May 5, 2006

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 05000336/2006002 AND 05000423/2006002

Dear Mr. Christian:

On March 31, 2006, 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 April 20, 2006, 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 NRC-identified finding and one self-revealing finding of very low safety significance (Green). Both of these findings were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they have been entered into your corrective action program, the NRC is treating these issues as Non-Cited Violations (NCVs), in accordance with Section VI.A.1 of the NRC's Enforcement Policy. Additionally, one licensee-identified violation which was determined to be of very low safety significance is listed in this report. 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 the Millstone Power Station.

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/

Paul G. Krohn, Chief
Reactor Projects Branch 6
Division of Reactor Projects

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

Enclosure: Inspection Report 05000336/2006002 and 05000423/2006002
w/Attachment: Supplemental Information

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REGION I

Docket No.:	50-336, 50-423
License No.:	DPR-65, NPF-49
Report No.:	05000336/2006002 and 05000423/2006002
Licensee:	Dominion Nuclear Connecticut, Inc.
Facility:	Millstone Power Station, Unit 2 and Unit 3
Location:	P. O. Box 128 Waterford, CT 06385
Dates:	January 1, 2006 through March 31, 2006
Inspectors:	S. R. Kennedy, Acting Senior Resident Inspector, Division of Reactor Projects (DRP) S. M. Schneider, Senior Resident Inspector, DRP D. L. Werkheiser, Acting Senior Resident Inspector, DRP J. C. Benjamin, Resident Inspector, DRP G. S. Barber, Senior Project Engineer, DRP L. S. Cheung, Senior Reactor Inspector, Division of Reactor Safety (DRS) K. Diederich, Reactor Inspector, DRS G. Johnson, Reactor Inspector, DRS K. A. Mangan, Senior Reactor Inspector, DRS T. A. Moslak, Health Physicist, DRS P. A. Presby, Operations Engineer, DRS D. M. Silk, Senior Emergency Preparedness Inspector, DRS
Approved by:	Paul G. Krohn, Chief Projects Branch 6 Division of Reactor Projects

Enclosure

CONTENTS

SUMMARY OF FINDINGS

IR 05000336/2006-002, 05000423/2006-002; 01/01/2006 - 03/31/2006; Millstone Power Station, Unit 2 and Unit 3; Operator Performance During Non-Routine Plant Evolutions and Events, Other Activities.

The report covered a 3-month period of inspection by resident inspectors and announced inspections by regional inspectors. Two (Green) non-cited violations (NCVs) were 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 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

Unit 3

- Green. A Green self-revealing NCV of Technical Specification (TS) 6.8.1a, “Procedures,” was identified for inadequate implementation of procedures which resulted in an unintended positive reactivity addition. On February 17, 2006, Operations personnel mis-positioned three valves which isolated the “A” boric acid gravity feed flow path and the “A” boric acid transfer pump. This issue manifested itself the following day during a planned blended makeup to the Volume Control Tank which resulted in a small positive reactivity addition. Dominion entered their procedural compliance error into their corrective action program for resolution. This issue involved the cross-cutting aspects of human performance in that operators failed to adequately implement procedures which lead to an unintended reactivity addition.

  This issue was more than minor because it is associated with the human performance and configuration control attributes of the Initiating Events cornerstone. The finding is associated with an increase in the likelihood of initiating events in that an inadvertent positive reactivity addition actually occurred. The inspectors determined that the self-revealing finding was of very low safety significance because the amount of reactivity added was small (approximately 6 pcm) and did not contribute to both the likelihood of a reactor trip and the unavailability of mitigation equipment or functions. (Section 1R14)

Cornerstone: Mitigating Systems

Unit 2

- Green. The inspectors identified a Green NCV for the failure to comply with TS 3.3.1.1, “Reactor Protection Instrumentation,” during routine monthly surveillance

testing of the Wide Range Nuclear Instrument (WRNIs). During a review of control room logs from January 1, 2006 through March 31, 2006, the inspectors identified that Operations did not enter TS 3.3.1.1 on two occasions during WRNIs testing and take action per Table 3.3-1 to place the Reactor Coolant Flow-Low and Thermal Margin/Low Pressure protective channels in either the bypassed or tripped condition within 1 hour. Dominion took immediate action to inform the operators of this deficiency and entered this issue into their corrective action program under CR-06-02295 and CR-06-03586 for resolution.

The failure by the operators to comply with TS was more than minor because it affected the configuration control attribute of the Mitigating Systems Cornerstone. Specifically, deliberate operator action was required to ensure that proper reactor protection system coincidence was maintained. Because there was no loss of safety function and the zero power mode switch was later verified to be in the "OFF" position, the failure to meet the TS action statement was considered to be of very low safety significance (Green). This finding is related to the cross-cutting aspects of problem identification and resolution in that Dominion did not identify the requirement to enter TS 3.3.1.1 for WRNIs during testing and failures and take action to place the Reactor Coolant Flow-Low and Thermal Margin/Low Pressure protective channel in either the bypassed or tripped condition within 1 hour. (Section 4OA5.2)

B. Licensee-Identified Violations

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

REPORT DETAILS

Summary of Plant Status

Unit 2 operated at essentially 100 percent power for the duration of the inspection period with the following exceptions. On February 23, 2006, the plant tripped from 100 percent power due to a partial loss of the instrument air system. The Unit was restored to full power on February 26, 2006. At 10:20 p.m. on March 31, 2006, Unit 2 commenced a shutdown from 100 percent power in preparation for repairs to the turbine-driven auxiliary feedwater pump. The Unit ended the inspection period with the plant operating at 88 percent power with the downpower in progress.

