



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

July 24, 2009

Mr. David A. Heacock  
President and Chief Nuclear Officer  
Dominion Resources  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION - NRC INTEGRATED INSPECTION REPORT  
05000336/2009003 AND 05000423/2009003

Dear Mr. Heacock:

On June 30, 2009, the U.S. 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 July 8, 2009, with Mr. A. J. Jordan 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 NRC-identified finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. Additionally, two licensee-identified violations which were determined to be of very low safety significance are listed in this report. However, because of their very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, 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 Millstone. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspector at Millstone. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with Title 10 of the Code of Federal Regulations (CFR) Part 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 the 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/**

Ronald R. Bellamy, Ph.D., Chief  
Projects Branch 6  
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000336/2009003 and 05000423/2009003  
w/Attachment: Supplemental Information

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Enclosure

D. Heacock

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Sincerely,

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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.: 05000336/2009003 and 05000423/2009003

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Power Station, Units 2 and 3

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

Dates: April 1, 2009 through June 30, 2009

Inspectors: S. Shaffer, Senior Resident Inspector, Division of Reactor Projects (DRP)  
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Enclosure

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## SUMMARY OF FINDINGS

IR 05000336/2009-003, 05000423/2009-003; April 1, 2009 – June 30, 2009; Millstone Power Station Unit 2 and Unit 3; Access Control to Radiological Significant Areas.

The report covered a three-month period of inspection by resident and region-based inspectors. One Green finding, which was a non-cited violation (NCV), 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) The cross-cutting aspect was determined using IMC 0305, Operating Reactor Assessment Program. 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.

### Cornerstone: Occupational Radiation Safety

- Green. An NRC-identified finding of very low safety significance (Green) was identified for Dominion's failure to effectively survey, label, and control contaminated tools and equipment. Specifically, Dominion failed to perform adequate surveys to identify a hose fitting having a contact dose rate measurement of 160 mrem per hour as required by 10 CFR 20.1501. Dominion entered this issue into their corrective action program as CR322737.

This finding was more than minor because it was associated with the program and process attribute of the Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. By not surveying and labeling the hose fitting, workers could have received unplanned exposure when not informed of the radiological hazard present. The finding has a cross cutting aspect in the area of work practices, because the licensee did not assure that personnel follow procedures [H.4(b)]. Specifically, procedure RPM 2.4.2, "Radiological Control of Material and Vehicles," was not properly implemented to assure compliance with 10 CFR 20 requirements. (Section 2OS1).

### Other Findings

Two violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective actions are listed in Section 4OA7 of this report

Enclosure

## REPORT DETAILS

### Summary of Plant Status

Units 2 & 3 operated at or near 100 percent power throughout 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 (1 Sample)

The inspectors reviewed Unit 2 and Unit 3's readiness for seasonal hot weather. 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 Condensate Storage and Surge Tanks, Refueling and Primary Water Storage Tanks, and Reactor Building Closed Cooling Water System and the Unit 3 Demineralized Water Storage Tank (DWST) and Auxiliary Building Ventilation System to determine if the actions required by the procedures were complete. Documents reviewed during the inspection are listed in the Attachment.

##### b. Findings

No findings of significance were identified.

#### .2 Readiness of Offsite and Alternating Current (AC) Power Systems

##### a. Inspection Scope (1 Sample)

The inspectors reviewed Dominion's, Independent System Operator (ISO) New England's and Connecticut Valley Electric Exchange's (CONVEX) procedures for notifications of abnormal grid conditions to determine if they were adequate to ensure the reliability of AC power systems. The inspectors reviewed Dominion's procedures to determine if they addressed inadequate post-trip voltages of the offsite power supply, unknown post trip voltages, reassessment of risk when maintenance activities could affect grid reliability, and required communication between Dominion and ISO New England/CONVEX when changes at the site could impact the transmission system. The inspectors interviewed selected operations personnel to determine if they were familiar with the procedures for abnormal grid conditions. Documents reviewed during the inspection are listed in the Attachment.

## 1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdownsa. Inspection Scope (4 Samples)

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 the selected systems were correctly aligned, in accordance with the 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

- “A” Emergency Diesel Generator (EDG) while the “B” EDG was inoperable due to a failure on April 29 and 30, 2009;
- “B” Motor Driven Auxiliary Feedwater Pump (MDAFWP) and Turbine Driven Auxiliary Feedwater Pump (TDAFWP) while the “A” MDAFWP was out of service (OOS) for scheduled maintenance on June 9, 2009;

Unit 3

- “A” Charging train while the “B” train was taken OOS for surveillance testing on April 1, 2009; and
- TDAFWP while the “B” MDAFWP was taken OOS for scheduled maintenance on April 27, 2009.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown (71111.04S)a. Inspection Scope (1 Sample)

The inspectors completed a detailed review of the alignment and condition of the Unit 3 safety-related 125 VDC and 120 vital AC system. The inspectors conducted a walkdown of the system to determine whether critical portions, such as breakers and switches, were aligned in accordance with procedures and to identify any discrepancies that may have had an adverse effect on operability. The inspectors also reviewed the system health reports, Condition Reports (CR), and maintenance rule evaluations to determine whether equipment 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

.1 Quarterly Fire Protection Walkdowns (71111.05Q)

a. Inspection Scope (6 Samples)

The inspectors performed walkdowns of six fire protection areas. 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 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

- Turbine Building El. 54'6", Fire Areas T-1, T-1F, and TS-1;
- 6.9 and 4.16 KV Switchgear El. 56'6", Fire Area T10;
- Main Transformer Yard, Fire Areas XR-1, XR-2, and XR-3;

Unit 3

- East Switchgear Area, El. 4'-6", Fire Area CB-2;
- Cable Spreading Area, El. 24'-6", Fire Area CB-8; and
- South Containment Recirculation Cooler Cubicle, El. -34'-9" to 36'-6", Fire Area ESF-1.

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observation (71111.05A)

a. Inspection Scope (1 Sample)

The inspectors observed personnel performance during an unannounced fire brigade drill on May 14, 2009, to evaluate the readiness of station personnel to fight fires. The drill simulated a fire in the Unit 2 main turbine pedestal area. The inspectors observed the fire brigade members using protective clothing, turnout gear, 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.

1R07 Heat Sink Performance (71111.7A)

a. Inspection Scope (1 Sample)

The inspectors observed the as-found condition of the opened Unit 2 “A” reactor building closed cooling water (RBCCW) heat exchanger X18A to verify that any adverse fouling concerns were appropriately addressed. The inspectors reviewed the results of the inspection against the acceptance criteria contained within the procedure to determine whether all acceptance criteria had been satisfied. The inspectors also reviewed the UFSAR to ensure that heat exchanger inspection results were consistent with the design basis. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11Q)

.1 Resident Inspector Quarterly Review

a. Inspection Scope (2 Samples)

The inspectors observed simulator-based licensed operator requalification training for Unit 2 on April 28, 2009, and for Unit 3 on April 21, 2009. 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 compared simulator configurations with actual control board configurations. The inspectors also observed Dominion evaluators discuss identified weaknesses with the crew and/or individual crew members, as appropriate. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q)a. Inspection Scope (3 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 Dominion's implementation of the "Maintenance Rule," 10 CFR 50.65. The inspectors reviewed Dominion'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), and the adequacy of the performance criteria and goals established for each system, as appropriate. The inspectors also reviewed recent system health reports, CRs, apparent cause determinations, functional failure determinations, operating logs, and discussed system performance with the responsible system engineer. Documents reviewed during the inspection are listed in the Attachment. The specific systems/components reviewed were:

Unit 2

- Emergency Safeguards Actuation System;
- Service Water (SW) System; and

Unit 3

- Engineered Safety Features (ESF) Building Ventilation.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)a. Inspection Scope (6 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 OOS 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 risk assessments for the following maintenance and testing activities:

Unit 2

- April 14, 2009, Emergent repairs on 2CH-110P (letdown flow control valve) follower arm;

- April 17, 2009, Orange Risk due to a loss of the B61 Motor Control Center Switchgear Cooling Unit;
- April 30, 2009, Yellow Risk due to emergent repairs on the "B" EDG;
- May 29, 2009, Yellow Risk due to high pressure safety injection (HPSI) and the Station Blackout (SBO) diesel being unavailable;

### Unit 3

- April 30 and May 1, 2009, Emergent repairs on the SBO diesel; and
- May 28 and 29, 2009, Troubleshooting the SBO diesel.

