UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

October 31, 2007

Mr. David A. Christian
Sr. Vice President and Chief Nuclear Officer
Dominion Resources
5000 Dominion Boulevard
Glenn Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION - NRC INTEGRATED INSPECTION REPORT 05000336/2007004 AND 05000423/2007004

Dear Mr. Christian:

On September 30, 2007, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Millstone Power Station Unit 2 and Unit 3. The enclosed inspection report documents the inspection results, which were discussed on October 10, 2007, with Mr. J. Alan Price and other members of your staff.

The 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. This report documents one self-revealing finding of very low safety significance (Green).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) 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 Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Raymond J. Powell, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000336/2007004 and 05000423/2007004
w/Attachment: Supplemental Information

cc w/encl:
see next page

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-336, 50-423
License No.:	DPR-65, NPF-49
Report No.:	05000336/2007004 and 05000423/2007004
Licensee:	Dominion Nuclear Connecticut, Inc.
Facility:	Millstone Power Station, Units 2 and 3
Location:	P. O. Box 128 Waterford, CT 06385
Dates:	July 1, 2007 through September 30, 2007
Inspectors:	S. Shaffer, Senior Resident Inspector, Division of Reactor Projects (DRP) J. Benjamin, Resident Inspector, DRP R. Fernandes, Resident Inspector, DRP N. Sieller, Project Engineer, DRP T. Moslak, Health Physicist, Division of Reactor Safety (DRS) S. Pindale, Senior Reactor Engineer, DRS R. Cureton, Emergency Preparedness Inspector, DRS
Approved by:	Raymond J. Powell, Chief Projects Branch 5 Division of Reactor Projects

TABLE OF CONTENTS

SUMMARY OF FINDINGS

IR 05000336/2007-004, 05000423/2007-004; 07/01/2007 - 09/30/2007; Millstone Power Station, Unit 2 and Unit 3; Post-Maintenance Testing.

The report covered a 3-month period of inspection by resident inspectors and announced inspections by regional inspectors. One Green finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

Green. A self-revealing finding was identified for Dominion's failure to implement procedure OP 3330B, "Turbine Plant Component Cooling Water" during restoration of the "B" turbine plant component cooling water (TPCCW) heat exchanger on August 28, 2007. Specifically, following maintenance that left the heat exchanger shell in a partially drained condition, Dominion did not fill and vent the heat exchanger in accordance with OP 3330B. This resulted in two of the three TPCCW pumps receiving an automatic trip signal on low suction pressure. Loss of the remaining TPCCW pump would have required the operators to manually trip the reactor within three minutes per plant procedures. Dominion entered this issue into their corrective action program as CR-07-09057. Corrective actions included revising OP 3330B to require the fill and vent section be used following maintenance to ensure the TPCCW side of the heat exchanger is completely full of water, and revising the work planning procedure to request operations work planning provide restoration packages for all applicable work orders.

This finding is more than minor because it was associated with the human performance attribute of the Initiating Events Cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, Dominion's failure to implement the fill and vent procedure, when required by heat exchanger conditions, could potentially have led to the loss of all TPCCW pumps and required operators to manually trip the reactor. This finding was determined to be of very low safety significance (Green) by performing a Phase 1 evaluation in accordance with NRC IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The finding has a cross-cutting aspect in the area of Human Performance, work practices component, because Dominion did not implement proper procedures for the restoration of the "B" TPCCW heat exchanger. [H.4(b)] (Section 1R19)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Units 2 & 3 operated at or near 100 percent through out the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Seasonal Site Inspection

a. Inspection Scope (One Sample)

The inspectors performed a review of severe weather preparations during the onset of the hurricane season to evaluate the site's readiness for seasonal susceptibilities. The inspectors reviewed selected equipment, instrumentation, and supporting structures to determine if they were configured in accordance with Dominion's procedures and that adequate controls were in place to ensure functionality of the systems. The inspectors reviewed the Unit 2 and 3 Updated Final Safety Analysis Report (UFSAR) and Technical Specifications (TS) and compared the analysis with procedure requirements to ascertain that procedures were consistent with the UFSAR. The inspectors performed partial walkdowns of the Unit 2 and Unit 3 intake structures, service water systems, intake structure traveling screens and emergency diesel generators (EDGs) to determine the adequacy of equipment protection from the effects of hurricanes. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 System Inspection

a. Inspection Scope (One Sample)

The inspectors reviewed the readiness of the Unit 2 service water system for extreme weather conditions, specifically, hurricanes, high winds, high tides, and other severe weather events. The inspectors reviewed licensee procedures and walked down the system to determine if the service water systems, including instrumentation and supporting structures, were configured in accordance with Dominion procedures and that adequate controls were in place to ensure functionality of the system. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdowns (Four Samples)

a. Inspection Scope

The inspectors performed four partial system walkdowns during this inspection period. The inspectors reviewed the documents listed in the Attachment to determine the correct system alignment. The inspectors conducted a walkdown of each system to determine if the critical portions of selected systems were correctly aligned, in accordance with these procedures, and to identify any discrepancies that may have had an effect on operability. The walkdowns included selected switch and valve position checks, and verification of electrical power to critical components. Finally, the inspectors evaluated other elements, such as material condition, housekeeping, and component labeling. The following systems were reviewed based on their risk significance for the given plant configuration:

Unit 2

- "C" High Pressure Safety Injection (HPSI) system while "B" HPSI out for planned maintenance on August 7, 2007; and
- "B" Enclosure Building Filtration System (EBFS) while the "A" train was out for planned maintenance on August 14, 2007.

Unit 3

- "B" EDG while "A" EDG out for planned maintenance on July 18, 2007; and
- "A" High Pressure Safety Injection (SIH) system while "B" SIH out for planned maintenance on August 28, 2007.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown (71111.04S)

a. Inspection Scope (Two Samples)

The inspectors completed a detailed review of the alignment and condition of the Unit 2 Safety Injection System (SIS) and Unit 3 Containment Recirculation Spray System (RSS). The inspectors conducted walkdowns of the systems to determine if critical portions, such as valve positions, switches, and breakers, were correctly aligned, in accordance with procedures, to identify any discrepancies that may have had an effect on operability.

The inspectors also conducted a review of outstanding maintenance work orders to determine if the deficiencies significantly affected the SIS and RSS system functions. In addition, the inspectors discussed system health with the system engineering staff and reviewed the condition report (CR) database to determine if equipment alignment

problems were being identified and appropriately resolved. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Sample Review (71111.05Q)

a. Inspection Scope (Twelve Samples)

The inspectors performed walkdowns of fire protection areas during the inspection period. The inspectors reviewed Dominion's fire protection program to determine the required fire protection design features, fire area boundaries, and combustible loading requirements for the selected areas. The inspectors walked down these areas to assess Dominion's control of transient combustible material and ignition sources. In addition, the inspectors evaluated the material condition and operational status of fire detection and suppression capabilities, fire barriers, and any related compensatory measures. The inspectors then compared the existing conditions of the areas to the fire protection program requirements to determine if all program requirements were being met. Documents reviewed during the inspection are listed in the Attachment. The fire protection areas reviewed included:

Unit 2

- Auxiliary Building 480 Volt MCC B51 and B41A (Fire Area A-13);
- Auxiliary Building Railroad Bay Area (Fire Area A-14B);
- Enclosure Building Filtration System EBFAS Equipment Area (Fire Area A-14D);
- Diesel Generator Room A (Fire Area A-15);
- Diesel Generator Room B (Fire Area A-16); and
- Auxiliary Building Hallway/Storage Area/Hot Tool Crib (Fire Area A-19).