Unit 3 operated at essentially 100 percent power for the duration of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Onset of Adverse Weather Site Inspection (One Site Sample)

Unit 2 and Unit 3

a. Inspection Scope

On February 10, 2006, the inspectors performed a review of adverse weather preparations during the onset of a winter snowstorm predicted for February 11 and February 12, 2006, to evaluate the site's readiness for the expected weather conditions. The inspectors reviewed Dominion's preparations/protection for the adverse weather and its impact on the protection of safety-related systems, structures and components. The inspectors verified that operator actions, taken in response to the adverse weather, maintained readiness of essential systems and that adequate operator and Site Emergency Response Organization staffing were specified. 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 (71111.04Q - Two Unit 2 Samples and Two Unit 3 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 verify that 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 inspectors verified that equipment alignment problems that could cause initiating events, impact mitigating system availability or function, or affect barrier functions, were identified and resolved. The following systems were reviewed based on their risk significance for the given plant configuration:

Unit 2

- Partial equipment alignment of "B" charging pump cubicle, January 9, 2006;
- Partial equipment alignment of "A" high pressure safety injection train, March 7, 2006.

Unit 3

- Partial equipment alignment of "A" charging train during a "B" train outage, January 20, 2006;
- Partial equipment alignment of "B" service water train on February 14, 2006, following an operational readiness test on February 13, 2006.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown (71111.04S - One Unit 2 Sample)

Unit 2

a. Inspection Scope

The inspectors completed a detailed review of the alignment and condition of the Unit 2 Auxiliary Feedwater System. The inspectors conducted a walkdown of the system to verify that the 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 verify that the deficiencies did not significantly affect the auxiliary feedwater system function. In addition, the inspectors discussed system health with the system engineer and reviewed the condition report database to verify that 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 - Four Unit 2 Samples and Four Unit 3 Samples)

a. Inspection Scope

The inspectors performed eight 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 those 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 inspected fire protection areas to the fire protection program requirements to ensure that selected 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, General Area, 45'-6" Elevation (Fire Area A-1, Zone A);
- Turbine Building, 14'-6" Elevation (Fire Area T-1, Zone A);
- Turbine Building, 31'-6" Elevation (Fire Area T-1, Zone C); and
- Turbine Building, Operating Floor/Turbine Deck, 54'-6" Elevation (Fire Area T-1, Zone F).

Unit 3

- Auxiliary Building, West Floor Area, 24'6" Elevation (Fire Area AB-1, Zone D);
- Auxiliary Building, North Floor Area, 4'6" Elevation (Fire Area AB-1, Zone A);
- Auxiliary Building, South Floor Area, 4'6" Elevation (Fire Area AB-1, Zone B); and
- Yard Area Adjacent to Emergency Diesel Generator Building (Fire Areas EG-3 and EG-4, Zone A).

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observation (71111.05A - One Site Sample)

a. Inspection Scope

Unit 2 and Unit 3

The inspectors observed personnel performance during a site fire brigade drill on February 15, 2006, to evaluate the readiness of station personnel to prevent and fight fires. The drill simulated a fire in the Unit 2 Auxiliary Building (Fire Area T-8, T-9). The

inspectors observed the site fire brigade members using protective clothing, turnout gear, and self-contained breathing apparatus and entering the fire area in a controlled manner. 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 site fire brigade members. The inspectors verified that 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 and entered into the corrective action program.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - One Unit 2 Sample and One Unit 3 Sample)

.1 Internal Flooding Inspection

a. Inspection Scope

The inspectors reviewed two samples of flood protection measures for equipment in the safety-related rooms listed below. 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 and reviewed the Final Safety Analysis Report, the internal flooding evaluation, and related documents. The inspectors compared 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.

Unit 2

- Turbine Building, Elevation 14'6".

Unit 3

- "A" Diesel Generator Enclosure.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

Resident Inspector Quarterly Review (71111.11Q - Two Unit 2 Samples and One Unit 3 Sample)

a. Inspection Scope

The inspectors observed two samples of Unit 2 operator requalification training on February 16, 2006, and March 7, 2006. The inspectors observed one sample of Unit 3 licensed operator requalification training on February 16, 2006. The inspectors verified that the training evaluators adequately addressed that the applicable training objectives had been achieved, operator performance was adequate, and evaluators were identifying and documenting crew performance problems. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

Routine Maintenance Effectiveness Inspection (71111.12Q - One Unit 2 Sample and One Unit 3 Sample)

a. Inspection Scope

The inspectors reviewed two 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 (MR), 10 CFR 50.65, and verified that the conditions associated with the referenced condition reports (CRs) were appropriately evaluated against applicable MR functional failure criteria as found in licensee scoping documents and procedures. The inspectors also discussed these issues with the system engineers and maintenance rule coordinators to verify that they were appropriately tracked against each system's performance criteria and that the systems were appropriately classified in accordance with MR implementation guidance. Documents reviewed during the inspection are listed in the Attachment. The following conditions were reviewed:

Unit 2

- Partial Loss of Instrument Air (CR-06-01796).