#### b. Findings

No findings of significance were identified.

### 1R15 Operability Evaluations (71111.15)

#### a. Inspection Scope (7 Samples)

The inspectors reviewed seven operability determinations (OD). The inspectors evaluated the ODs 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. Documents reviewed during the inspection are listed in the Attachment. The inspectors reviewed the adequacy of the following evaluations of degraded or non-conforming conditions:

### Unit 2

- OD 000281, "Westinghouse Identified Error in MP2 Containment Pressure Analysis";
- CR332990, "U2 EDG room floor drain backflow preventers exhibit consistent failure";
- CR334153, "Bus 201B Ground Alarm was Received Indicating a Hard Ground on the Battery Bus";
- CR335537, "Potential Water Intrusion Identified at Vertical Crack in CTMT Outer Concrete El. -25 ft";

### Unit 3

- RAS000092, "HVR and EGS Fouling Action Curve Issues," Rev. 0;
- Condition Report Engineering Disposition (CRED) for CR 333933, "Degraded Tube Conditions in "B" Component Cooling Pump (CCP) Heat Exchanger," Rev. 0; and
- OD000292, "Charging Pump Non Conformance," Rev. 0.
- 

#### b. Findings

No findings of significance were identified.

## 1R18 Plant Modifications (71111.18)

a. Inspection Scope (1 Sample)

To assess the adequacy of the modifications, the inspectors performed walkdowns of selected plant systems and components, interviewed plant staff, and reviewed applicable documents, including procedures, calculations, modification packages, engineering evaluations, drawings, corrective action program documents, the UFSAR, and TS.

Unit 2 temporary modification, "Isolation of 2-CH-199, RCP Bleed-off Flow Relief Valve," was reviewed by the inspectors to determine whether selected attributes (component safety classification, energy requirements supplied by supporting systems, seismic qualification, instrument setpoints, and equipment environmental qualification) were consistent with the design and licensing bases. Design assumptions were reviewed to verify that they were technically appropriate and consistent with the UFSAR. The 10 CFR 50.59 screenings or safety evaluations were reviewed. The inspectors also verified that procedures, calculations, and the UFSAR were properly updated with revised design information. In addition, the inspectors verified that the as-built configuration was accurately reflected in the design documentation and that post-modification testing was adequate to ensure the structures, systems, and components would function properly. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)a. Inspection Scope (8 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 PMTs were evaluated:

Unit 2

- "B" EDG maintenance outage on March 30 through April 1, 2009;
- SBO diesel on May 29, 2009, following troubleshooting and maintenance activities;

Unit 3

- "B" EDG maintenance outage on April 7 and 8, 2009;
- TDAFWP maintenance outage on April 13, 2009;

- “B” MDAFWP maintenance outage on April 27, 2009;
- “B” Train Recirculation Spray System (RSS) maintenance outage April 28 through April 30, 2009;
- “D” SW pump strainer inspection and maintenance on May 4, 2009; and
- ESF Building Porous Concrete Groundwater Sump Pump replacement and sump inspection on June 17, 2009.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (8 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 briefings, 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

- SP 2606J-001, “Containment Spray Pump and Check Valve High Flow Inservice Test, Facility 2,” Rev. 000-02;
- SP 2613K, “Periodic Diesel Generator (DG) Slow Start Operability Test, Facility 1 (Loaded Run),” Rev. 003-04;
- SP 2402M, “Functional test of Steam Generator (SG) level and Auto-Aux. Feedwater Initiation Logic,” Rev. 009-08;
- CH-SP 2832, “Reactor Coolant Analysis for Dose Equivalent Iodine 131,” Rev 008;
- SP 2612A, “A” SW Pump Tests,” Rev. 010-07 In-Service Testing (IST);
- SP 2661A, “A” EDG Overspeed Trip Test,” Rev. 000-05;

Unit 3

- SP 3608.6-006, “Safety Injection Valve Stroke Testing – Train “B”,” Rev. 000-02; and
- SP 3646A.1-001, “EDG “A” Operability Tests,” Rev. 017.

b. Findings

No findings of significance were identified.

**Cornerstone: Emergency Preparedness (EP)**

## 1EP6 Drill Evaluation (71114.06)

.1 Classification and Notification During Requalification Traininga. Inspection Scope (1 Sample)

The inspectors reviewed the operators' emergency classification and notification completed during Unit 2 requalification training on April 28, 2009 (See Section 1R11). The inspectors verified the classification, notification, and protective action recommendations were accurate and timely and in accordance with Nuclear Energy Institute (NEI) 99-02.

b. Findings

No findings of significance were identified.

**2. RADIATION SAFETY****Cornerstone: Occupational Radiation Safety**

## 2OS1 Access to Radiological Significant Areas (71121.01)

a. Inspection Scope (1 Sample)

On April 20, 2009, the inspectors reviewed the actions taken by the licensee to identify potentially unsurveyed contaminated tools and components located in Unit 2 and Unit 3 radiologically controlled areas (RCA). The licensee initiated this effort in response to CRs 08-03588, 08-04774, and 08-07886. Implementation of contamination controls was reviewed against the criteria contained in 10 CFR 20 and relevant Dominion procedures.

b. Findings

Introduction: An NRC-identified finding of very low safety significance (Green) was identified for Dominion's failure to effectively survey, label, and control contaminated tools and equipment. Specifically, Dominion failed to identify a hose fitting, having a contact dose rate measurement of 160 mrem per hour.

Description: On August 29, 2008, during a programmatic effort to identify contaminated tools and components, the licensee found a contaminated hose fitting inside a tool locker, located on the -45' elevation of the Unit 2 Auxiliary Building, having a contact reading of 160 mrem per hour. The contaminated hose fitting had no associated record or label that identified the radiological hazard that was present. The hose fitting was stored at this location for an indeterminate time period and was available for use by workers.

Analysis: Although this issue was licensee identified, it is being treated as an NRC-identified finding, because the inspectors identified, through an integrated review of corrective action program documents, radiation survey records, and radiation protection procedures, that the licensee failed to identify safety and job performance related issues. Specifically, the inspectors determined the licensee failed to assess the potential for workers to receive an unplanned exposure from the contaminated hose fitting. In

addition, the licensee did not assess why this contaminated component was not initially surveyed following its use that resulted in it having a contact dose rate of 160 mrem per hour.

The inspectors determined that Dominion's failure to survey and label the contaminated hose fitting constituted a performance deficiency, in that Dominion procedure RPM 2.4.2, "Radiological Control of Material and Vehicles," requires surveys be performed to ensure that contaminated equipment is identified and handled properly to ensure compliance with 10 CFR Part 20 subpart F, "Surveys and Monitoring" and was reasonably within Dominion's ability to foresee and correct. Traditional enforcement is not warranted since the matter did not have an actual safety consequence, impact on the NRC's ability to perform its regulatory function, or willful aspects to the finding.

This finding was more than minor because it was associated with the program and process attribute of the Radiation Safety cornerstone and affected the cornerstone's objective of ensuring adequate protection of worker health and safety from exposure to radiation. By not surveying and labeling the hose fitting, workers could have received unplanned exposure when not informed of the radiological hazard present. Specifically, procedure RPM 2.4.2, "Radiological Control of Material and Vehicles," was not properly implemented to ensure compliance with 10 CFR Part 20 subpart F, "Surveys and Monitoring."

The finding was evaluated by application of IMC 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process." Applying this process, it was determined that the matter did not involve an overexposure or a substantial potential for overexposure, and did not compromise the licensees' ability to assess dose. Accordingly, the matter was determined to have very low safety significance (Green). The matter was determined to have a cross cutting aspect in the area of Work Practices, because the licensee did not assure that personnel followed procedures [H.4(b)].