Unit 3

- Auxiliary Building, West Motor Control Center and Rod Control Area, 24'-6" Elevation (Fire Area AB-6, Zone A);
- Auxiliary Building, West Motor Control Center and Rod Control Area, 43'-6" Elevation (Fire Area AB-6, Zone A);
- West Service Water Cubicle, 14'-6" Elevation (Fire Area CSW-4);
- Control Building, Cable Spreading Area, 24'-6" (Fire Area CB-8);
- Control Building, East Switchgear Area, 4'-6" (Fire Area CB-2); and
- Control Building, West Switchgear Area, 4'-6" (Fire Area CB-1).

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observation (71111.05A)

a. Inspection Scope (One Sample)

Unit 2

The inspectors observed personnel performance during a fire brigade drill on September 14, 2007, to evaluate the readiness of station personnel to fight fires. The drill simulated a fire in the Unit 2 'A' DC Switchgear Room. The inspectors observed the fire brigade members using protective clothing, turnout gear, and self-contained breathing apparatus and entering the fire area. The inspectors also observed the fire fighting equipment brought to the fire scene to evaluate whether sufficient equipment was available to effectively control and extinguish the simulated fire. The inspectors evaluated whether the permanent plant fire hose lines were capable of reaching the fire area and whether hose usage was adequately simulated. The inspectors observed the fire fighting directions and communications between fire brigade members. The inspectors also evaluated whether the pre-planned drill scenario was followed and observed the post drill critique to evaluate if the drill objectives were satisfied and that any drill weaknesses were discussed.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

.1 Internal Flooding Inspection

a. Inspection Scope (One Sample)

The inspectors reviewed the flood protection measures for Unit 3 equipment in the safety-related "A" and "B" service water pump cubicles. This review was conducted to evaluate Dominion's protection of the enclosed safety-related systems from internal flooding conditions. The inspectors performed a walkdown of the area, reviewed the UFSAR, the internal flooding evaluation and related documents. The inspectors examined the as-found equipment and conditions to ensure that they remained consistent with those indicated in the design basis documentation, flooding mitigation documents, and risk analysis assumptions. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 External Flooding Inspection

a. Inspection Scope (One Sample)

The inspectors evaluated Dominion's preparation for, and protection from, the effects of external flooding conditions for Unit 2. The inspectors reviewed the UFSAR and applicable procedures to determine the readiness of protection for applicable safety-related structures, systems, and components. The inspectors performed walkdowns of the Unit 2 turbine, auxiliary, and EDG rooms to determine the adequacy of the floodgates, flood doors, temporary equipment, and removable flood planks to perform their design function. Additionally, the inspectors reviewed recent Dominion inspection results, including floodgate inspections, to determine whether previously identified deficiencies had been entered into Dominion's corrective action program for resolution. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.7A)

Inspection Scope (One Sample)

The inspectors reviewed the Unit 2 “B” EDG service water heat exchanger. The inspectors observed the as-found condition of the heat exchanger once it was opened to determine whether any adverse fouling concerns were appropriately addressed. The inspectors reviewed the results of the inspections performed in accordance with Dominion procedures. The inspectors reviewed the inspection results against the acceptance criteria contained within the procedure to determine whether all acceptance criteria had been satisfied. The inspectors also reviewed the UFSAR to evaluate whether heat exchanger inspection results were consistent with the design basis. The inspectors determined whether adverse conditions identified by Dominion were appropriately entered into Dominion’s corrective action program. The inspectors also reviewed Work Order (WO) M2 06 07171, “B EDG Clean service water heat exchanger and inspect expansion joints,” and WO M2 0510019 “B EDG 18 Month 100 percent eddy current testing tubing examination.”

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11Q)

Resident Inspector Quarterly Review

a. Inspection Scope (Two Samples)

The inspectors observed simulator-based licensed operator requalification training provided to operators for Unit 2 on August 28, 2007, and Unit 3 on August 28, 2007. The inspectors evaluated crew performance in the areas of clarity and formality of communications; ability to take timely actions; prioritization, interpretation, and verification of alarms; procedure use; control board manipulations; oversight and direction from supervisors; and command and control. Crew performance in these areas was compared to Dominion management expectations and guidelines as presented in OP-MP-100-1000, "Millstone Operations Guidance and Reference Document." The inspectors also compared simulator configurations with actual control board configurations. The inspectors also observed Millstone evaluators discuss identified weaknesses with the crew and/or individual crew members, as appropriate.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

Routine Maintenance Effectiveness Inspection (71111.12Q)

a. Inspection Scope (Three Samples)

The inspectors reviewed three samples of Dominion's evaluation of degraded conditions, involving safety-related structures, systems and/or components for maintenance effectiveness during this inspection period. The inspectors reviewed licensee implementation of the Maintenance Rule. The inspectors reviewed work practices that may have contributed to degraded system performance, Millstone's ability to identify and address common cause failures, the applicable maintenance rule scoping document for each system, the current classification of these systems in accordance with 10 CFR 50.65 (a)(1) or (a)(2), the applicable system (a)(1) performance evaluation, and the adequacy of the performance criteria and goals established for each system, as appropriate. The inspectors also reviewed recent system health reports and/or discussed system performance with the responsible system engineer. The specific samples are listed below:

Unit 2

- CRAC (a)1 Action Plan; and
- DC Breakers Testing and Maintenance.

Unit 3

- Emergency Safeguards Facility (ESF) Building Ventilation (HVQ) System (a)1 Action Plan.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope (Nine Samples)

The inspectors evaluated online risk management for emergent and planned activities. The inspectors reviewed maintenance risk evaluations, work schedules, and control room logs to determine if concurrent planned and emergent maintenance or surveillance activities adversely affected the plant risk already incurred with out-of-service components. The inspectors evaluated whether Dominion took the necessary steps to control work activities, minimize the probability of initiating events, and maintain the functional capability of mitigating systems. The inspectors assessed Dominion's risk management actions during plant walkdowns. Documents reviewed during the inspection are listed in the Attachment. The inspectors reviewed the conduct and adequacy of scheduled and emergent maintenance risk assessments for the following maintenance and testing activities:

Unit 2

- "A" instrument air compressor unavailable due to planned maintenance on July 19, 2007;
- "B" EDG starting air tank unavailable due to planned maintenance for the double check valve replacement on July 23, 2007;
- Containment and enclosure building heating and ventilation maintenance during "A" EDG maintenance on August 8, 2007;
- Dominion's response to rising power operated relief valve (PORV) temperatures during the time period of August 15 -20, 2007;
- Dominion's response to an unexpected indication during surveillance testing of Reactor Protection System (RPS) matrix logic circuitry on September 7, 2007; and
- Dominion's response to pressurizer back-up heater failures during the time period of September 1-21, 2007.