Unit 3

- Water in the “B” EDG Rocker Arm Lube Oil System (CR-05-10248).

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - Five Unit 2 Samples and Four Unit 3 Samples)

a. Inspection Scope

The inspectors reviewed nine samples of the adequacy of maintenance risk assessments of emergent and planned activities during the inspection period. The inspectors utilized the Equipment-Out-of-Service quantitative risk assessment tool to evaluate the risk of the plant configurations and compared the results to Dominion's stated risk. The inspectors verified that Dominion entered appropriate risk categories and implemented risk management actions as necessary. Documents reviewed during the inspection are listed in the Attachment. The inspectors verified the conduct and adequacy of scheduled maintenance risk assessments for plant conditions affected by performance of the following maintenance and testing activities:

Unit 2

- Risk assessment for repair of “A” engineered safety features room cooling isolation valve and associated scheduled maintenance, January 25, 2006;
- Risk assessment and probabilistic risk assessment analysis for missed Technical Specification 4.8.1.1.2.C.9 surveillance on “B” emergency diesel generator and related emergent work, February 3-6, 2006;
- Risk assessment during “B” emergency diesel generator surveillance and 345KV switchyard work on February 22, 2006;
- Risk assessment of emergent work following permanent magnet generator failure during plant startup on February 25, 2006;
- Risk assessment of the connection of temporary power supply (to replace power supply from the permanent magnet generator) on March 9, 2006.

Unit 3

- Risk assessment due to emergent turbine-driven auxiliary feedwater pump repairs, January 11, 2006;
- Risk assessment due to “B” train charging cooling repairs, January 23, 2006;
- Risk assessment for “A” emergency diesel generator and “B” charging pump maintenance, January 30, 2006;
- Risk assessment for “B” diesel generator maintenance and high winds conditions, March 15, 2006.

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Non-Routine Evolutions and Events (71111.14 - Four Unit 2 Samples and Two Unit 3 Samples)

a. Inspection Scope

The inspectors reviewed six samples of events that demonstrated personnel performance in coping with non-routine evolutions and transients. The inspectors observed operations in the control room and reviewed applicable operating and alarm response procedures, technical specifications, plant process computer indications, and control room shift logs to evaluate the adequacy of Dominion's response to these events. The inspectors also verified the events were entered into the corrective action program to resolve identified adverse conditions. Documents reviewed during the inspection are listed in the Attachment.

Unit 2

- On January 9, 2006, at 4:35 a.m., with the Unit at 100 percent power, Operations received a charging pump bladder failure primary plant computer (PPC) alarm and observed a decreasing “C” charging pump flow trend. Operators took action to restore charging pump flow by starting the “A” and “B” charging pumps and securing the “C” charging pump. When no flow was indicated, Operations promptly secured all the charging pumps and isolated letdown. Operators entered Technical Specification Action Statement (TSAS) 3.0.3 for a loss of all charging. Operators identified water leaking out of the “B” charging pump discharge pulsation dampener cover. Operators entered Abnormal Operating Procedure (AOP) 2568, “Reactor Coolant System Leak”, and directed that the “B” charging pump be isolated. After the “B” charging pump was isolated, the leakage stopped. At 5:54 a.m., the “C” charging pump was started and proper flow was observed. Operations exited TSAS 3.0.3 but entered TSAS 3.5.2.a for having one inoperable emergency core cooling system train. At 1:43 p.m., TSAS 3.0.3 was re-entered based on a second loss of all charging. Dominion determined that the loss of all charging on both occasions was due to the migration of nitrogen from a failed discharge pulsation dampener to the common suction piping for all three charging pumps. The “A” and “C” charging pumps were filled and vented and by 3:14 p.m. and the “C” charging pump was restarted with proper operations observed. At 5:52 p.m., after a Reasonable Expectation of Continued Operability was approved that supported the running of one charging pump, Operations exited TSAS 3.0.3 and re-entered TSAS 3.5.2.a. This issue was reviewed in detail in NRC Inspection Report 05000336/2006006, Section 4OA2.1.c.3 and was dispositioned as a Green NCV of 10 CFR 50, Appendix B, Criterion III, “Design Control.”

- On February 23, 2006, at approximately 10:22 a.m., with the Unit at 100 percent power, Unit 2 experienced a partial loss of instrument air in the turbine building. The partial loss of instrument air caused a transient on the feedwater heater level control valves which resulted in the trip of both main feedwater pumps on loss of suction pressure. Operations personnel manually tripped the reactor and

turbine-generator as directed in AOPs. Operations personnel then entered Emergency Operating Procedure (EOP) 2525, "Standard Post Trip Action." Both motor-driven auxiliary feedwater pumps automatically started as a result of the loss of main feedwater and operators restored steam generator water levels to the program band. Operations personnel received a call from the field that an instrument air line nipple had broken off during maintenance activities. An upstream instrument air excess flow check valve prevented the entire air header from rapidly depressurizing and limited the air loss to components in the turbine building. In addition, maintenance personnel quickly responded by reconnecting the air line and applying a temporary wooden wedge to support the air line. The resident inspectors responded to the Unit 2 control room to observe crew response. The inspectors observed that the operators were following procedures, that the unit supervisor was demonstrating proper command and control, and that management was providing oversight and support. By 11:21 a.m., the Unit was stable in Mode 3.