Enforcement: 10 CFR 20.1501 states, in part, that each licensee shall make surveys that may be necessary to comply with the regulations of this part, and reasonable to evaluate the magnitude and extent of radiation levels, and the potential radiological hazards. Contrary to this requirement, Dominion did not perform a survey of a hose fitting that was later determined to have a radiation level as high as 160 mrem per hour; and consequently failed to establish appropriate radiological documentation, labeling and controls for the indeterminate time that the article was available for use without any identification of the associated radiological hazard. Because this violation was determined to be of very low safety significance and has been entered into Dominion's corrective action program (CR322737), it is being treated as a non-cited violation (NCV), consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000336/2009003-01, Failure to Survey a Contaminated Component)**

## 2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems (71122.01)

### a. Inspection Scope (3 Samples)

During the period May 11 - 14, 2009, the inspectors conducted the following activities to verify the licensee was properly maintaining the gaseous and liquid effluent processing

Enclosure



systems to ensure that radiological releases were properly mitigated, monitored, and evaluated with respect to public exposure. Implementation of these controls was reviewed against the criteria contained in the 10 CFR Parts 20 and 50, the licensee's Radiological Effluent Monitoring & Offsite Dose Calculation Manual (REMODCM), and the licensee's procedures. This inspection activity represents completion of three samples relative to this inspection area.

The inspector reviewed the 2007 and 2008 Annual Radiological Effluent Release Reports to verify that the effluents program was implemented as required by the REMODCM.

The inspectors walked down the major components of the Unit 2 and Unit 3 gaseous and liquid release systems with the cognizant system engineers and the I&C supervisor, to verify the system configurations complied with the Final Safety Analysis Report (FSAR) description, and to evaluate equipment material condition. Effluent monitors examined included:

Unit 2:

Gaseous Systems:

RM-8132 - Enclosure Building Roof Vent Monitor  
 RM-8145 - Spent Fuel Pool Building Exhaust  
 RM-8434 - Auxiliary Building Exhaust Monitor  
 RM-8169 - Millstone Stack Monitor  
 RM-8997 - Radwaste Exhaust Monitor

Liquid Systems:

RM-5099 - Steam Jet Air Ejector Monitor  
 RM-4262 - Steam Generator Blowdown Gross Activity  
 RM-9116 - Aerated Waste Discharge  
 RM-9049 - Clean Waste Monitor  
 RM 9095 - Waste Gas To Site Stack Discharge Monitor  
 RM-9327 - Condensate Receiving Tank Gross Activity  
 RM-6038 - Reactor Building Component Cooling Water Gross Activity

Unit 3:

Gaseous Systems:

HVR-10A/B - Ventilation Vent High & Normal Range Stack Monitor  
 HVQ-RE49 - Engineered Safeguards Building Exhaust Monitor  
 HVR-19A/B - Millstone Stack via SLCRS High and Normal Range Monitor

Liquid Systems:

CND-RE07 - Waste Neutralization Sump Monitor  
 LWS-RE70 - Liquid Waste Monitor  
 DAS-RE50 - Turbine Building Sump Monitor

The inspectors reviewed the relevant surveillance procedures (SP) and observed technicians collecting weekly air particulate and iodine samples, and monthly tritium samples. Airborne particulate and iodine samples were taken from the Main Station Stack using SP-2815. Samples were taken from the Unit 2 Enclosure Building roof vent using SP-2843. Samples were taken from Unit 3 ventilation systems using SP 3876.

The inspectors reviewed the most current Unit 2 and Unit 3 liquid and gaseous effluent monitor quarterly functional test results and calibration records to verify that associated pumps/isolation valves or fans/isolation dampers, respectively, were operable.

The inspectors evaluated the preparation of Unit 3 liquid discharge permit number 5884 by observing the technician taking a liquid sample from the Unit 3 "B"-Waste Test Tank, using Chemistry Procedure CP-3804A, and by reviewing the associated records.

The inspectors reviewed monthly and quarterly dose projections for liquid and gaseous effluents performed during the past 12 months to verify that the effluent was processed and released in accordance with REMODCM requirements.

The inspectors reviewed administrative changes made to the REMODCM to determine if the changes affected the licensee's ability to maintain effluent doses As Low As Reasonably Achievable (ALARA).

The inspectors reviewed monthly, quarterly, and annual dose calculations for calendar year 2008 to ensure that the licensee properly calculated the offsite dose from effluent releases and to determine if any performance indicator (criteria contained in Appendix I to 10 CFR 50) was exceeded.

The inspectors reviewed liquid discharge permits for Unit 2 (Numbers 2012-2015) and Unit 3 (Numbers 6731-6737, 6772-6814) to evaluate the adequacy of dilution flow, radioactive content, and overall accuracy of the documented data.

The inspectors reviewed the air cleaning systems surveillance test results for the High Efficiency Particulate Absolute (HEPA) and charcoal filtration systems installed in Unit 2 and Unit 3. The inspectors confirmed that the air flow rates were consistent with the FSAR values and the filtration system met the acceptance criteria.

The inspectors reviewed the daily quality control records for the Unit 2 and Unit 3 counting room instrumentation used to characterize and quantify effluent samples.

The inspectors reviewed the results of the licensee's inter-laboratory comparison program to verify the accuracy of effluent sample analysis performed by the licensee.

The inspectors reviewed and discussed with the licensee the dose calculation methods of the effluent software (DOSAIR and DOSLIQ), and performed manual calculations to ensure the software currently in use provides accurate dose calculations.

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 (8 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, monthly operating reports, and Licensee Event Reports (LER) and discussed the methods for compiling and reporting the PIs with cognizant licensing and engineering personnel. Documents reviewed during the inspection are listed in the Attachment.

###### Unit 2

- Unplanned Scrams per 7000 Critical Hours, 2<sup>nd</sup> Quarter 2008 through 1<sup>st</sup> Quarter 2009;
- Unplanned Scrams With Complications, 2<sup>nd</sup> Quarter 2008 through 1<sup>st</sup> Quarter 2009;
- Unplanned Transients per 7000 Critical Hours, 2<sup>nd</sup> Quarter 2008 through 1<sup>st</sup> Quarter 2009;
- Reactor Coolant System (RCS) Specific Activity, 1st Quarter 2008 through 1<sup>st</sup> Quarter 2009;
- RCS Identified Leakage, 1<sup>st</sup> Quarter 2008 through 1<sup>st</sup> Quarter 2009;

###### Unit 3

- Unplanned Scrams per 7000 Critical Hours, 2<sup>nd</sup> Quarter 2008 through 1<sup>st</sup> Quarter 2009;
- Unplanned Scrams With Complications, 2<sup>nd</sup> Quarter 2008 through 1<sup>st</sup> Quarter 2009; and
- Unplanned Transients per 7000 Critical Hours, 2<sup>nd</sup> Quarter 2008 through 1<sup>st</sup> Quarter 2009.

###### 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 (1 Sample)

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 follow-up, 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 during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Annual Sample - Root Cause Evaluations for Unit 3 Fuel Failures

a. Inspection Scope (1 Sample)

Inspection activities were performed using Inspection Procedure 71152, "Identification and Resolution of Problems", Section 03.02. A review was conducted of the CRs related to fuel performance at Millstone Unit 3 generated for the last two operating cycles. A review of the root cause evaluation and the fuel vendor's root cause evaluation for the fuel failures in cycles 11 and 12 were performed. Proposed interim corrective actions and the long term plan for permanent corrective actions were reviewed with members of the Dominion staff. Interviews were conducted with members of the Dominion Nuclear Analysis and Fuel Department regarding the root cause and corrective actions. Documents reviewed during the inspection are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified.

The inspectors observed a proactive approach to zero tolerance for failed fuel with strong management support. Dominion personnel were observed to be knowledgeable of the fuel failure mechanism as it relates to Millstone Unit 3 and the industry.

.3 Semi-Annual Problem Identification & Resolution (PI&R) Trend Review

a. Inspection Scope (1 Sample)

As required by Inspection Procedure 71152, the inspectors performed a review of the Dominion corrective action program and associated documents to identify trends that may indicate existence of safety significant issues. The review was focused on repetitive equipment and corrective maintenance issues, but also considered the results of daily inspector corrective action program item screening. The inspectors also reviewed a sample of 12-month old CRs in order to determine Dominion's effectiveness at completing corrective actions.

b. Assessments and Observations

No findings of significance were identified.