Unit 3

- "A" EDG jacket water cooling heat exchanger unavailable due to planned maintenance on July 20, 2007;
- TDAFW system unavailable due to emergent maintenance on August 19, 2007; and
- TDAFW and "B" quench spray system (QSS) unavailable due to planned maintenance on August 23, 2007.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (Six Samples)

The inspectors reviewed six operability determinations. The inspectors evaluated the operability determinations against the guidance contained in NRC Regulatory Issue Summary 2005-20, Revision to Guidance Formerly Contained in NRC Generic Letter 91-18, "Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and on Operability." The inspectors also discussed the conditions with operators and system and design engineers, as necessary. The inspectors reviewed the adequacy of the following evaluations of degraded or non-conforming conditions:

Unit 2

- CR-07-07926, Six tubes recommended for plugging in X53B, EDG lube oil heat exchanger on July 26, 2007;
- CR-07-02246 B CRAC exhaust fan damper leaks by air causing fan to rotate backwards on August 30, 2007; and
- CR-07-09015, Potential failure scenario for the pressurizer PORV's on September 11, 2007.

Unit 3

- CR-07-08539, Pressure test not performed after Class I valve replacement;
- CR-07-08565, "C" component cooling water (CCP) heat exchanger cover suspended over "A" CCP pump; and
- CR-07-08599, Feedwater isolation trip valves closing capability degraded.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A)

a. Inspection Scope (One Sample)

The inspectors reviewed a permanent plant modification on Unit 2 B EDG output breaker 15G-13U-2 closing coil. The inspectors performed a walkdown of the area and reviewed the UFSAR, licensing and design basis documents, and the engineering disposition. These reviews were conducted to determine whether (1) the modified components remained consistent with the assumptions indicated in the design basis documents, (2) system availability, reliability, and functional capability were maintained, and (3) any unrecognized conditions that significantly affected risk or could place the plant in an unsafe condition were introduced as a result of the modifications. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were determined.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (Eight Samples)

The inspectors reviewed post-maintenance test (PMT) activities to determine whether the PMT adequately demonstrated that the safety-related function of the equipment was satisfied, given the scope of the work specified, and that operability of the system was restored. In addition, the inspectors evaluated the applicable test acceptance criteria to evaluate consistency with the associated design and licensing bases, as well as TS requirements. The inspectors also evaluated whether conditions adverse to quality were entered into the corrective action program for resolution. Documents reviewed during the inspection are listed in the Attachment. The following maintenance activities and their post-maintenance tests were evaluated:

Unit 2

- "B" EDG operability test following various preventive maintenance tasks and lube oil heat exchanger tube plugging on July 24, 2007 (WO M2-06-07171);
- Doble Testing on the 4.16KV breaker for "C" service water (SW) Pump following a design change to wiring involving the power switch on August 21, 2007 (WO's M2 04-12276, 03-08727, 04-07956); and
- Repair of "B" TPCCW heat exchanger tube leak.

Unit 3

- "B" service water strainer inspection and repairs on July 16, 2007 (WO M3-07-10233);
- "A" EDG jacket water cooling heat exchanger tube plugging on July 18, 2007 (WO M3-07-09476);
- Motor driven auxiliary feedwater pump oil leak repairs on July 23, 2007 (WO M3-07-08384);
- High pressure safety injection (SIH) to cold leg check valve (WO M3-06-00145); and
- "A" EDG testing following completion of an engine overhaul on September 11, 2007 (SP 3646A.1, "Emergency Diesel Generator A Operability Test," Revision 17).

b. Findings

Introduction: A self-revealing finding was identified for Dominion's failure to implement procedure OP 3330B, "Turbine Plant Component Cooling Water," during restoration of the "B" TPCCW heat exchanger on August 28, 2007. Specifically, Dominion did not fill and vent the heat exchanger in accordance with OP 3330B following maintenance that left the heat exchanger shell in a partially drained condition. This resulted in two of the three TPCCW pumps receiving an automatic trip signal on low suction pressure. Plant

procedures would have required the operators to manually trip the reactor within three minutes had the third TPCCW pump tripped.

Description: On August 8, 2007, Dominion identified a tube leak originating from the "B" TPCCW heat exchanger. Dominion prepared a work package to identify and repair the source of the leak. On August 27, Dominion personnel began work on repairing the TPCCW heat exchanger. A leaking tube was identified near the bottom of the heat exchanger, and the leak rate was estimated to be approximately one half gallon per minute at that time. Dominion successfully completed the repairs to the heat exchanger on August 28.

During restoration of the heat exchanger, when operators opened the "B" TPCCW heat exchanger discharge isolation valve, the "C" TPCCW pump immediately tripped on low suction pressure. The "B" TPCCW pump, which was in standby, also received an automatic trip signal on low suction pressure, preventing the pump from starting. The "A" pump, which was running, did not receive a trip signal and remained in operation. Heat loads on the TPCCW system at full power require at least two pumps to be in service. The plant operated with only one TPCCW pump running for approximately five minutes, during which time lube oil temperatures increased and a generator bus duct cooling system high temperature alarm was received. Operators were able to restart the "B" TPCCW pump within five minutes, which provided sufficient cooling to the TPCCW system.

Dominion's investigation determined that the TPCCW side of the heat exchanger had been slowly draining through the failed tube since August 8, when the heat exchanger was first isolated. Restoring the "B" TPCCW heat exchanger while in a substantially drained condition resulted in two of the three TPCCW pumps receiving automatic trip signals on low suction pressure, and could have potentially also led to a trip signal being sent to the only remaining TPCCW pump. The performance deficiency is that Dominion failed to implement procedure OP 3330B, Section 4.8, "Filling TPCCW Heat Exchanger(s)", when required by heat exchanger conditions following maintenance to repair a tube leak.

Analysis: As a result of not implementing OP 3330B, Section 4.8, "Filling TPCCW Heat Exchanger(s)," Dominion restored the "B" TPCCW heat exchanger while in a substantially drained condition, which resulted in the "B" and "C" TPCCW pumps receiving automatic trip signals on low suction pressure. This finding is more than minor because it was associated with the human performance attribute of the Initiating Events Cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, Dominion's failure to implement the fill and vent procedure, when required by heat exchanger conditions, could potentially have led to the loss of all TPCCW pumps and required operators to manually trip the reactor.