- On February 25, 2006, Operations personnel responded to a report of light smoke from the main turbine front standard as the main turbine was being rolled during plant startup. The site fire brigade was dispatched. After a report that arcing from the permanent magnet generator (PMG) was observed, the unit supervisor ordered the manual tripping of the main turbine. The PMG is a small generator that supplies backup power to the turbine electrohydraulic control system. The reactor was stabilized at approximately 12 percent reactor power, steaming to the condenser via the bypass valves. Subsequent investigation indicated damage limited to the PMG. No safety related equipment was affected.

- On February 25, 2006, Operations personnel responded to an unexpected reduction in primary plant pressure during manual feedwater control during a plant startup. During the transient, primary plant pressure dropped from the normal system pressure (2250 psig) to 2185 psig. Operations personnel entered TS 3.2.6, "DNB (Departure from Nucleate Boiling) Margin", since primary plant pressure dropped below the DNB TS limit of 2225 psig as specified in the core operating limits report. Control room operators took prompt action and restored pressure to above the DNB limit in approximately two minutes and exited the limiting condition of operation.

Unit 3

- On February 6, 2006, Operations personnel responded to a high radiation particulate alarm in containment (CMS *22B, channel 2 only) and entered AOP 3573, "Radiation Monitor Alarm Response" and the applicable TS Limiting Conditions of Operations (LCOs). Actions included checking all indications for signs of a reactor coolant system (RCS) leak. No indications of a RCS leak were apparent by reviewing water level traces of the volume control tank, leakage calculation outputs, and obtaining local containment air samples. Subsequent to the containment alarm, it was apparent that the "B" control rod drive mechanism

(CRDM) cooling fan had failed and tripped off. Operators responded by starting the standby "C" CRDM cooling fan, in accordance with standard operating procedures. It was determined that indications observed prior to failure were consistent with prior CRDM fan failure events. Local air samples indicated a radon based spike. Dominion determined this radiation spike was caused by dust particles associated with fan vibration and subsequent failure. Containment monitor CMS*22B returned to normal and the applicable TS LCOs were exited. Dominion entered this condition into their corrective action program (CR-06-01165 and CR-06-01167).

- On February 18, 2006, with Unit 3 at 100 percent power, Operations personnel initiated action to perform a blended makeup to the volume control tank (VCT). Shortly after initiating the makeup, Operations personnel observed "0" gallons per minute (gpm) of boric acid flow. Within approximately thirty seconds, Operations personnel confirmed there was a boric acid flow problem and terminated the addition. The control room supervisor observed there had been approximately 41 gallons of primary water added to the VCT. In anticipation of an increase in reactor power due to the positive reactivity addition, Operations personnel reduced turbine load to ensure reactor power remained within licensed limits.

b. Findings

Introduction. A Green self-revealing NCV of Technical Specification 6.8.1a, "Procedures," was identified for inadequate implementation of procedures which resulted in an unintended positive reactivity addition.

Description. On February 18, 2006, with Unit 3 at 100 percent power, Operations personnel initiated action to perform a blended makeup to the VCT. Shortly after initiating the makeup, Operations personnel observed "0" gpm of boric acid flow. Within approximately thirty seconds, Operations personnel confirmed there was a boric acid flow problem and terminated the addition. The control room supervisor observed there had been approximately 41 gallons of primary water added to the VCT. In anticipated of an increase in reactor power due to the positive reactivity addition, Operations personnel reduced turbine load to ensure reactor power remained within licensed limits.

Dominion's subsequent investigations revealed that the "A" boric acid storage tank was inadvertently isolated the previous day during a surveillance test on the "B" boric acid transfer pump. Specifically, Section 4.2.3 of Surveillance Procedure (SP)-3604C.5, "Boric Acid Pump 3CHS*P2B Operational Readiness Test," states, "To test 3CHS*V294, boric acid transfer pump "A" discharge check valve, check the following valves open: 3CHS*V289, 3CHS*V290, 3CHS*295." The inspectors determined that theses valves were closed vice check opened. This action isolated the "A" boric acid transfer pump and the boric acid gravity drain line from the "A" boric acid storage tank and manifested itself the following day during the planned blended makeup to the VCT. In addition, the inspectors determined that the operator failed to use peer checking for valve manipulation and failed to notify the control room that a change to a valve position

occurred during a “CHECK” step (required by Operations Department Administrative Controls). Upon discovery of the mis-positioned valves, Dominion took immediate corrective action to verify valve lineups for the “A” boric acid transfer pump and the “A” boric acid tank, placed the “B” storage acid tank in service, re-performed applicable steps of SP-3604C.5, and performed a surveillance test of the “A” boric acid pump to verify the pump was not damaged. The issue was entered into the corrective action program (CAP) as condition report CR-06-01662. The performance deficiency associated with this event is that the plant operators did not adequately implement a plant operating procedure that was within Dominion’s ability to foresee and control.

Analysis. Traditional enforcement does not apply because there were no actual safety consequences, impacts on the NRC's ability to perform its regulatory function, or willful aspects to the violation. This issue was more than minor because it is associated with the human performance and configuration control attributes of the Initiating Events cornerstone. The finding is associated with an increase in the likelihood of initiating events in that an inadvertent positive reactivity addition actually occurred and operators took manual action to reduce turbine load. The inspectors determined that the self-revealing finding was of very low safety significance (Green) through performance of a Phase 1 SDP in accordance with Inspection Manual Chapter (IMC) 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Specifically, the amount of reactivity added was small (approximately 6 pcm) and consequently did not contribute to both the likelihood of a reactor trip and the unavailability of mitigation equipment or functions. This issue involved the cross-cutting aspects of human performance in that operators failed to adequately implement procedures which led to an unintended positive reactivity addition.