The inspectors noted that although Dominion's trend report identified a few negative trends, it did not identify negative trends in radiation monitors or work control. Radiation

monitors have been in maintenance rule (a)(1) status for several years and work control has had issues in planning, scheduling, spare parts, and coordination with operations and maintenance. Additionally, the trend report does not carry over identified issues from one quarter to the next, so it is not clear when the trend issues are resolved.

Samples of 132 twelve month old CRs revealed that only five (3.8%) did not have all corrective actions completed. However, 24 Level "N" CRs (18.2%) that had all their corrective actions completed did not have the action request (AR) set to complete. Also, the status of all 55 CRs (41.7%) that had their corrective actions completed was "Open." Procedure MP-16-CAP-FAP01.3, "ACR/CR Owner, Action Owner and Investigator Responsibilities" does not require the CR owner to set Level "N" CRs to complete, nor does it require the CR to be closed when all corrective actions are complete.

.4 Annual Sample: Apparent Cause Evaluation of SBO Diesel Generator and Unit 2 "B" EDG trips

a. Inspection Scope (1 Sample)

The inspectors reviewed Dominion's evaluations and corrective actions associated with the emergency trip of the Unit 2 "B" EDG after abnormal indications received during the slow start surveillance on April 29, 2009, and the unexpected opening of the SBO Diesel output breaker during the functional testing on April 30, 2009. The inspectors reviewed the licensee's apparent cause analysis to determine whether Dominion had adequately identified the apparent causes, the contributing causes, and implemented corrective actions to prevent recurrence. ACE017564 was performed as a result of the Emergency Trip of the Unit 2 "B" EDG on April 29, 2009, and ACE017571 for unexpected opening of the SBO Diesel output breaker. Documents reviewed during the inspection are listed in the Attachment.

b. Findings & Observations

No findings of significance were identified.

On April 29, 2009, the operators were performing a "slow start" of the "B" EDG. During the start, the pressure delay circuit energized light lit, extinguished, and lit again. Also, the DC Control Power Failure annunciator illuminated and the alarm cleared when it was acknowledged. The EDG was emergency tripped due to abnormal indications. Dominion identified the apparent cause to be an inadequate termination that resulted in a loose wire in the panel mounted on the EDG.

The inspectors determined that the apparent cause evaluation was detailed. The identified apparent cause and contributing causes were reasonable. Dominion-identified corrective actions to prevent recurrence were appropriate, and the extent of condition review was adequate.

On April 30, 2009, the SBO diesel output breaker tripped open unexpectedly during functional testing. SBO local alarm "Lube Oil Temp High" and "Over/Under Frequency" were lit. Dominion identified the apparent cause to be the conditional generator breaker trip which is bypassed in an emergency start and no contributors to the event were identified.

The inspectors reviewed the apparent cause evaluation and also reviewed the SBO design trip function. The inspectors determined that this conditional SBO diesel generator output breaker trip is bypassed during an emergency start condition. During an emergency start the SBO diesel generator would have performed its safety function.

#### 4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)

##### .1 (Closed) LER 05000423/2008001-00, Postulated Fire Scenario Results in Unanalyzed Condition – Pressurizer Overfill

During the stretch power uprate project for Unit 3, Dominion engineers identified a potential for pressurizer overfill during an inadvertent actuation of the safety injection system (SIS). This potential condition existed within the original plant design. Dominion developed a plant modification to the SIS injection control circuits to eliminate the potential. On August 29, 2008, engineers further determined that the same potential existed within the deterministic design criteria of the Unit 3 fire protection program and as such required immediate notification to the NRC by 10 CFR 50.72(b)(3)(ii)(B). Until the plant modification was completed during the fall 2008 refuel outage, Dominion established compensatory measures consistent with the fire protection program to minimize the likelihood of fires that could lead to this condition. Dominion completed an eight-hour report to the NRC Operations Center on August 29, 2008, and subsequently submitted the LER. Specifically, the scenario reported to the NRC identified credible control room fires that required evacuation of the control room while a spurious actuation of the SIS occurred. During such scenarios, operators evacuating the control room would have insufficient time to terminate the safety injection at the auxiliary shutdown panel, to maintain pressurizer water level within the indicating range. Additionally, the transient could cause pressurizer safety relief valves to open with the potential to fail open, because the valves are not qualified for water relief. Both conditions, water level above the indicating range and safety relief valves opening to relieve water, are not consistent with the requirements of the alternative shutdown system as described in the Unit 3 fire protection program and this issue is a performance deficiency.

The inspectors reviewed the LER, verified the appropriateness of corrective actions and extent of condition reviews, interviewed engineers and licensed operators, and completed a plant walkdown with Dominion engineers to identify the target safety injection signal cables. Documents reviewed during the inspection are listed in the Attachment.

The inspectors used Phase 3 of the NRC's IMC 0609, Appendix F, "Fire Protection Significance Determination Process (SDP)," to determine that this finding was of very low safety significance (Green). Because this finding was licensee identified, the enforcement aspects of the violation are discussed in Section 4OA7, Licensee Identified Violations. This LER is closed.

#### 4OA5 Other Activities

##### .1 Quarterly Resident Inspector Observations of Security Personnel and Activities

###### a. Inspection Scope

During the inspection period, the inspectors conducted the following observations of security force personnel and activities to ensure they were consistent with Exelon security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours. Specifically, the inspectors:

- Observed operations within the central and secondary alarm stations;
- Observed security officers on compensatory posts and in ready rooms;
- Observed security force shift turnover activities; and
- Observed security officers conducting access control activities.

###### b. Findings

No findings of significance were identified.

##### .2 Independent Spent Fuel Storage Installation (60853)

###### a. Inspection Scope (1 Sample)

The inspectors observed selected activities associated with loading of a dry cask canister to ensure that TS were met, equipment operated properly and personnel were properly trained. The inspectors reviewed documents and records associated with the operation of the Millstone Power Station Independent Spent Fuel Storage Installation (ISFSI). The inspectors interviewed the training coordinator regarding the crew training and qualifications, and examined the personnel qualification logs. The inspectors met with reactor engineering personnel to review the fuel selection process and associated documentation. The inspectors examined the fuel location history sheets for the specific fuel bundles to be loaded. Fuel sipping results for past refueling campaigns were reviewed. The video recording of the fuel bundles being placed into the canister was reviewed to ensure that each bundle was placed into the proper location. The inspectors observed work activities in the Unit 2 Fuel Storage Building and the ISFSI pad associated with the fuel selection, vacuum drying, welding, moving of the canister to the ISFSI pad, and loading the canister into a horizontal storage module. Documents reviewed during the inspection are listed in the Attachment.

###### b. Findings

No findings of significance were identified.

##### .3 TI 2515/173, Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative

###### a. Inspection Scope (1 Sample)

An NRC assessment was performed the week of May 10, 2009, of the licensee's implementation of the Nuclear Energy Institute - Voluntary Ground Water Protection Initiative (NEI 07-07, dated August 2007, ML072610036). The inspectors verified that the licensee had evaluated work practices that could lead to leaks and spills, and has performed an evaluation of systems, structures, and components that contain licensed radioactive material to determine potential leak or spill mechanisms.

The licensee has completed a site characterization of geology and hydrology to determine the ground water gradients and potential pathways for ground water migration from on-site locations to off-site locations. Monitoring wells have been installed at the appropriate locations and an on-site ground water sampling program has been implemented to monitor for potential licensed radioactive leakage into ground water. The ground water monitoring results were being reported in the annual radiological environmental operating report.

The licensee has prepared procedures for the decision making process for potential remediation of leaks and spills, including consideration of the long term decommissioning impacts. Records of leaks and spills are being recorded in the licensee's decommissioning files in accordance with 10 CFR 50.75(g). The licensee has identified the appropriate local and state officials, and has conducted briefings on the licensee's ground water protection initiative. Protocols have been established for notification to these local and state officials regarding detection of leaks and spills. Aspects of the ground water protection program that have not been fully implemented are being tracked to completion through the licensee's corrective action program (AR06005152).

b. Findings and Observations

No findings of significance were identified.

4OA6 Meetings, including Exit

Exit Meeting Summary

On July 8, 2009, the resident inspectors presented the overall inspection results to Mr. A J. Jordan, and members of his staff. The inspectors confirmed that no proprietary information was provided or examined during the inspection.