The inspectors conducted a Phase 1 screening of the finding in accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The finding was determined to be of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available.

The performance deficiency has a cross-cutting aspect in the area of Human Performance, Work Practices, in that Dominion did not implement proper procedures for the restoration of the "B" TPCCW heat exchanger. [H.4(b)]

Enforcement: Enforcement action does not apply because the performance deficiency did not involve a violation of regulatory requirements because the TPCCW system is not safety-related equipment. Dominion entered this issue into their corrective action program (CR-07-09057). Corrective actions include revising the work planning procedure to request Operations Work Planning provide restoration packages for all applicable work orders, and revising OP 3330B to require the fill and vent section be used following maintenance to ensure the TPCCW side of the heat exchanger is completely full of water. Because this finding does not include a violation of regulatory requirements and is of very low safety significance (Green), it is identified as **FIN 05000336/2007004-01, Failure to Perform Fill and Vent of TPCCW Heat Exchanger Resulted in Loss of Two TPCCW Pumps.**

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (Seven Samples)

The inspectors reviewed surveillance activities to determine whether the testing adequately demonstrated equipment operational readiness and the ability to perform the intended safety-related function. The inspectors attended pre-job briefs, reviewed selected prerequisites and precautions to determine if they were met, and observed the tests to determine whether they were performed in accordance with the procedural steps. Additionally, the inspectors reviewed the applicable test acceptance criteria to evaluate consistency with associated design bases, licensing bases, and TS requirements and that the applicable acceptance criteria were satisfied. The inspectors also evaluated whether conditions adverse to quality were entered into the corrective action program for resolution. Documents reviewed during the inspection are listed in the Attachment. The following surveillance activities were evaluated:

Unit 2

- On July 19, 2007, "A" containment spray pump and check valve IST;
- On July 27, 2007, "C" high pressure core spray check valve IST;
- On September 25, 2007, Diesel Fire Pump M7-7 monthly operability demonstration; and
- On September 28, 2007, "C" service water pump IST test.

Unit 3

- Reactor protection set cabinet II operational surveillance test (SP 3443B21);
- On August 8, 2007, Service water relief valve 3SWP*RV94A; and
- On August 24, 2007, Auxiliary Feedwater Pump 3FWA*P2 operational readiness test.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope (Two Samples)

The inspectors reviewed two temporary modifications to evaluate if the temporary modifications adversely affected the function of the associated safety systems. The inspectors reviewed the temporary modifications and their associated 10 CFR 50.59 screening against the UFSAR and TS determine whether the modifications affected system operability or availability. Documents reviewed during the inspection are listed in the Attachment.

Unit 2

- Disconnect of faulted pressurizer back-up heaters in order to restore remaining heater on the breakers to operation on September 20, 2007 (DCN DM2-00-0185-07).

Unit 3

- Temporary removal of the 'A' control building air conditioning booster pump check valve 3SWP*V010 (DM3-00-0238-07).

b. Findings

No findings of significance were identified.

Emergency Preparedness

1EP2 Alert and Notification System (ANS) Evaluation (71114.02)

a. Inspection Scope (One Sample)

An onsite review was conducted to assess the maintenance and testing of the licensee's ANS. During this inspection, the inspector interviewed site Emergency Preparedness (EP) staff responsible for implementation of the ANS testing and maintenance. CRs pertaining to the ANS were reviewed for causes, trends, and corrective actions. The inspector reviewed the licensee's original ANS design report to ensure compliance with those commitments for system maintenance and testing. The inspector also interviewed EP staff to gain an understanding of the new ANS plans for Millstone. Planning standard, 10 CFR 50.47(b)(5) and the related requirements of 10 CFR 50, Appendix E were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Staffing and Augmentation System (71114.03)

a. Inspection Scope (One Sample)

A review of Millstone's ERO augmentation staffing requirements and the process for notifying the ERO was conducted. This was performed to ensure the readiness of key staff for responding to an event and to ensure timely facility activation. The inspector reviewed procedures, CRs, and call-in drills associated with the ERO notification system and drills. The inspector interviewed personnel responsible for testing the ERO augmentation process. The inspector compared qualification requirements to the training records for a sample of ERO members. The inspector also verified that the EP department staff were receiving required training as specified in the emergency plan. Planning standard, 10 CFR 50.47(b)(2) and related requirements of 10 CFR 50, Appendix E were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04)

a. Inspection Scope (One Sample)

Since the last NRC inspection of this program area, the latest Emergency Plan Revision was implemented based on Dominion's determination, in accordance with 10 CFR 50.54(q), that the changes resulted in no decrease in effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspector conducted a sampling review of the Emergency Plan changes, and all changes to EALs, to evaluate for potential decreases in effectiveness of the Emergency Plan. However, this review was not documented in a Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05)

a. Inspection Scope (One Sample)

The inspector reviewed self-assessments and audit reports to assess the licensee's ability to evaluate their performance and programs. The inspector reviewed CRs initiated from January 2006 to September 2007 from drills, self-assessments, and audits for 2006 and 2007 required by 50.54(t). Planning standard, 10 CFR 50.47(b)(14) and the related requirements of 10 CFR 50, Appendix E were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

Combined Functional Drill

a. Inspection Scope (One Sample)

The inspectors observed the conduct of a Unit 2 licensed operator training emergency planning drill on August 29, 2007. The inspectors observed the operating crew performance at the simulator and the emergency response organization performance at the site emergency operations center. The inspectors evaluated the classification, notification and protective action recommendations for accuracy and timeliness. Additionally, the inspectors assessed the ability of Dominion's evaluators to adequately address operator performance deficiencies identified during the exercise. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

a. Inspection Scope (Nine samples)

During the period September 24-28, 2007, the inspectors conducted the following activities to evaluate the operability and accuracy of radiation monitoring instrumentation, and the adequacy of the respiratory protection program, relative to maintaining and issuing self-contained breathing apparatus (SCBA). Implementation of these programs was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and Dominion's procedures.

The inspectors reviewed the UFSAR to identify area radiation monitors that are installed in Millstone Units 2 and 3 for the protection of workers, and reviewed the calibration procedure and current calibration records for selected instrumentation, including the Unit 2 spent fuel area monitors (RM-8139/8142/8156/8157), the Unit 3 spent fuel pool area monitors (3RMS-RIY08/36) and the Unit 3 containment area monitors (RE-01/02/03). The inspector discussed with the Instrument and Control (I&C) supervisor the monitoring system health report and instrument reliability trends.

The inspector reviewed the operating procedure and current source activities/dose rate characterizations for the Shepherd Model 89 instrument calibrators (Serial Nos. 9155 & 9068). The inspector observed a technician perform safety interlock testing on the calibrator prior to using it.

The inspector reviewed the calibration records for selected survey instruments and contamination monitors including the small article contamination monitors (SAM 9 & 11), personnel contamination monitors (ARGOS-4A/B), electronic dosimeters (Seimens Mk2), and various portable survey instruments (FH40TC, RO-2A, RO-20).