Enforcement. Technical Specification S 6.8.1a, “Procedures,” states, in part, that “written procedures shall be established, implemented and maintained covering the activities specified in Appendix A of Regulatory Guidance 1.33, “Quality Assurance Program Requirements (Operations).” Appendix A, Item 3.n of this Regulatory Guide, requires procedures to be adequately implemented for the operation of the Chemical and Volume Control System. Contrary to this requirement, on February 17, 2006, during boric acid transfer pump testing, Operations mis-positioned valves which resulted in isolation of the “A” boric acid drain line and the “A” boric acid transfer pump. This action led to an inadvertent positive reactivity addition during an intended blended makeup the following day. This violation has been determined to have a very low safety significance and is in Dominion’s corrective action program as CR-06-01662. Therefore, it is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy (**NCV 05000423/2006002-01, Mis-positioning of Boric Acid Valves Resulting in Unintended Positive Reactivity Addition**).

1R15 Operability Evaluations (71111.15 - Five Unit 2 Samples and Seven Unit 3 Samples)

a. Inspection Scope

The inspectors reviewed twelve operability determinations associated with degraded or non-conforming conditions to ensure that operability was justified and that mitigating systems or those affecting barrier integrity remained available and no unrecognized increase in risk had occurred. The inspectors also reviewed compensatory measures to ensure that the measures were in place and were appropriately controlled. The inspectors reviewed licensee performance to ensure all related TS and FSAR requirements were met. The inspectors reviewed the following degraded or non-conforming conditions:

Unit 2

- #1 Steam Generator Loose Parts Monitoring Alarm (CR-05-14294);
- Pipe Support Missing on Discharge of the "A" Charging Pump Discharge Relief Valve (CR-06-00584);
- Emergency Diesel Generator (EDG) Part 21 Digital Reference Unit (CR-06-00482);
- Missed Technical Specification 4.8.1.1.2.C.9 Surveillance on "B" EDG (CR-06-01050);
- "B" and "C" Charging Pump Operation (CR-06-0233).

Unit 3

- "B" Charging System (CHS) Leakage During Pump Isolation and Replacement (CR-06-00866);
- "B" CHS Pump 30 Day Technical Requirements Manual 7.4.1 Action a.3 Extension (CR-06-00892);
- Turbine Driven Auxiliary Feedwater Pump Steam Control Valve Stuffing Box (CR-06-02039);
- Turbine Driven Auxiliary Feedwater Pump Tripped During Start-up (CR-06-00244);
- Missing Welds on "C" Service Water Pump Strainer (CR-06-02955);
- "B" Train Charging Pump Cooling Service Water Leak (CR-06-00651);
- "B" Charging Pump Shaft Failure (CR-06-00808).

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - Five Unit 2 Samples and Five Unit 3 Samples)

a. Inspection Scope

The inspectors reviewed ten samples of post-maintenance tests (PMT) during this inspection period. The inspectors reviewed these 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 verify consistency with the associated design and licensing bases, as well as TS requirements. The inspectors also verified that 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" Charging Pump P18B Suction and Discharge Valve Replacement (M2-06-00601);
- "A" Engineered Safety Features Room Cooling Isolation 2-RB-68.1A Repair (M2-06-00880);
- Replace Bladder in Discharge Dampener of "C" Charging Pump (P18C) (M2-05-00554);
- Post-Installation Testing of Temporary Power Supply to Electrohydraulic Control (M2-06-01915);
- "B" Low Pressure Safety Injection Pump Breaker Modification (M2-04-12273).

Unit 3

- Replace Motor Control Center Starter for Reactor Coolant Charging Valve (M3-06-00181);
- Control Room Door Repair (M3-06-02484);
- Control Room Ventilation Outlet Isolation Valve 10 Year Overhaul (M3-02-03896);
- Restoration of the High-1 and High-2 Signals for the Containment Pressure Transmitter (SPROC IC06-3-001, dated 3/5/06);
- Turbine-Driven Auxiliary Feedwater Pump Control Valve Rebuild and Governor Replacement (M3-06-00466).

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20 - One Unit 2 Sample)

Unit 2 Forced Outage

a. Inspection Scope

The inspectors reviewed one sample of a forced outage following a Unit 2 manual reactor shutdown on February 23, 2006, due to a partial loss of instrument air, for conformance to technical specification requirements and approved procedures. Documents reviewed during the inspection are listed in the Attachment. Selected activities were verified for the following evolutions:

- Event Review Team Report to Site Organization Review Committee;
- Outage planning meetings;
- Containment entry and walkdown;
- Reactor startup and criticality;
- Power ascension.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - Six Unit 2 Samples and Five Unit 3 Samples)

a. Inspection Scope

The inspectors reviewed eleven samples of 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, verified that selected prerequisites and precautions were met and that the tests were performed in accordance with the procedural steps. Additionally, the inspectors evaluated the applicable test acceptance criteria to verify consistency with associated design bases, licensing bases, and TS requirements and that the applicable acceptance criteria were satisfied. The inspectors also verified that 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

- "A" Diesel Generator Slow Start Operability Test, Facility 1 (SP-2613K);
- "C" Charging Pump Flow In-Service Test (SP-2601H);
- Reactor Protection System (RPS) Channel "D" Bistable Trip Test (SP-2401GD);
- RPS High Power Trip Test (SP-2401FB);
- "B" Emergency Diesel General Slow Roll and Operational Test (SP-2613L);
- Reactor Coolant Sampling and Analysis (CP-3802E).