4OA7 Licensee Identified Violations

The following violations of very low safety significance (Green) or Severity Level IV were identified by the licensee and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as NCVs.

- 10 CFR 50 Appendix B, Criterion III, "Design Control" states, in part, that measures shall be established to assure that the applicable regulatory requirements and the design basis, for those structures systems, and components, are correctly translated into specifications, drawings, procedures, and instructions. Contrary to this, in April 2007, Dominion removed relief valves 3CHS\*RV8510A and B from the charging system alternate minimum recirculation flow path. This modification connected non-



seismic American Society of Mechanical Engineers (ASME) B31.1 piping to safety-related ASME Code Class 2 piping without an appropriate means of isolation. Dominion produced evaluations that demonstrated that the ASME B31.1 piping would not rupture in a seismic event and entered the issue into their corrective action process, CR 333528. This finding is of very low safety significance because the finding is a design or qualification deficiency confirmed not to result in loss of operability or functionality.

- License Condition 2.H for Unit 3 states, in part, that Dominion shall implement and maintain in effect all provisions of the approved fire protection program as described in the FSAR. The Fire Protection Evaluation Report of the FSAR requires Dominion to comply with Branch Technical Position (BTP) CMEB 9.5-1, position C.5.c for alternative or dedicated shutdown capability. The BTP CMEB 9.5-1, position C.5.c(1) requires in part that, "During the postfire shutdown, the reactor coolant system process variables is maintained within those predicted for a loss of normal AC power, and the fission product boundary integrity is not affected." Contrary to this, from initial plant operation until Unit 3 entered cold shutdown conditions on October 12, 2008, implementing the alternative shutdown method while a SIS actuation occurred during certain postulated fires requiring control room evacuation, could result in a water-solid pressurizer and water relief through the pressurizer safety relief valves. The pressurizer safety relief valves are not qualified for water relief and may fail to open. This finding was entered into Dominion's Corrective Action Program (CR 107561). Dominion promptly established compensatory actions consistent with Unit 3's fire protection program requirements on August 29, 2008, when the fire protection program nonconformance was identified. Dominion subsequently completed a plant modification to the safety injection circuits during the Fall 2008 refuel outage and eliminated the potential for a single spurious actuation of the SIS resulting in pressurizer overfill. This finding is more than minor because it is associated with the external factors attribute (fire) of the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, a control room fire requiring evacuation while a spurious SIS injection signal occurred could have caused the pressurizer to fill solid and pressurizer safety relief valves to relieve water. The inspectors used Phase 3 of the NRC's IMC 0609, Appendix F, "Fire Protection Significance Determination Process (SDP)," to determine that this finding was of very low safety significance (Green).

Additional details of this issue are discussed in Section 4OA3 of this report.

#### **ATTACHMENT: SUPPLEMENTAL INFORMATION**

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee personnel

G. Auria	Nuclear Chemistry Supervisor
B. Bartron	Supervisor, Licensing
P. Baumann	Manager, Security
C. Chapin	Supervisor, Nuclear Shift Operations Unit 2
A. Chyra	Nuclear Engineer, PRA
T. Cleary	Licensing Engineer
G. Closius	Licensing Engineer
L. Crone	Supervisor, Nuclear Chemistry
J. Dorosky	Health Physicist III
M. Finnegan	Supervisor, Health Physics, ISFSI
A. Gharakhanian	Nuclear Engineer III
R. MacManus	Director, Nuclear Station Safety & Licensing
W. Gorman	Supervisor, Instrumentation & Control
J. Grogan	Assistant Operations Manager
C. Houska	I&C Technician
A. Jordan	Site Vice President
J. Kunze	Supervisor, Nuclear Operations Support
B. Krauth	Licensing, Nuclear Technology Specialist
D. Godinez	System Engineer
J. Laine	Manager, Radiation Protection/Chemistry
B. Barron	Manager, Nuclear Oversight
P. Luckey	Manager, Emergency Preparedness
C. Maxson	Director, Engineering
J. Moos	IST Coordinator
T. Moore	System Engineer
S. Smith	Manager, Engineering
J. Semancik	Plant Manager
C. Roberston	Supervisor Nuclear Maintenance
M. Roche	Senior Nuclear Chemistry Technician
M. O'Connor	Manager, Operations
A. Smith	Asset Management
R. Riley	Supervisor, Nuclear Shift Operations Unit 3
J. Spence	Manager, Training
S. Turowski	Supervisor, Health Physics Technical Services
C. Vournazos	IT Specialist, Meteorological Data

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

#### Closed

05000423/2008001-00	LER, Postulated Fire Scenario Results in Unanalyzed Condition – Pressurizer Overfill (Section 4OA3)
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Attachment

## LIST OF DOCUMENTS REVIEWED

### **Section 1R01: Adverse Weather Protection**

CONVEX Operating Instructions

C OP 200.8, "Response to ISO New England/CONVEX Notifications and Alerts," Rev. 004-01

ISO New England Master Local Control Center Procedures

NF-AA-PRA-370, "Probabilistic Risk Assessment Procedures and Methods: PRA Guidance for MRule (a)(4)," Rev. 3

OP2268, "Hot Weather Operation," Rev. 004-05

OP 2319B, "Condensate Storage and Surge System," Rev. 015-02

OP 2326A, "Service Water System," Rev. 023-02

OP 2350, "Refueling Water Storage Tank Temperature Control," Rev. 014-04

OP 3322, "Auxiliary Feedwater System," Rev. 021-03

OP 3352, "Heat Tracing," Rev. 013-03

53M30804215

### **Section 1R04: Equipment Alignment**

C MP 755E, "Individual Battery Cell Charging," Rev.003-01

OP 2322-001, "Auxiliary Feedwater System Lineup," Rev. 000-01

OP 3304A-001, "MB3 Charging and Letdown Lineup," Rev. 005-03

OP 3304A-2, "Controller Lineup for CVCS (MB3)" Rev. 5

OP 3304A-003, "Charging and Letdown Lineup," Rev. 013

OP 3322-001, "TDAFW Pump and Components Common to Both Trains," Rev. 007

OP 3345C-2, "Electrical Breaker Lineup," Rev. 1

25212-30076, "One Line Diagram 125VDC & 120VAC Distr Sys-Cmpst," Rev. 29

Maintenance Rule Functional Failure Evaluations: CR-07-03279, CR-07-03447, CR-07-03937,

CR-07-04590, CR-07-04609, CR-07-04801, CR-07-04914, CR-07-04924, CR-07-04950,

CR-07-05725, CR-08-01812

System Health Report, 120 Volt Instrument AC System, 4<sup>th</sup> Quarter 2007 and 2008

System Health Report, 125 Volt DC System, 4<sup>th</sup> Quarter 2007 and 2008

CR-07-04609

CR-08-00521

CR113373

CR116033

CR117821

CR118693

CR119680

CR316406

MRE007020

MRE007186

MRE007191

MRE010209

MRE010295

25203-26002, Sheet 1, "Piping & Instrumentation Diagram Main Steam From Generators,"

Rev. 69

25203-26005, Sheet 3, "Piping & Instrumentation Diagram Condensate Storage and Aux Feed,"

Rev. 56

**Section 1R05: Fire Protection**

Millstone Unit 2 Fire Hazards Analysis, Revision 9  
25203-SP-M2-SU-1046 Rev 00, Millstone Unit 2 Appendix "R" Compliance Report  
Millstone Unit 3 Firefighting Strategies, April 2002  
Millstone Unit 3 Fire Protection Evaluation Report  
CR338792, "2-FIRE-13 Ring Header Stop was found closed" dated 6/19/2009

**Section 1R07: Heat Sink Performance**

AWO 531022447237  
SW Design Bases Calc 03-ENG04035M2  
CR331538, "Blue Mussels found in the "A" RBCCW Heat Exchanger X18A"