The inspector reviewed the relevant procedures and observed a technician performing a calibration validation on electronic dosimeters and calibrate portable radiation survey instruments (RO-2A & RO-20).

The inspector observed a technician performing daily functional checks on a variety of contamination monitors and survey instruments located in Units 2 and 3 including SAC-4, SAM-11, ARGOS 4A/B, CM-11, RM-14, Ludlum 177, BC-4, and Teleprobes. The inspector reviewed the procedure and quality control records associated with performing the instrument daily functional checks, including air sample counting equipment and gamma spectrometers.

The inspector reviewed recent contamination sampling (10 CFR 61 data) results for Units 2 and 3 to determine if the instrument calibration sources used were representative of the radioisotopes found in the plant source term.

The inspector evaluated the adequacy of the respiratory protection program regarding the maintenance and issuance of SCBA to emergency response personnel. Training and qualification records were reviewed for licensed operators from each of the five operating shifts at each unit and for selected response personnel who would wear SCBAs in the event of an emergency.

The inspector, with the assistance of Fire Protection technicians, physically inspected three SCBAs staged for use in each control room, two SCBAs staged for use in the Unit 3 turbine building, and two SCBAs staged in the Unit 2 Technical Services Area. Maintenance and regulator test records were reviewed for selected SCBAs. The inspector also evaluated whether the air used to fill the SCBAs met the Grade D quality criteria of the Compressed Gas Association.

The inspectors evaluated the licensee's program for assuring quality in the radiation monitoring instrumentation and respiratory protection programs by reviewing self-assessments (MP-SA-06-56/69/74/79), Nuclear Oversight audits (Nos.05-06, 06-04/08, 07-06), and 21 CRs related to these program areas. The inspector determined if problems were identified in a timely manner, that an extent of condition and cause evaluation were performed, previous radiation surveys remained valid, and corrective actions were appropriate to preclude repetitive problems.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator (PI) Verification (71151)

.1 Cornerstone: Initiating Events

a. Inspection Scope (Two Samples)

The inspectors reviewed Dominion submittals for the PIs listed below to verify the accuracy of the data reported during that period. The PI definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Revision 5, were used to verify the basis for reporting each data element. The inspectors reviewed portions of the operations logs and monthly operating reports, and discussed the methods for compiling and reporting the PIs with cognizant licensing and engineering personnel. Documents reviewed during this inspection are listed in the Attachment.

Unit 2

- Unplanned Power Changes per 7000 critical hours.

Unit 3

- Unplanned Power Changes per 7000 critical hours.

b. Findings

No findings of significance were identified.

.2 Emergency Planning Cornerstone (3 samples)

a. Inspection Scope (Three Samples)

The inspector reviewed data for the EP PIs: Drill and Exercise Performance, ERO Drill Participation; and ANS Reliability. The inspector reviewed supporting documentation from drills and tests from April 2006 to June 2007 to evaluate the accuracy of the reported data. The acceptance criteria used for the review were NEI 99-02.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance

issues for followup, the inspectors performed a daily screening of items entered into Dominion's corrective action program. This was accomplished by reviewing the description of each new CR and attending daily management review committee meetings. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Annual Sample: Safety Injection Tank (SIT) Leakage (One Sample)

a. Inspection Scope

The inspectors reviewed the actions taken by Dominion to evaluate and correct several instances of valve leakage that impacted SIT accumulator water levels and/or boron concentration over the past several years of operation. The inspectors reviewed CRs related to SIT accumulator leakage, the completed evaluations, and associated corrective actions to assess the performance history and effectiveness of Dominion's actions. The inspectors conducted interviews with plant personnel. The inspectors also reviewed procedures, data and drawings.

b. Assessments and Observations

No findings of significance were identified. The inspectors concluded that Dominion had adequately evaluated and corrected the various individual valve leakage issues. However, the inspectors noted that engineers and operators were challenged by the multiple system/valve leaks over the last several years. In particular, operator actions were necessary to frequently fill the affected SIT accumulators or to depressurize an associated accumulator fill header (via a temporary modification). Engineers and operators also developed and executed troubleshooting plans to identify leaking components. Although the past problems have not resulted in rendering the SIT accumulator or related emergency cooling systems inoperable, continued leaks represent challenges to plant equipment and staff. Dominion management acknowledged the concerns related to the continuing challenges, and discussed some of their ongoing and planned efforts to broadly address and evaluate additional proactive measures to prevent further leakage problems, including an inter-discipline review of the potential leakage paths and scenarios.

4OA6 Meetings, Including Exit

On September 14, 2007, the EP inspector presented the inspection results to Mr. J. Alan Price, Site Vice President, and other members of his staff. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On September 28, 2007, the radiation protection inspector presented the inspection results to Mr. J. Alan Price, Site Vice President, and other members of his staff. The inspector confirmed that no proprietary information was provided or examined during the inspection.

On October 10, 2007, the resident inspectors presented the overall inspection results to Mr. J. Alan Price, Site Vice President, and other members of his staff. The inspectors confirmed that no proprietary information was provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

A. Price	Site Vice President
A. Jordan	Director, Nuclear Station Operations and Maintenance
R. Griffin	Director, Nuclear Station Safety & Licensing
D. Atwood	Fire Protection Instructor
M. Brooks	Senior Radiation Protection Technician
T. Cleary	Licensing Engineer
K. Collins	Fire Protection Technician
C. Dibiasi	Chemist
S. Dubicki	Fire Protection Technician
J. Firmam	Radiation Protection Technician, Instrument Calibration Facility
T. Gilbert	Emergency Preparedness
T. Gleason	Radiation Protection Technician, Instrument Calibration Facility
W. Gorman	Supervisor Instrumentation & Control
J. Hochdorfer	Supervisor, Water Treatment
N. Hunter	Senior Radiation Protection Technician
J. Kunze	Supervisor Nuclear Operations Support
J. Laine	Manager Radiation Protection/Chemistry
P. Luckey	Manager, Emergency Preparedness
S. Mazzola	Supervisor, Emergency Preparedness
E. Reiman	Fire Protection Technician
S. Turowski	Supervisor HP Technical Services

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000423/2007004-01	FIN	Failure to Perform Fill and Vent of TPCCW Heat Exchanger (Section 1R19)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
OP 3215, Rev. 007-06, "Response to Intake Structure Degraded Conditions"
OP 2271B, Rev. 000-02, "Response to Intake Structure Degraded Conditions"
AOP 3579, Rev. 016-00, "Severe Weather Conditions"
AOP 2560, Rev. 010-03, "Storms, High Winds and High Tides"
SP 3665.2, Rev 008-02, "Intake Structure Condition Determination"
SP 2615, Rev. 006-01, "Flood Level Determination"
COP 200.6, Rev 002-01, "Storms and Other Hazardous Phenomena (Prep and Recovery)"