Unit 3

- Service Water Pump 3SWP*P1B Operational Readiness Test (SP-3626.5);
- Residual Heat Removal Pump 3RHS*P1A Operational Readiness In-Service Test (SP-3610A.1);
- Turbine Driven Auxiliary Feedwater Pump Operational Readiness Test (SP-3622.2);
- Reactor Coolant Leakage Measurement Trending (SP-3680.1);
- Reactor Coolant Sampling and Analysis (SP-2830).

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23 - One Unit 2 Sample and One Unit 3 Sample)

a. Inspection Scope

The inspectors reviewed two samples of temporary modifications to verify that the temporary modifications did not affect the function of important safety systems. The inspectors reviewed the temporary modifications and their associated 10 CFR 50.59 screening against the FSAR and TSs to ensure the modifications did not affect system operability or availability. Documents reviewed during the inspection are listed in the Attachment.

Unit 2

- Connecting Temporary Power to Electrohydraulic Control (TM-02-06-002).

Unit 3

- Safety Injection Bypass Line (TM-03-02-010).

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness [EP]

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 - One Unit 2 Sample and One Unit 3 Sample)

a. Inspection Scope

The NRC had received and acknowledged the changes made to the Millstone emergency plan implementing procedures. The changes were made in accordance with 10 CFR 50.54(q), which Dominion had determined did not result in a decrease in

effectiveness to the Plan and concluded that the changes continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. During this in-office inspection on March 1 - 6, 2006, the inspector conducted a review of the changes which could potentially result in a decrease in effectiveness. This review did not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4. The requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06 - One Unit 2 Sample and One Unit 3 Sample)

a. Inspection Scope

The inspectors observed one sample of the conduct of a Unit 2 licensed operator simulator training on March 7, 2006, and one sample of the conduct of a Unit 3 licensed operator simulator training on February 16, 2006. The inspectors evaluated the Operations crew activities related to evaluating the scenario and making proper emergency action level classification determinations. Additionally, the inspectors assessed the ability of Dominion's evaluators to adequately address operator performance deficiencies identified during the exercise.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Controls to Radiologically Significant Areas (71121.01 - Eleven Site Samples)

a. Inspection Scope

During the period February 13 -16, 2006, the inspector conducted the following activities to verify that Dominion was properly implementing physical, administrative, and engineering controls for access to locked high radiation areas, and other radiologically controlled areas, and that workers were adhering to these controls when working in these areas. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, technical specifications, and Dominion's procedures. This inspection activity represents completion of eleven samples relative to this inspection area.

Plant Walkdown and Radiation Work Permits (RWP) Reviews

- The inspector identified areas in Units 2 and 3 where radiologically significant work was being performed, or where future work was being planned. These areas included the site radwaste storage area, where a Unit 2 spent resin liner was being transferred into a shipping cask, the Unit 2 resin valve room whose posting as a Technical Specification Locked High Radiation Area was being re-evaluated, and the Unit 3 auxiliary building, where plans were being developed to drain water from the charcoal absorber tanks. The inspector reviewed RWPs associated with these activities, RWP Nos. 4060032, 2060001, and 306003; respectively, and the radiation survey maps of the work areas, to determine if the radiological controls were acceptable.

- The inspector toured accessible radiologically controlled areas in Units 2 and 3, and with the assistance of radiation protection technicians, performed independent radiation surveys of selected areas to confirm the accuracy of survey data and the adequacy of postings.

- In reviewing various RWPs, the inspector reviewed electronic dosimeter dose/dose rate alarm set points to determine if the set points were consistent with the survey indications and plant policy. The inspector verified that the workers were knowledgeable of the actions to be taken when the electronic dosimeter alarms or malfunctions for tasks being conducted under selected RWPs. Work activities reviewed included Unit 2 Health Physics (RWP 2060001), Unit 3 Health Physics (RWP 30600001), Unit 3 Instrumentation and Control (I&C) activities (RWP 3060011), Routine Security Activities (RWP 4060008), and Unit 3 in-containment activities at power (RWP 3060090).

- The inspector reviewed the RWPs and associated instrumentation and engineering controls for potential airborne radioactivity areas. Through review of relevant condition reports and supporting documentation, the inspector reviewed the dose assessment methodology and corrective actions for airborne incidents that occurred during 2005. The inspector determined that no incident resulted in an internal dose of 50 mrem or more.

- The inspector reviewed the physical and procedural controls for highly activated/contaminated materials stored in the Unit 2 and 3 spent fuel pools. The inspector also reviewed the access controls for the stored old Unit 2 reactor head.

Problem Identification and Resolution

- The inspector reviewed elements of Dominion's Corrective Action Program related to controlling access to radiologically significant areas, completed since the last inspection of this area, to determine if problems were being entered into

the program for resolution. Details of this review are contained in Section 4OA2.3 of this report.