**Section 1R11: Licensed Operator Regualification Program**

LORTSE39, Rev. 1  
Evaluated Simulator Exam ES09301A

**Section 1R12: Maintenance Effectiveness**

ER-AA-MRL-10, "Maintenance Rule Program," Rev 2  
ER-AA-MRL-100, "Implementing Maintenance Rule," Rev 1  
ESAS Unavailability April 2007 to March 2009  
ESF HVAC Unavailability, May 2007 to April 2009  
Maintenance Rule (a)(1) Evaluation for the ESF Building Ventilation (HVQ) System (3314D)  
Maintenance Rule (a)(2) Disposition for the ESF Building Ventilation (HVQ) System (3314D)  
Maintenance Rule Scoping Tables  
System Health Report, Emergency Safeguards Actuation, 4<sup>th</sup> Quarter 2007 and 2008  
System Health Report, ESF Ventilation, 1<sup>st</sup> Quarter 2008 and 2009  
System Health Report, Service Water, 1st Quarter 2009, 2<sup>nd</sup> and 4<sup>th</sup> Quarters 2008  
25212-26952 Sheet 3, "Piping & Instrumentation Diagram ESF and MSV Buildings Ventilation,"  
Rev. 18  
Maintenance Rule Functional Failure Evaluations for CR-07-09426, CR-07-11048, CR-08-07312, CR-08-03892, CR-08-03893, CR-08-05329, CR-08-06194, CR-08-08301, CR118697  
MRE007076, "Unplanned Tech Spec Entries during Unscheduled Condenser Backwash" dated 9/30/2008  
MRE007120, "Socket weld leakage on "B" EDG SW pipes" dated 10/11/2008  
MRE007278, "Thru-wall leak on "A" diesel generator service water piping" dated 11/24/2008  
MRE007351, "Through wall service water leak on inlet to "B" Diesel Air Cooler" dated 11/6/2008  
MRE010253, "Degraded Flange on "A" Diesel Service Water Spool Piece" dated 1/21/2009  
MRE010682, "Unexpected response when swapping from "B" to "A" SW pump" dated 5/16/2009  
MRE for CR-07-8349, "A" EDG Cooling Heat Exchanger SW Inlet Strainer Weld Joints Pitted and Leaking" dated 8/8/2007  
MRE for CR-07-12122, "B" SW Header INOP following failure of 2-SW-8.1C, "C" RBCCW HX TCV" dated 12/9/2007  
MRE for CR-08-02281, "Unit 2 "B" Service Water Pump failed its IST Surveillance" dated 3/9/2008  
MRE for CR-08-05435, ""B" Service Water Pump Strainer Differential Pressure Switch has a Pencil Size Stream of Water Leak" dated 5/08/2008  
CR-07-05461

CR-07-08245  
CR-07-10784  
CR-07-11749  
CR-07-11816  
CR-08-03703  
CR-08-03865  
CR-08-03892  
CR-08-03893  
CR-08-05500

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

OP2315M, "B51/B61 Switchgear Enclosure Cooling Systems" Rev. 000-03  
WO 53102243812, "Reconnect Positioner Feedback Arm 2CH-110P  
WO 53102245008, "Perform Adjustment of Card for min of 29+/-2 GPM to Restore 2CH-110P  
WO 53102255586, "Received Lube Oil High Temperature and Engine Shutdown Alarms on SBO Diesel"

**Section 1R15: Operability Evaluations**

OD 000281 "Westinghouse Identified Error in MP2 LOCA Containment Pressure Analysis Calculation T-0443S2 "MP2 Issues with the Current LOCA Mass and Energy Releases and the M3-EV-03-0020, "Seismic Structural Integrity of B31.1 Piping Millstone Unit 3," Rev. 0  
Resulting Short-Term Containment Pressure Impacts" dated 4/13/09  
NUCENG-09-19, "MPS3 – Service Water System, HVR and EGS DP-Flow Action Curve Issues, RAS Support Information"  
Topical report DOM-NAF-3, "Gothic Methodology for Analyzing the Response to Postulated Pipe Ruptures Inside Containment"  
Safety Evaluation by NRR Relating to Topical report DOM-NAF-3  
96-001, "Empirical Adjustment of the MP3 SW Model to 1995 Flow Test Data and Incorporation of the Latest SW System Design Change Notices," Rev. 1  
CR32996  
CR330751  
CR332617  
CR332990  
CR333528  
CR333933  
CR334075  
CR334153  
CR336082  
CR336497  
CR337740  
25203-ER-08-0005, "MP2 EDG Floor Drain Backwater Valves" dated 1/31/2008  
FSAR Chapter 8.3 "Emergency Generators"  
CR334153, "Bus 201B Ground Alarm was Received Indicating a Hard Ground on the Battery Bus" dated 5/11/2009  
LVD-00-C, "125 VDC / 120 VAC Systems" Rev 5 CH1  
SP2669A-002, "Auxiliary Building Rounds Unit 2" Rev 045  
ARP 2590F-086, "125 VDC Bus 201B Ground" Rev 000-01  
OP-2388A, "Unit 2 Ground Isolation and Electrical Distribution" Rev 005-00

C04102-1, "125 VDC / 120 VAC Ground Detectors"

NRC Information Notice No. 88-86, Operating with Multiple Grounds in Direct Current Distribution Systems"

25212-26904 Sheet 1, "Piping & Instrumentation Diagram Chemical & Volume Control," Rev. 49

25212-26904 Sheet 1, "Piping & Instrumentation Diagram Chemical & Volume Control," Rev. 46

25212-26904 Sheet 4, "Piping & Instrumentation Diagram Chemical & Volume Control," Rev. 28

25212-26904 Sheet 4, "Piping & Instrumentation Diagram Chemical & Volume Control," Rev. 25

25212-26911, "Piping & Instrumentation Diagram Fuel Pool Cooling & Purification System," Rev. 32

25212-26915 "Piping & Instrumentation Diagram Quench Spray & H<sub>2</sub> Recombiner," Rev. 36

### **Section 1R18: Plant Modifications**

OP-AA-101 Attachment 2 ODM, "2-Ch-199 RCP Bleed-off flow relief valve isolated" dated 7/22/08 (closed)

OP-AA-1500 Attachment 1, "Alternate Plant Configuration to operate with valve 2-CH-507 closed instead of open" dated 7/30/2008

DWG NO. 7604-MS-1 sheet 1 of 1, "Piping Class Summary CCB"

DNAP-3004 Attachment 4, "50.59/72.48 Screen"

ARP-2590B-038, "RCP Control Bleed-off Pressure HI HI"

Proceedings of ICAAP 2005 Paper 5119, "Advanced Mechanical Seals for Primary Coolant Pumps in PWR Service" by David Zagres, Flowserve Corporation dated May 15, 2005

CR-08-06136, "RCP Bleed-off Relief Valve is Leaking By"

CR325920, "RCP Vapor Seal Upper Pressure Alarms Coincident with Diverting VCT"

CR330616, "2-CH-198 RCP bleed-off control valve is full open"

### **Section 1R19: Post Maintenance Testing**

OP 3346A-013, "EDG – Data Sheet," Rev. 007-01

SP 3606.9-001, "RSS Valve Stroke Time Test – Train "B", Rev. 012-02, performed 4/28/09

SP 3622.3, "TDAFW Pump Operational Readiness Test," Rev. 014-02

SP 3626.3-006, "3SWP\*MOV54B and MOV54D, RSS Coolers "B" and "D" SW Supply, Stroke Test," Rev. 007-03, performed 4/29/09

SP 3626.3-025, "3SWP\*MOV57B and MOV57D, RSS Cooler Outlets, Stroke Time," Rev. 000-01, performed 4/28/09

SP 3626.3-026, "3SWP\*MOV57B and MOV57D Biennial Valve Position Indication," Rev. 000-00, performed 4/28/09

SP 3626.14-002, "RSS Train "B" Heat Exchangers SW Supply Piping Flush," Rev. 001, performed 4/29/09

SP 3646A.2-001, "EDG "B" Operability Tests," Rev. 019, performed 4/7/09

SP 3646A.2-001, "EDG "B" Operability Tests," Rev. 019, performed 4/8/09

Service Water Cooled Heat Exchanger Inspection Form, 3RSS\*E1B, performed 4/30/09

Service Water Cooled Heat Exchanger Inspection Form, 3RSS\*E1D, performed 4/30/09