Work Orders
M2 06 07806 Screen Wash Spool replacement Upstream of 2-TS-4

Section 1R04: Equipment Alignment

Procedures
OP 2308 HPSI System Valve Alignment, Facility 2
OP 2314 Enclosure Building Filtration System Alignment
OP 3306, Containment Recirculation Spray System
OP 3308, High Pressure Safety Injection

Condition Reports
CR-07-02301, Two broken bolts found on 3RSS*MOV23B
CR-07-02946, Broken bolts on 3RSS*MOV23C
CR-07-04382, Water discovered in "D" RSS piping
CR-06-05621, P43B Containment Spray pump exhibits Increased vibration
CR-06-06690, A Containment Spray pump vibration measurement not in normal limit

Work Orders
M2-05-05854 A Containment Spray pump seal leakage, CR-05-05149

Drawings
25203-26015 Piping & Instrument Diagram LP and HP Safety Injection System and Pumps

Other Documents
UFSAR Section 6.7 Enclosure Building Filtration System
Operability Determination MP3-005-07, Rev. 2
2007 Qtr 1 System Health Report for Containment Recirculation Spray System

Section 1R05: Fire Protection

Other Documents
Millstone Unit 2 Fire Hazards Analysis, Revision 9
Millstone Unit 3 Fire Fighting Strategy, Fire Area AB-6, March 1998
Millstone Unit 3 Fire Fighting Strategy, Fire Area CSW-4, March 1998
Millstone Unit 3 Fire Fighting Strategy, Fire Area AB-1, March 1998
Millstone Unit 3 Fire Fighting Strategy, Fire Area HR-1, March 1998
Millstone Unit 3 Fire Fighting Strategy, Fire Area MSV-1, March 1998

Section 1R06: Flood Protection Measures

Procedures
SP 2665 Building Flood Gate Inspections, Revision 005-01
AOP-2560 Storms, High Winds, and High Tides, Revision

Condition Reports
CR 07-08486 MP2 Gate 1 Gouge in Seal Gasket
CR 07-08487 MP2 Gate 2 Seal Gasket Coming Off Top Left of Door
CR 07-08488 MP2 Gate 5 Seal Gasket Coming Off Angle Iron
CR 07-08489 MP2 Gate 6 Seal Gasket has Gouge
CR-07-08571, A SWP cubicle west floor drain plugging
CR-07-08385, A Service Water pump cubicle flooding

Other Documents
Unit 2 Final Safety Analysis Report, Change 8
MP3 Service Water Pump Cubicle Internal Flooding Evaluation, Calculation 01-ENG-01884M3

Section 1R11: Licensed Operator Requalification Program

Other Documents
Cycle 07-5 Simulator Progress Review Exam #1
LORTS E55, Rev 000-02, Operational Exam 55

Section 1R12: Maintenance Effectiveness

Condition Reports
CR-04-07801, 3HVQ*ACUS1B did not auto start as expected
CR-05-00143, HVQ*ACUS1A tripped due to compressor pressure high
CR-05-07540, Low freon charge on 3HVQ*ACUS1B
CR-05-10244, During leak checks on 3HVQ*ACUS1B an additional 30 lbs of freon were added
CR-05-11408, 3HVQ*ACUS1A tripped unplanned LCO entry
CR-05-11752, Freon leaking from SWP*PV113B2
CR-05-11760, Configuration management lost on 3SWP*PV113B1 and 3SWP*PV113B2
CR-06-06088, Unplanned LCO refrigerant leak found at threaded joint on 3HVQ*ACUS2B
CR-06-08651, Performing running checks on 3HVQ*ACUS2B found refrigerant leak
CR-07-04036, Investigation of 125 VDC EC Breaker trip devices
CR-06-00443, Blown Fuse,
CR-06-07115, Positive pressure in control room
CR-07-01620, MRFF on Interface Board
CR-07-01659, As found Program did not match VTM or DM2S-0265-96
CR-06-03722, Charcoal Filter Failed Efficiency Testing
CR-07-07929, 2-HV-207 Damper Failure
CR-06-10614, 1-2" gap below fan discharge damper 206B
CR 01-00904 2 New EC-1 Devices failed
CR 03-10390 New EC-1 Device failed as found testing
CR 03-07156 Left pole failed short time testing
CR 03-10929 Breaker failed testing
CR 05-13883 High failure rates of EC-1 devices
CR 06-07999 Breaker Failed all but 1 LTA, device leaking oil

CR 06 10100 Breaker Failed Testing
CR 07-04801 All DC AKR Breakers PM'd during 3R11 Failed as Found over current testing.

Drawings
25203-30023 Single Line Diagram 125 VDC System- Turbine Battery
25203-30024 Single Line Diagram 125 VDC Emergency and 120 VAC Vital System
25212-30076 One Line Diagram 125VDC and 120 VAC Distribution System-CMPST

Other Documents
Maintenance Rule (a)(1) Evaluation for the ESF Building Ventilation (HVQ) System
SP-M3-EE-269 Revision 3, Electrical Design Criteria Unit 3 Electrical Distribution System
Calculation PA-085-082-00812GE MP2 125V DC Coordination Study Revision 3
DM2-02-0444-05 Modification for the Control Room Ambient Temperature

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
MP-13-PRA-FAP01.1, "Performing (a)(4) Risk Assessments"
DNAP-2000, "Dominion Work Management Process"
MP-14-OPS-GLD600, "Plant Status and Configuration Control"
OP 23332B, "Unit 2 Instrument Air System"
M2-05-00069, "Unit 2 'A' Instrument Air Compressor"
M2-05-04047, "Containment and Enclosure Building H&V Unit Fan Discharge Damper"
OP3322, Auxiliary Feedwater System

Condition Reports
CR-07-08729, Unplanned LCO, failure of stroke time test of 3FWA*HV32A during performance of SP 3622.8-012
CR-07-08730, Unplanned LCO, failure of stroke time test of 3FWA*HV32B during performance of SP 3622.8-012
CR-07-08731, Unplanned LCO, failure of stroke time test of 3FWA*HV32C during performance of SP 3622.8-012
CR-07-08732, Unplanned LCO, failure of stroke time test of 3FWA*HV32D during performance of SP 3622.8-012
CR-07-08793, Air pockets identified in FWA system piping

Other Documents
Plan of the Day and EOS Risk evaluation for 'A' EDG maintenance(Work Week 0729)
MNPS-3-UFSAR, Millstone Unit 3 UFSAR

Section 1R15: Operability Evaluations

Condition Reports
CR-07-08599, 3FWS*CTV41's closing capability against main feedwater pump shutoff pressure may be degraded
CR-07-08565, The "C" CCP HX end cover is suspended over the operable "A" CCP pump
CR-07-08359, 0 Section XI pressure test not performed after replacement of CL1 valve 3RCS*V106 for upstream weld
CR-07-02246 2-HY-206B, The exhaust fan discharge damper, appears to be leaking by air, causing Fan 31B to rotate backwards.