Jobs-In-Progress Review

- The inspector observed aspects of various maintenance activities being performed during the inspection period to verify that radiological controls, such as required pre-job surveys, area postings, job coverage, and pre-job RWP briefings were conducted; personnel dosimetry was properly worn; and that workers were knowledgeable of work area radiological conditions. The inspector attended the pre-job RWP briefing for transferring a Unit 2 spent resin liner from its storage location to a shipping cask.

High Risk Significant, High Dose Rate High Radiation Area and Very High Radiation Areas Controls

- The inspector discussed with Unit 2 and Unit 3 radiation protection supervision the adequacy of physical and procedural controls for performing work in potential Very High Radiation Areas. The inspector reviewed the relevant procedures for controlling access to these areas to evaluate the adequacy of the radiological controls.

- Keys to Unit 2 and 3 locked high radiation areas (LHRA) were inventoried and accessible LHRAs were verified to be properly secured and posted during plant tours.

- The inspector discussed with the cognizant radiation protection staff the radiological controls to be implemented for replacement and storage of the Unit 2 pressurizer during the upcoming fall 2006 refueling outage.

Radworker and Radiation Protection Technician Performance

- The inspector evaluated radiation worker and radiation protection technician performance by observing various jobs-in-progress, reviewing daily log entries, attending a pre-job RWP briefing, and attending planning meetings.

- The inspector reviewed condition reports related to radiation protection technician and radiation worker errors to determine if an observable pattern traceable to a similar cause was evident.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02 - Four Site Samples)

a. Inspection Scope

During the period February 13 - 16, 2006, Dominion conducted the following activities to verify that Dominion was properly implementing operational, engineering, and administrative controls to maintain personnel exposure as low as is reasonably achievable (ALARA) for past activities performed in 2005 and in preparing for the fall 2006 Unit 2 refueling outage. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and Dominion's procedures. The inspection represents completion of four samples relative to this inspection area.

Radiological Work Planning

- The inspector reviewed pertinent information regarding cumulative exposure history, current exposure trends, and ongoing activities to assess 2005 site ALARA performance, current (2006) exposure trends, and the challenges for the fall 2006 Unit 2 refueling outage.

- The inspector reviewed current exposure status of ongoing maintenance activities and the associated work activity exposure estimates contained in the RWPs and ALARA Evaluations. Ongoing work reviewed included Unit 2 charging system pulsation damper replacements (RWP 2060030, AE 2-06-32), Unit 3 transfer of Tri-Nuc filters to a shielded cask (RWP 3060042, AE 3-06-02) , and Unit 3 de-gasifer maintenance (RWP 3060028, AE 3-06-01).

- The inspector evaluated the departmental interfaces between radiation protection, operations, maintenance crafts, and engineering to identify missing ALARA program elements and interface problems. The evaluation was accomplished by interviewing the ALARA Coordinator and Radiation Protection Manager, reviewing station ALARA Council meeting minutes, attending a post-job de-brief for a Unit 3 containment entry, and reviewing preparations for the fall 2006 Unit 2 refueling outage.

- The inspector reviewed the assumptions and basis for the annual site collective exposure projections for site power operations and for the Unit 2 refueling outage, scheduled later this year. Additionally, the inspector reviewed the 2006-2010 Station Exposure Reduction Plan.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator (PI) Verification (71151 - Two Unit 2 Samples and Two Unit 3 Samples)

a. Inspection Scope

Cornerstone: Barrier Integrity

The inspectors sampled licensee submittals for the two PIs listed below for Unit 2 and Unit 3. For the reactor coolant system leakage and for the reactor coolant system specific activity in Unit 2, the inspectors reviewed data from second quarter 2004 through the fourth quarter 2005. For the reactor coolant system leakage and for the reactor coolant system specific activity in Unit 3, the inspectors reviewed data from first quarter 2005 through the fourth quarter 2005. To verify the accuracy of the PI data reported during these periods, PI definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the reporting basis for each data element.

Unit 2

- Reactor Coolant System Leakage;
- Reactor Coolant System Specific Activity.

Unit 3

- Reactor Coolant System Leakage;
- Reactor Coolant System Specific Activity.

The inspectors reviewed portions of the operations logs and raw PI data developed from monthly operating reports and discussed the methods for compiling and reporting the PIs with cognizant licensing and engineering personnel. The inspectors compared graphical representations from the most recent PI report to the raw data to verify that the data was correctly reflected in the report. Documents reviewed during this inspection are listed in the Attachment.

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

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to discern 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.

.2 Annual Sample Review

Unit 3

a. Inspection Scope

The inspectors selected CRs associated with the Unit 3 Charging System. The reports were reviewed to ensure that the full extent of the issues were identified, an appropriate evaluation was performed, and appropriate corrective actions were specified, prioritized, and implemented. The inspectors evaluated the reports against the requirements of Dominion's corrective action program as delineated in MP-16-CAP-FAP01.1, "CR Screening and Review," and 10 CFR 50, Appendix B, Criterion XVI, “Corrective Actions.” Documents reviewed during the inspection are listed in the Attachment. Unresolved Item (URI) 05000423/2005012-02, “DNC Integrated Assessment of Charging System Performance Following the April 17, 2005 Inadvertent Safety Injection,” was selected as a sample as part of this annual review. Details of this review are contained in Section 4OA5.3.

b. Findings

No findings of significance were identified.