Heat Exchanger Visual Inspection/Leak Test Record, 3RSS\*E1B, performed 4/30/09

Heat Exchanger Visual Inspection/Leak Test Record, 3RSS\*E1D, performed 4/30/09

53M30500172

53M30705474

53M30708073

53M30806557

53M30807968

53102177165  
53102184785  
53102213020  
53102218057  
53102218029  
53102244721  
CR330203

**Section 1R22: Surveillance Testing**

OP 3346A-014, "EDG A – Operating Log," Rev. 011-02  
SP 2606J-001, "Containment Spray Pump and Check Valve High flow Inservice Test, Facility 2," Rev. 000-02  
SP2402M, "Functional test of SG level and Auto-Aux. Feedwater Initiation Logic," Rev. 009-08  
CH 2802N, "Primary Systems Sampling and Analysis," Rev. 000-00  
CH-SP 2832, "Reactor Coolant Analysis for Dose Equivalent Iodine 131," Rev. 008  
SP 3630E.2-001, "Safety Injection Pump "B" Cooling Pump Operational Readiness Test," Rev. 005-01  
CR335122  
CR336017

**Section 2OS1: Access to Radiologically Significant Areas**

Procedures

RP-AA-203, Radiological Labeling and Posting  
RPM 2.4.2, Radiological Control of Materials and Vehicles

Condition Reports (Access Controls)

129524, 129522, 324453, 322737, 08-07886, 08-03588

**Section 2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems**

Procedures:

SP 2814A	Gaseous Effluents for Iodines and Particulates from Unit 2 Vent
SP 2843	Enclosure Building Roof Vent Monthly Sampling and Analysis for Principle Gamma Emitters and Tritium
SP 2843A	Main Station Stack Gas Sampling and Counting
SP 2843B	Main Station Stack Tritium Sampling and Analysis
SP 2815	Main Station Stack WRGM Sampling for Iodine and Particulates
SP 2404AA	Aerated Liquid Radwaste Monitor RM-9116 Functional Test
SP 2404AC	Clean Liquid Radwaste Monitor RM-9049 Functional Test
SP 2404AG	Waste Gas Monitor RM-9095 Functional Test
SP 2404AE	Stack Gas Monitor RM-8132 Functional Test
SP 3876	SLCRS, Normal Vent, ESF Building Gaseous Effluent Iodine and Particulates
CP 3804AC	Liquid Waste Sample Sink
CP 3809A	Liquid Waste Discharges
SP 2815	Weekly Main Station Stack, Wide Range Gas Monitor (WRGM) Sampling for Iodine & Particulates
SP 2814A	Gaseous Effluents Sampling for Iodines & Particulates from Unit 2 Vent- Weekly
SP 3614A	Unit 3 Auxiliary Building Ventilation System Surveillance Tests
SP 3614I	Unit 3 Supplemental Leak Collection & Release System Surveillance Tests

SP 2654Q Unit 2 Containment & Enclosure Building Exhaust Filter L-25 HEPA Filtration Testing  
 SP 2609D Unit 2 Enclosure Building Charcoal/HEPA Filtration Testing  
 SP 3449B SLCRS Gaseous Radiation Monitor & Ventilation Vent Stack Calibration  
 SP 3880 Unit 3 SLCRS Vent Radiation Monitor Inoperable  
 CY-AA-LQC-400-1000, Confirmatory Measurements Using Blind Samples  
 VPROC-OPS03-001, In-Place Testing of HEPA Filters & Charcoal Absorbers  
 M33SUR-3450H01/11, Liquid Waste Monitor 3LWS-RE70 Calibration/Operational Test  
 M33SUR-3450G01/11, Turbine Bldg Floor Drains 3DAS-RIY50 Calibration/Operational Check  
 M33SUR-3450F01/11, Waste Neutralization Sump Monitor Calibration/Operational Check  
 M33SUR-3449A01/11, Ventilation Stack Monitor 3HVQ-RE49 Calibration/Operational Check  
 M33SUR-3450L41, Rad Gas/Liquid Effluent Monitor (HVR-10, HVR-19, HVQ-49) Source Checks  
 M33SUR-3450H31, Liquid Waste Effluent Flow Rate  
 MP-22-REC-PRG, Radiological Effluent Control and Groundwater Protection Program  
 RP-AA-502, Groundwater Protection Program  
 RP-AA-504, Remediation Process for Groundwater Protection Program

Condition Reports:

328810, 322790, 328107, 328271, 132640, 330809, 127331, 129792, 125243, 131704, 334394, 321622, 121309, 120091, 131111, 320805, 323352, 332154, 08-02473, 324218, 319166, 320129, 120761, 125344

Miscellaneous Reports:

Audit 07-10, Offsite Dose Calculation Manual (ODCM) /Radiological Environmental Monitoring  
 Unit 2, Radiation Monitoring System Health Report  
 Unit 3, Radiation Monitoring System Health Report  
 Unit 2, "A" & "B" EBFS Filter Efficiency Testing Data  
 2007 & 2008 Annual Effluent Release Reports  
 NCS Corporation In-Place Testing of Air Cleaning Systems for Millstone 3  
 Millstone Groundwater Protection Initiative Action Plan

**Section 40A1: Performance Indicator (PI) Verification**

"RCS Leakage 2008 and 2009 Validated.XLS", Excel Spreadsheets  
 SP 2619A-001, "Control Room Daily Surveillance, Modes 1 & 2" for the months of August 2008 and May 2009  
 SP 2832, "Reactor Coolant Analysis for DEI-131" Rev 007-00 for August 2008 and May 2009

**Section 40A2: Identification and Resolution of Problems**

Millstone 2 CRs

CR-08-00303  
 CR-334883  
 CR-337722  
 ACE017564  
 ACE017571  
 CR332818  
 CR332931  
 CR334883



Millstone 3 CRs

CR-07-02017  
CR-07-04201  
CR-07-06377  
CR-07-12441  
CR-116783  
CR-118486  
CR-320317

Dominion Procedures

NF-AA-PA-3004, "Fuel Integrity Monitoring", Rev. 4  
NF-AA-FPA-3002, "Monthly Fuel Reliability Indicator"  
MA-AA-102, "Foreign Material Exclusion"  
NF-AA-FPA-2001, "Fuel Performance Engineer Tasks", Rev.1  
NF-AA-FPA-502, "Irradiated Fuel Assembly and Insert Component  
PI-AA-200, "Corrective Action", Rev. 5

Drawings

25203-28500, Millstone Unit 2 PS7020 Fuel Oil Press Low H7B Diesel System Loop Diagram, Rev. 2  
25203-32041, Diesel Generator 15G-13U (H7B) Engine Control Sheet 15, Rev. 12  
25203-32041, Diesel Generator 15G-13U (H7B) Engine Control Sheet 16, Rev. 10  
25203-32041, Diesel Generator 15G-13U (H7B) Engine Control Sheet 17, Rev. 6  
25203-32041, Diesel Generator 15G-13U (H7B) Engine Control Sheet 18, Rev. 8  
25203-32041, Diesel Generator 15G-13U (H7B) Engine Control Sheet 16, Rev. 10  
25203-39038, EDG Wiring diagram Cont. Term. Box T041, Sheet 24B, Rev. 8  
25203-39038, EDG Wiring diagram Cont. Term. Box T041, Sheet 25B, Rev. 8  
25203-39038, EDG Wiring diagram Cont. Term. Box T041, Sheet 26B, Rev. 8

Completed Surveillance

OP 3346D, "SBO Diesel Operating Log," Rev. 007, performed March 05, 2009  
OP 3346D, "SBO Diesel Operating Log," Rev. 007, performed May 01, 2009

OE Reports

OE25288, Radiochemistry Trending Indicates a Probable Fuel Rod Failure- Millstone Unit 3, 08/10/2007  
OE25323, Radiochemistry Trending Indicates a Probable Fuel Rod Failure in the Cycle 11 Core- Millstone Unit 3, 08/16/07  
Dominion Apparent Cause Evaluation ACE017564, "Emergency Trip of "B" EDG After Abnormal Indications Were Received"  
Dominion Root Cause Evaluation M-07-02017, Rev. 1, "MP# RCS Radiochemistry Indicates Probable Fuel Failure in Cycle 11"  
CAPS RCA-09-035-C007, Rev. 0, "Leaking Fuel Identified at Millstone Unit 3 Cycle 12", Root Cause Analysis Report  
CORRES-OUT-WEST 20090012, Potential Fuel Design Modifications for Millstone Unit 3 Cycle 14 (Region 16)  
Westinghouse response to CORRES-OUT-WEST, via email from Julia Leonelli, Westinghouse to Rick Sterner, Dominion, March 2009