CR-07-09015, Potential failure scenario for the new MP2 presssurizer PORVs

Other Documents
Operability Determination MP3-014-07, 3FWS*CTV41's closing capability against main feedwater pump shutoff pressure may be degraded
Operability Determination MP3-013-07, ASME Section XI Pressure Test not Performed after Replacement of CL 1 Valve
Operability Determination MP2-014-07, Potential failure scenario for the new MP2 presssurizer PORVs
DM2-01-0146-06 RC-404 Tailpipe temperature indicator TI-114 High Temperature Alarm Setpoint Change

Section 1R17: Permanent Plant Modifications

Condition Reports
CR-07-09362 White light on breaker A407 "C" Service Water Pump" is Dim
CR-03-02501
CR-07-09572

Work Orders
M2-07-07133
M2-04-12270 4.16 KV & 6.9 KV Circuit breaker Closing Coil Modification

Drawings
25203-32013 Sheet 6, Service Water Pump MP5B
25203-32007 Sheet 32, Pressurizer Back-up Heaters
25203-32007 Sheet 33, Pressurizer Back-up Heaters
25203-32007 Sheet 34, Pressurizer Back-up Heaters

Other Documents
Design Change Notice DM2-00-0283-04, 4.16 KV & 6.9 KV Circuit breaker Closing Coil Modification
Design Change Notice DM2-00-0185-07, Temporary plant change required to disconnect failed pressurizer back-up heaters

Section 1R19: Post-Maintenance Testing

Procedures
SP 3626.13, "Service Water Heat Exchangers Fouling Determination"
SP 3622.1, "Auxiliary Feed Pump 3FWA*P1A Operational Readiness Test"
MP 3750AA, "Service Water Strainer Maintenance"
CMP 795, "Heat Exchanger Tube Plugging"

Condition Reports
07-05627, 07-07655, 06-11755

Work Orders
M3-07-08384, M3-06-12743, M3-03-06351, M3-05-11224, M3-07-10233, M3-07-09476

Drawings
EM-130B, “Motor Driven Auxiliary Feedwater Pump System P&ID”
2275.002-014-016, “MDAFW Oil Piping”
12179-EM-133D, “Service Water System”
12179-EM-116A, “Emergency Diesel Generator ‘A” Lube Oil & Cooling System”

Other Documents
Clearance # 3C12-FWA01-0001
Clearance # 3C12-EGS01-0007"
03-5006289, “Areva Tubesheet Sleeving Data Sheet for ‘A’ EDG Jacket Water Cooling Heat Exchanger”

Section 1R22: Surveillance Testing

Procedures
SP 3443B21-0041, “Protection Set Cabinet II Operational Test Data Sheet”
SP 2612B, “C” Service Water Pump Tests, Rev. 010-02
SP 2606A, Containment Spray Pump Operability and Inservice Testing, Facility 1, Revision 013-02
SP-2604BO-001, “C” HPSI Pump and Check Valve IST, Rev 000-00

Condition Reports
07-07602, 07-07630, 07-07627
CR-07-08350, 3SWP*RV94A failed as found lift test

Work Orders
M3-06-11784, M3-07-10123,
M3-06-12681, A RSS Heat Exchanger Relief Valve 3 year PM

Drawings
Millstone Unit 2 Inservice Test Program for Pumps and Valves, Rev. 7, Change 16

Section 1R23: Temporary Plant Modifications

Drawings
25212-26933, “Service Water System”

Other Documents
DM3-00-0238-07, “Temporary Removal of the Control Building Air Conditioning Booster Pump Check Valve 3SWP*V010"
50.59 Screening for Check Valve 3SWP*V010 TMOD
PROTO-FLOW computer model for service flow with Check Valve 3SWP*V010 TMOD1
Service Water Pump 2A Discharge Check Valve Design Bases Document

Section 1EP2: Alert and Notification System (ANS) Evaluation
“Alert and Notification Systems, Millstone Nuclear Power Station and Haddam Neck Plant,” April 1984
MP-26-EPA-FAP08, “Public Alerting System Administration,” Rev. 002-02, 8/30/06
MP-26-EPA-FAP09, “Public Alerting System Test and Maintenance,” Rev. 002-03, 8/1/07
MP-26-EPA-FAP10, “Public Alerting System Test and Repair,” Rev.000

Letter from Dominion to Connecticut DEP, "2006 Siren System Changes," February 7, 2007

Maintenance Logs 2006 & 2007

Sample of Corrective Actions related to the sirens

Section 1EP3: Emergency Response Organization (ERO) Staffing and Augmentation System

Call in Drill Records for 2006 & 2007
SERO Position List and Personnel
TPD-7.2.12 "Emergency plan Training (EPLAN) Training Program Description," Rev. 21
TQ 1 "Personnel Qualification and Training," Rev. 007-02
MP-26-EPI-FAP07 "Notifications and Communications," Rev. 005
MP-26-EPA-FAP01 "Management Program for Maintaining Emergency Preparedness," Rev.002-03

Sample of Student Qualification Matrix

Section 1EP4: Emergency Action Level (EAL) and Emergency Plan Changes

MP-26-EPA-FAP02, "Decrease in Effectiveness 10CFR 50.54(q) Determination," Rev. 001
MP-26-EPA-FAP06, "Emergency Plan Change Process," Rev. 002

Review Numbers

MP-07-28	MP-07-10
MP-07-04	MP-07-08
MP-07-01	MP-07-25
MP-06-60	MP-07-23
MP-06-53	MP-07-22
MP-06-48	MP-07-21
MP-06-47	MP-07-21
MP-06-46	MP-07-15
MP-06-41	MP-07-12
MP-06-38	MP-07-14
MP-06-30	MP-07-13
MP-06-15	MP-06-01

Section 1EP5: Correction of Emergency Preparedness Weaknesses

Sample of EP Related CRs from January 2006 – September 2007
"EP Assessment of 04/25/07 Unusual Event"
All CRs related to the 04/25/07 Unusual Event
50.54(t) Audits from 2006 and 2007
Sample of EP self-assessments from 2006 and 2007

Drill Reports: CFD 07-01, CFD 07-02, CFD 07-03, CFD 06-01, CFD 06-02, CFD 06-03, CFD 06-04, CFD 06-05, CFD 06-06, CFD 06-07, CFD 06-08

Section 1EP6: Drill Evaluation

Other Documents Millstone Unit 2 Training Drills CFD 07-04

Section 2OS3: Radiation Monitoring Instrumentation and Protective Equipment

Procedures:

