

1R04 Equipment Alignment

a. Inspection Scope

The inspector conducted partial walkdowns of the following systems:

- Train "B" high head safety injection (SIH) in the engineered safety features (ESF) building;
- SIH accumulator fill and drain lines from the Train "A" SIH header in the ESF building to the containment penetration in the auxiliary building;
- Service Water (SWP) emergency fill line (from Train "A" header) to the spent fuel pool.

Maintenance activities had been recently performed on the Train "B" SIH equipment prior to the system walkdown. The SIH accumulator fill line is routinely used to maintain the emergency core cooling system accumulators inside containment above the borated water volume prescribed by the unit technical specifications (TS). The SWP connection to the spent fuel pool provides an emergency source of cooling water; but this non-borated, seawater flow path is positively locked out and administratively controlled to prevent an accidental dilution and salt water intrusion event. The inspector verified the proper operational alignment of these systems.

The applicable sections of the Final Safety Analysis Report (FSAR), piping and instrumentation diagrams (P&IDs) and related system descriptions for the inspected systems were reviewed. The inspector also examined the material condition of the in-line components, system tagging controls, and various instrument and relief valve settings. As applicable, the inspector checked the position indications of certain components on the main control board and discussed with the control room operators the routine evolutions (e.g., accumulator fill) that require the repositioning of equipment out of the normal system alignment. Compliance with the governing TS requirements for SIH system operability was also verified.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspector performed walkdowns of the auxiliary building including the reactor plant component cooling water and charging pump area (Fire Area AB-1), the east motor control center (MCC) and rod control area (Fire Area AB-5), and the west MCC and rod control area (Fire Area AB-6, Zone A); as well as walkdowns of the ESF building, including both residual heat removal heat exchanger cubicles (Fire Areas ESF-3 & ESF-6). The inspector also examined the halon storage area, compressed gas cylinders and delivery system piping and equipment that provides the automatic fire suppression for the computer and instrument rack rooms in the control building.

The inspector confirmed that fire detection and suppression equipment located in the areas was as specified in the Millstone 3 Fire Protection Evaluation Report. For the halon system, the inspector reviewed the fire protection P&ID to verify proper system alignment and checked the latest (June 2002) surveillance test results to confirm system operability. The inspector also reviewed the fire fighting strategies for Fire Areas AB-5 and AB-6, Zone A to confirm they appropriately directed fire brigade response. The inspector noted no equipment out of service or degraded components that would require the implementation of compensatory measures (e.g., hourly fire roves) in accordance with the Unit 3 Technical Requirements Manual (TRM).

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspector reviewed licensee actions taken in response to the following condition reports (CRs):

- CR-02-04022 Not able to perform emergency safety features building porous concrete groundwater sump (3SRW*SUMP6) in leakage surveillance following sump maintenance;
- CR-02-05053 Two inadequate core cooling (ICC) links fail (unusable) - unplanned limiting condition for operation (LCO) entry;
- CR-02-05368 "A" heater drain pump expansion joint leakage.

For each CR identified, the inspector reviewed the applicable system's maintenance rule scoping document, quarterly system health report, corrective actions taken in response to the equipment problem, and maintenance rule functional failure determination. The inspector confirmed that the licensee appropriately tracked the occurrences against the systems' performance criteria, both for functional failures and unavailability time.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspector reviewed the work planning and execution, as well as the operations response to emergent conditions, related to two condition reports, CR-02-06380 & 06421, documenting separate feedwater (FWS) pump equipment problems. The first CR identifies the June 10 discovery of increased leakage in an outboard mechanical seal of the "B" turbine driven feedwater (TDFW) pump. The latter CR documents the subsequent June 11 identification of oil leakage from the motor driven feedwater (MDFW) pump, 3FWS-P1, which was placed into service to provide the feedwater flow while the TDFW pump outboard seal package assembly was being replaced.

The inspector checked the work area for the TDFW pump, 3FWS-P2B, after it was removed from service for the seal repairs. Two automated work order (AWO) packages, M3-01-19813 and M3-02-08477, were reviewed in the field and discussed with maintenance personnel. After the repairs were completed and the 3FWS-P2B pump was determined ready for restart, the inspector examined the as-left condition of the pump and discussed the operational readiness and criteria with the control room operators on shift.