Work Orders  
53102249645

**Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion**

Condition Reports

08-01281  
08-08323  
107561

Design Change Notice  
DM3-00-0191-07

Other

Millstone Power Station, Unit 3, Final Safety Analysis Report, Rev. 20.4

**Section 4OA5: Other Activities**

Study or Technical Information Document

STID #06-008, "Neutron Characterization and Measurement Evaluation at the Millstone Unit 2 Containment"

Health Physics Operation Procedure

RP-07-05, ISFSI Neutron Correction Factors prepared by Ira L. Hass, dated 08/08/08  
RP-07-10, ISFSI REM 500 Neutron Correction without water in the Dry Storage Cask (Revision to RP-07-10) prepared by Ira L. Hass, dated 11/26/07  
RPM 2.5.9, Rev. 001-2, Dry Shielded Canister (DSC) Surveys (ISFSI)  
RPM 1.3.10, Rev 005, Determining Estimated Neutron Dose

Surveillance Procedure

C SP 604.3, Transfer Cask Lift Yoke Inspection (ISFSI)  
C SP 604.4, Transfer Equipment Pre-Op Testing (ISFSI)  
C OP 302.5, Vacuum Drying Systems Operations (ISFSI)

Common Operating Procedure

C OP 302.1, Dry Shielded Canister Insertion Into Horizontal Storage Module (ISFSI)  
C OP 302.2, Dry Shielded Canister Retrieval From Horizontal Storage Module (ISFSI)  
C OP 302.3, Transfer Trailer Prime Mover Pre-Op Inspection (ISFSI)  
C OP 302.4, Transfer Trailer Operations (ISFSI)

Maintenance Procedure

MP 2712B1, Control of Heavy Loads

Nuclear Fleet Administrative Procedure

NF-AA-NSF-401, ISFSI Fuel Selection and Certification

General Operating Procedure

OP 2209H, Dry Shielded Canister Loading (ISFSI)  
OP 2209J, Dry Shielded Canister Unloading (ISFSI)  
OP 2209K, Transfer Cask/Dry Shielded Canister Decontamination (ISFSI)

Vendor Procedure

VPROC ENG04-2-010, Closure Welding of Dry Shielded Canister (ISFSI)  
VPROC ENG04-2-011, Milling of DSC Inner and Outer Covers (ISFSI)  
VPROC ENG04-2-012, High Temperature Liquid Penetrant Examination and Acceptance Standards for Welds, Base materials and Cladding (ISFSI)  
VPROC ENG04-2-013, Visual Examination of Welds (ISFSI)  
VPROC ENG04-2-014, Helium Mass Spectrometer Leak Test Procedure (ISFSI)  
VPROC ENG04-2-015, Welding Procedure Specification 8 MN-GTAW (ISFSI)  
VPROC ENG04-2-016, Welding Procedure Specification \* MC-GTAW (ISFSI)  
VPROC ENG04-2-017, General Welding Standard 1 GWS-1 ASME Application (ISFSI)  
VPROC ENG04-2-018, Welding Control Procedure 3 WCP-3 Weld Material Control (ISFSI)  
VPROC ENG04-2-019, Welding Control Procedure 8 WCP Preheating and Post Weld Heat Treatment (ISFSI)  
VPROC ENG04-2-020, General Quality Procedure GQP-12-0 Control of Measuring and Test Equipment (ISFSI)  
VPROC ENG06-2-011, Weld Base Metal Repair, WCP-5 (ISFSI)  
VPROC ENG09-2-001, Solvent Removable Liquid Penetrant Examination and Acceptance Standards for Welds, Base Materials and Cladding (GQP-9.7) (ISFSI)  
VPROC ENG09-2-003, Power Supply and Weld Head Gold Track V and PCI Canister Closure Weld Head – System Compliance (PI-CNSTR-EM-SC-112) (ISFSI)

72.48 Screen Forms

ISFSI-04195F2  
ISFSI-04255F2  
ISFSI-04262F2  
SE-NAF-2008-0013, Rev. 0  
SE-NAF-2008-0014, Rev. 0  
SE-NAF-2008-0015, Rev. 0  
SE-NAF-2008-0016, Rev. 0  
SE-NAF-2008-0017, Rev. 0  
SE-NAF-2008-0018, Rev. 0  
SE-NAF-2008-0019, Rev. 0  
SE-NAF-2008-0023, Rev. 0  
SE-NAF-2008-0025, Rev. 0  
SE-NAF-2008-0026, Rev. 0  
SE-NAF-2008-0030, Rev. 0  
SE-NAF-2008-0032, Rev. 0  
SE-NAF-2008-0033, Rev. 0  
SE-NAF-2009002-0-0  
SE-NAF-2009004-0-0  
SE-NAF-2009006-0-0  
SE-NAF-2009007-0-0  
SE-NAF-2009008-0-0  
SE-NAF-2009009-0-0  
SNCR 08-M-003, Rev. 0  
Condition Report CC0313, VDS instrumentation “as found” out of calibration

Other Documents

Condition Report CR0313, VDS instrumentation “as found” out of calibration  
 Condition Report CR330576, minor scratches to the transfer cask  
 Condition Report CR329935, ISFSI inner lid fit-up issue for DSC-001  
 Dominion Nuclear Connecticut Millstone ISFSI 2009 Requal Training  
 MD-006 Millstone ISFSI Training Matrix Student Qualification Matrix  
 NODFOB-07-074, ISFSI Human Performance audit  
 NODFOB-07-77, ISFSI Campaign 3 Nightshift Activities audit  
 NODFOB-08-040, ISFSI HSM 011-019 Installation audit  
 Work Order 53M20703899, PM, 1 year – SPF Crane Inspection  
 Transnuclear Non Compliance Report 2006-026, DSC S/N MPS32Pt-S100-A-001 localized wall thickness reduction  
 Millstone Independent Spent Fuel Storage Installation Standardized NUHOLMS 10 CFR 72.212 Evaluation, March 2009  
 Fuel verification video for DSC S/N MPS32Pt-S100-A-001

**LIST OF ACRONYMS**

AC	Alternating Current
ADAMS	Agencywide Documents Access and Management System
ALARA	As Low As Reasonably Achievable
AR	Action Request
ASME	American Society of Mechanical Engineers
BTP	Branch Technical Position
CCP	Component Cooling Pump
CDF	Core Damage Frequency
CFR	Code of Federal Regulations
CONVEX	Connecticut Valley Electric Exchange
CR	Condition Report
CRED	Condition Report Engineering Disposition
DG	Diesel Generator
DNB	Departure from Nucleate Boiling
DNC	Dominion Nuclear Connecticut
DNMS	Division of Nuclear Materials Safety
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
DSC	Dry Shielded Canister
DWST	Demineralized Water Storage Tank
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
ESF	Engineered Safety Feature
FSAR	Final Safety Analysis Report
HEPA	High Efficiency Particulate Absolute
HPSI	High Pressure Safety Injection
I&C	Instrumentation and Control
IMC	Inspection Manual Chapter

IP	Inspection Procedure
ISFSI	Independent Spent Fuel Storage Installation
ISO	Independent Systems Operator
IST	In-Service Testing
LER	Licensee Event Reports
MDAFWP	Motor Driven Auxiliary Feedwater Pump
MPS3	Millstone Power Station, Unit 3
mrem	millirem
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OA	Other Activities
OD	Operability Determinations
ODCM	Off-Site Dose Calculation Manual
OOS	Out Of Service
PARS	Publicly Available Records System
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PMT	Post Maintenance Testing
RBCCW	Reactor Building Closed Cooling Water
RCA	Radiologically Controlled Area
RCS	Reactor Coolant System
REMODOCM	Radiological Effluent Monitoring and Offsite Dose Calculation Manual
RSS	Recirculation Spray System
SBO	Station Blackout
SDP	Significance Determination Process
SG	Steam Generator
SIS	Safety Injection System
SP	Surveillance Procedure
SW	Service Water
TDAFWP	Turbine Driven Auxiliary Feedwater Pump
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WRGM	Wide Range Gas Monitor