RPM 1.3.7, Rev 7	Lost, Off-Scale, or Questionable Dosimetry
RPM 1.3.14, Rev 7	Personnel Dose Calculations and Assessments
RPM 1.6.4, Rev 4	Siemens Electronic Dosimetry System
RPM4.1.6, Rev 4	HD-29A, HD-66A, and AVS-28A Air Sampler Calibration
RPM 4.3.7, Rev 4	RO-20 Dose Rate Meter Calibration
RPM 4.6.6, Rev 4	Electronic Dosimeter Calibration Verification & Response Check
RPM 4.6.12, Rev 2	PCM-1B Contamination Monitor Calibration
RPM 4.6.24, Rev 6	Small Articles Monitor Calibration
RPM 4.6.26, Rev 0	Eberline Personnel Monitor PM-7 Calibration
RPM 4.7.3 Rev 6	Small Articles Monitor Operation
RPM 4.7.8, Rev 7	Whole Body Counting System Operation
CP 2801/3801Rev 0	Abacos Plus Whole Body Counting System Maintenance
RPM 4.8.1, Rev 6	Measuring the Radiation Intensity of the J. L. Shepard Calibrator
RPM 4.8.11, Rev 7	Response Checking Whole Body Contamination Monitors
RPM 4.8.14, Rev 5	Instrumentation Quality Assurance Program
RPM 4.8.9, Rev 9	Source Checking Health Physics Instruments
SFP 24, Rev 3	Inspection & Inventory of Self-Contained Breathing Apparatus
FPI18, Rev 8	Site Fire Protection Emergency Response Vehicle Equipment Inspection
IC 3490B10, Rev 6	Calibration and Functional Test for Kaman Science Area Radiation Monitor

Condition Reports:
04-08430, 04-08493, 04-09221, 04-10790, 04-01095, 05-01957, 05-02974, 05-06283, 05-06941, 05-09428, 05-13711, 06-00894, 06-02421, 06-03004, 06-07494, 06-09584, 06-10204, 06-11210, 06-12054, 06-12096, 06-12121

Department Self-Assessments
MP-SA-06-56, Portal Monitor and Personnel Contamination Monitor Calibration Checks
MP-SA-06-69, Respiratory Protection Equipment for Emergency Response
MP-SA-06-74, Review of Portable HP Instrument Calibration Procedures

Nuclear Oversight Audits
05-06, RP/PCP/ Chem Programs
06-04, Fire Protection Program
06-08, Radiological Protection and Process Control Program
07-06, Radiological Protection, Process Control Program, and Chemistry

SCBA's Inspected:
Pack Nos. 077,110, 021, 112, 084, 035, 434, 032, 039

Instrument Calibration Verification & Response Checks:

Electronic Dosimeters: Nos. 64745, 66620, 63693, 15501, 7051
ARGOS 4A/B: Nos. 121, 123, 095
SAM-11 Nos. 498, 493, 494, 495, 135

BC-4: Nos. 804, 805, 800, 1022

Gamma Spectrometers: Nos. 07, 08, 15, 16
SAC-4: Nos. 879
Ludlum 177: Nos, 208754, 208750, 208766
Ludlum 2241: Nos. 195206, 21374
Teleprobes: Nos. 454, 169
RO-2 Nos. 1206, 2870, 2885, 350

Other:
Unit 2 and Unit 3 Student Qualification/Training Status Records for SCBA training
2007 2nd Quarter Radiation Monitoring System Health Reports
ARGOS-4AB & SAM-11 Response to Unit 3 Plant Mix Evaluation
2007 Annual Validation of J. L. Shepherd Calibrators Nos. 9068, 9155

Section 4OA1 - Performance Indicator (PI) Verification

Other Documents
MP2 Cycle 17 Power History, August 2005 - August 2007
MP3 Cycle 10 Power History, August 2005 - August 2007
ERO Drill Participation PI data, April 2006 - June 2007
Public Notification System PI data, April 2006 - June 2007
DEP PI data, April 2006 - June 2007

Section 4OA2 - Identification and Resolution of Problems

Procedures
SP 3608.4, High Pressure Injection System Vent and Valve Lineup Verification, Rev. 005-01
SP 3610A.3, RHR System Vent and Valve Lineup Verification, Rev. 007-01
MP-16-CAP-FAP01.1, Condition Report Screening and Review, Rev. 008-04

Completed Tests
SP 3610A.3-001, RHR System Venting and Valve Lineup - Train A, 7/13/07, 7/27/07
SP 3610A.3-003, RHR System Venting and Valve Lineup - Train B, 7/27/07
SP 3608.4-001, High Pressure Injection System Vent and Valve Lineup Verification - Train A and Common Header, 7/13/07, 8/10/07
SP 3608.4-003, High Pressure Injection System Vent and Valve Lineup Verification - Train B, 7/27/07, 8/27/07

Drawings
12179-EM-113A, High Pressure Safety Injection, Sh. 1, Rev. 26
12179-EM-113B, High Pressure Safety Injection, Sh. 2, Rev. 32
12179-EM-112A, Low Pressure Safety Injection, Sh. 1, Rev. 44
12179-EM-112B, Low Pressure Safety Injection, Sh. 2, Rev. 21
12179-EM-102A, Reactor Coolant System, Sh. 1, Rev. 26
12179-EM-102B, Reactor Coolant System, Sh. 2, Rev. 21
12179-EM-102D, Reactor Coolant System, Sh. 4, Rev. 18
12179-EM-102E, Reactor Coolant System, Sh. 5, Rev. 21

Other Documents
System Health Report, Safety Injection Accumulators, 2nd Quarter 2007

Condition Reports
05-14026, 06-01813, 06-03781, 06-04097, 06-08164, 06-09518, 07-00792, 07-05639, 07-08553

LIST OF ACRONYMS

3R11	Unit 3 refueling outage
ADAMS	Agencywide Documents Access and Management System
ANS	Alert and Notification System
AOP	abnormal operating procedure
ASME	American Society of Mechanical Engineers
CCP	component cooling water
CFR	Code of Federal Regulations
CR	condition report
CRAC	control room air conditioning
DEP	Drill and Exercise Performance
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EAL	Emergency Action Level
EBFS	enclosure building filtration system
EDG	emergency diesel generator
EP	Emergency Preparedness
ERO	Emergency Response Organization
ESF	engineered safety features
HPSI	High Pressure Safety Injection
I&C	Instrumentation and Control
IMC	inspection manual chapter
MR	maintenance rule
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OA	Other Activities
PARS	Publicly Available Records System
PI	performance indicator
PMS	preventive maintenance tasks
PMT	post maintenance testing
PORV	power operated relief valve
QSS	quench spray system
RECO	reasonable expectation of confirmed operability
RPS	reactor protection system
RSS	recirculation spray system
SAM	small articles monitor
SCBA	self-contained breathing apparatus
SDP	significance determination process
SIH	high pressure safety injection system

SIS	safety injection system
SIT	safety injection tank
SORC	site operations review committee
SW	service water
TDAFW	turbine-driven auxiliary feedwater
TPCCW	turbine plant component cooling water
TS	technical specification
UFSAR	updated final safety analysis report
WO	work order