With respect to the MDFW pump oil leakage, the inspector noted the operations shift management decision to remove the 3FWS-P1 pump from service as soon as could be accomplished in a controlled manner. The inspector witnessed the control room brief and the implementation of the abnormal operating procedure (AOP) 3575 for a "Rapid Downpower" of the unit. The presence in the control room of additional licensed operators and reactor engineering personnel to assist in this evolution was noted. The inspector discussed the target power level, ultimately determined at approximately 50%,

and the rate of power reduction with the operations shift management and station management personnel. The inspector verified that the operations personnel were cognizant of the appropriate technical specification LCO entry points and confirmed that CR-02-06422 was initiated to document unplanned LCO entries, based upon the rod insertion limit alarm criteria met during the downpower.

The inspector witnessed the removal of 3FWS-P1 from service at the reactor power level prescribed by the controlling procedures. The inspector also observed the subsequent implementation of controls by the operators to maintain the measured axial flux difference (AFD) initially within the established relaxed axial offset control curves, and subsequently within the AFD target band for the power increase and restoration of the reactor to full power.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

Operability determination (OD) MP3-005-02 was written to evaluate the operability of the "B" control building chiller (3HVK*CHL1B) after it tripped on high bearing temperature. The inspector verified that the engineering justification for operability was sound, no compensatory actions were required, and all applicable technical specifications and technical requirements manual actions were met.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

.1 Safety Injection System and Control Building Chilled Water System Valve Maintenance

a. Inspection Scope

The inspector reviewed the completed documentation for post maintenance testing (PMT) performed on the "B" safety injection pump outlet valve (3SIH*V018), worked under automated work order (AWO) M3-01-08785. The inspector reviewed the scope of the work activities, discussed the AWO with the work planner and maintenance supervisor, and verified that the PMT planned and performed was appropriate to restore the operability of the valve.

The inspector also reviewed and discussed CR-02-06468 with the cognizant operations and work control personnel. This condition report documented problems with a temperature control valve in the train "B" control building chilled water (HVK) system. The valve failure had been first identified during a surveillance test that followed the Train "B" HVK chiller outage PMT. The inspector evaluated the corrective maintenance

work performed to repair the valve and confirmed the conduct of another surveillance test as the PMT required to restore the valve and system operability.

Additionally, in order to verify that correct TRM limiting condition for operability (LCO) considerations had been applied, the inspector checked that no maintenance activities had been performed on the subject temperature control valve during the initial Train "B" HVK outage, which otherwise would have lengthened the LCO period of inoperability for the system. The inspector noted that system engineering, condition based maintenance, and inservice inspection personnel were all involved with the operators on shift in determining the proper course of corrective action for this CR.

b. Findings

No findings of significance were identified.

.2 Charging System and Emergency Diesel Generator System Maintenance

a. Inspection Scope

The inspectors observed and reviewed post maintenance testing (PMT) activities to ensure: 1) the PMT was appropriate for the scope of the maintenance work completed; 2) the acceptance criteria were clear and demonstrated operability of the component; and 3) the PMT was performed in accordance with procedures. The PMT activities related to the following emergency diesel generator (EDG) and charging system operating and surveillance procedures were reviewed.

- OP 3346A-14 EDG A Operating Log
- SP 3626.13 Service Water Heat Exchanger Fouling Determination
- SP 3646A.1 Emergency Diesel Generator A Operability Test
- SP 3646A.7 AC Electrical Sources Inoperability
- SP 3604A.3 Charging Pump C Operational Readiness Test

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspector reviewed licensee performance related to the following surveillance tests:

- SP 3609.1 Quench Spray Pump 3QSS*P3A Operational Readiness Test;
- SP 3630D.2 Charging Pump Cooling 3CCE*P1B Operational Readiness Test;
- SP 3646A.2 Emergency Diesel Generator B Monthly Tests;
- SP 3646A.22 Train B EDG Air System Check Valve Test.

The inspector observed the charging pump cooling (CCE) pre-job brief in the control room and the actual testing in the plant to confirm performance of the test in accordance with approved procedures. For the quench spray (QSS) pump and EDG tests, the inspector checked the set up and performance of surveillance activities in the field. For the QSS test, the archived operator log data was reviewed. The inspector also independently verified the final restoration of the EDG and air start system components repositioned by the surveillance procedure (SP) 3646A surveillance steps. The completed data sheets for all these surveillance tests were reviewed to verify that the tested equipment met procedural acceptance criteria and was operable consistent with technical specification requirements.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspector reviewed Temporary Modification (TM) 3-02-004, which involved disabling the automatic electrical reset of the primary water makeup and boron addition batch counters that are part of the chemical and volume control (CHS) system. Implementation of this TM involved lifting a 120V AC signal lead and resulted in the need to manually reset the applicable batch counter before dilution or boration evolutions could be initiated. While the batch counters are not safety related controls, continued operation with the known faulted automatic reset capability was viewed as a precursor to potential reactivity events.

The inspector confirmed the site operations review committee (SORC) review and approval of TM 3-02-004 and proper 10 CFR 50.59 screening and engineering evaluation of this design change. The applicable CHS system P&ID was reviewed to verify that the batch counter reset signal was correctly represented as an input into the flow interlock. Control room operators from different on-shift crews were interviewed with regard to their understanding of the TM and how it affected operational evolutions. The inspector also witnessed some dilution and boration activities, checking both the existence of procedural controls and operator cognizance of the TM impact.

b. Findings

No findings of significance were identified.

Emergency Preparedness [EP]

1EP6 Drill Evaluation

a. Inspection Scope

The inspector observed a Unit 3 based emergency preparedness (EP) training drill in the simulator and emergency operations facility (EOF) and the subsequent player and

controller critique for the EOF. The licensee had preselected the drill notification results to be included in the EP drill performance indicator (PI). The inspector reviewed the licensee's Emergency Planning Services Department Instruction 18, Administration of NRC Performance Indicators, and industry guidance provided by NEI 99-02, Regulatory Assessment Performance Indicator Guideline, and discussed the performance expectations and results with the simulator and EOF controllers to confirm correct implementation of the PI program.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator Verification

.1 Emergency AC Power System Unavailability

a. Inspection Scope

The purpose of this inspection was to confirm the information presented in the licensee's March 2002 safety system unavailability performance indicator (PI) for emergency ac power (i.e. emergency diesel generator [EDG] system) was complete and accurate. The inspector reviewed selected operator logs and compared the out-of-service time for the EDG system, including supporting components, with the unavailability information reported for the period January 1, 2001, through March 31, 2002. This time frame was selected as the last confirmation of this PI was performed for data through December 31, 2000. The inspector discussed minor discrepancies with the responsible system engineer.

b. Findings

No findings of significance were identified.

.2 Auxiliary Feedwater System and Residual Heat Removal System Unavailability

a. Inspection Scope

The purpose of this inspection was to confirm that the information presented in the licensee's March 2002 Safety System Unavailability PIs for the auxiliary feedwater (AFW) and residual heat removal (RHR) systems was complete and accurate. The inspector reviewed selected system health reports, related condition reports and associated documents, and surveillance data for occurrences involving the AFW and RHR systems. The inspector also discussed the information with the responsible system engineers and reviewed the PIs against the criteria specified in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," to verify that all occurrences which met the NEI criteria were identified, tabulated, tracked and reported.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Price and other members of licensee management at the conclusion of the inspection. The inspectors asked the licensee whether any material examined during this inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

a. Key Points of Contact

J. Alan Price, Site Vice President - Millstone
D. Dodson, Supervisor, Regulatory Compliance-Licensing
P. Grossman, Nuclear Specialist-Nuclear Engineering
D. Hicks, Director-Nuclear Station Safety & Licensing
W. Hoffner, Manager-Nuclear Operations
P. Parulis, Manager-Nuclear Oversight

b. List of Items Opened, Closed and Discussed

None

c. List of Acronyms Used

AFD	axial flux difference
AFW	auxiliary feedwater
AOP	abnormal operating procedure
AWO	automated work order
CCE	charging pump cooling
CHS	chemical and volume control
CRs	condition reports
EDG	emergency diesel generator
EOF	emergency operations facility
EP	emergency preparedness
ESF	engineered safety features
FSAR	Final Safety Analysis Report
FWS	feedwater
HVK	control building chilled water
ICC	inadequate core cooling
LCO	limiting condition for operation
MCC	motor control center
MDFW	motor driven feedwater
NEI	Nuclear Energy Institute
OD	operability determination
P&IDs	piping and instrumentation diagrams
PI	performance indicator
PMT	post maintenance testing
QSS	quench spray
RHR	residual heat removal
SIH	high head safety injection
SORC	site operations review committee
SP	surveillance procedure
SWP	service water
TDFW	turbine driven feedwater
TM	temporary modification
TRM	Technical Requirements Manual
TS	technical specifications