.3 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

The inspector reviewed 18 condition reports, recent ALARA Council Meeting minutes, and Nuclear Quality Assessment field observation reports and audits to evaluate the threshold for identifying, evaluating, and resolving occupational radiation safety problems. This review included a check of possible repetitive issues such as radiation worker and radiation protection technician errors.

The review was conducted against the criteria contained in 10 CFR 20, technical specifications, and Dominion’s procedures.

b. Findings and Conclusions

No findings of significance were identified.

.4 Cross-References to PI&R Findings Documented Elsewhere in this Report

Section 4OA5.2 describes a finding for the failure to comply with TS during wide range nuclear instruments (WRNI) testing. Specifically, Dominion did not identify the requirement to enter TS 3.3.1.1 for WRNIs during testing and failures.

4OA3 Event Followup (71153 - One Unit 2 Sample and Two Unit 3 Samples)

.1 Unit 2 Trip

a. Inspection Scope

On February 23, 2006, Unit 2 Operations personnel responded to a loss of instrument air in the turbine building resulting in a loss of main feedwater and a manual reactor trip. Section 1R14 provides a detailed discussion on this event. Resident inspectors responded to the control room, verified emergency action level and notification considerations, and reviewed the event in accordance with Inspection Procedure 71153, "Event Follow-up", and Management Directive 8.3, "NRC Incident Investigation Program".

b. Findings

No findings of significance were identified.

.2 (Closed) Licensee Event Report (LER) 05000423/2005-001-00, Hydrogen Recombiners Out of Service

On February 24, 2005, with Unit 3 at 100 percent power, during performance of a surveillance test on the "A" hydrogen recombiner, the system failed a leak tightness test. Dominion investigation revealed a compression fitting which was reassembled improperly on September 7, 2004, even though the leak tightness check was successfully completed. Dominion also determined that the improperly assembled joint was most likely disturbed during the time period between the two tests. NRC Inspection Report 05000423/2005002, Section 1R19, documented a non-cited violation associated with this issue. The inspectors reviewed this LER with its associated condition reports to verify that the root cause and corrective actions related to the event described in the LER was adequate. The inspectors identified one new finding of minor significance. Code of Federal Regulations, 10 CFR 50.73, "Licensee Event Report System," requires that LERs be submitted within 60 days of the date of event occurrence. Contrary to this requirement, LER 05000423/2005-001-00 described an out of service condition for the hydrogen recombiners that occurred on February 24, 2005 and was not reported in this LER until September 1, 2005, (a time period of 189 days) which exceeded the 60 day reporting requirement. However, because of the very low safety significance and because the issue was entered into Dominion's corrective action program (CR-05-04348), this finding is being treated as a minor violation, consistent with Section VI.A of the Enforcement Policy, issued May 1, 2000 (65FR25368). This LER is closed.

.3 (Closed) LER 05000423/2005-003-00, Manual Reactor Trip Due to Loss of Two Circulating Water Pumps in Same Condenser Section

On September 29, 2005, with the Unit in Mode 1 at 100 percent power, Unit 3 reactor was manually tripped due to a loss of two circulating water pumps in the same condenser section. Dominion determined that the loss of the circulating water pumps was related to a storm consisting of high winds and waves. The inspectors reviewed this LER with its associated condition reports to verify that the root cause and corrective actions related to the event described in the LER were adequate. No findings of significance were identified and no violation of NRC requirements occurred. Dominion documented this problem in CR-05-10322. This LER is closed.

4OA5 Other Activities

.1 (Closed) Unresolved Item 05000336/2004007-05, Main Steam Code Safety Valve Testing

This unresolved item (URI) was opened to determine how information supplied by a 10 CFR 50 Appendix "B" certified vendor is reviewed including vendor-provided constant and testing tolerances, if Dominion could trace the measuring and test equipment to a national standard, and whether it was acceptable to test main steam code safety valves (MSSVs) with the vendor's test apparatus following an actual lift of the relief valve.

The inspectors reviewed the vendor's response to questions on this matter and determined that K constant provided by the vendor was based on correlations which were supported by safety valve testing at various inlet conditions in which approximately 200 data points were taken to develop the correlation. This documentation also indicated that the tolerances during testing met the appropriate American Society of Mechanical Engineers and Technical Specification requirements which included traceability of test instrumentation to the appropriate standards bureaus. The vendor also indicated that the test apparatus could be used to test valves that had been previously lifted by an actual demand signal. However, the vendor noted that any other method other than the precise method specified in the vendor prescribed licensee procedure may result in an actual lift point slightly different from that established by strict control of the test conditions provided by the procedure.

The inspectors noted that this URI was opened in NRC Inspection Report 05000336/2004007 in conjunction with a non-cited violation for the failure to take effective corrective actions to preclude MSSVs from lifting following design basis turbine trips/reactor trips from 100 percent power. Specifically, the inspectors noted that MSSVs lifted and reseated following two uncomplicated reactor trips at Unit 2 in March 2004 and that there was a previous history of MSSVs lifting and reseating following uncomplicated trips. This URI attempted to identify other likely causes for the frequent opening of MSSVs for uncomplicated reactor trips. In response to this concern, Dominion lowered operating Tave by 2 degrees Fahrenheit (F) which lowered steam generator pressure to establish a greater margin to the MSSV setpoints. Additionally, Dominion implemented Design Change (M2-05001) in January 2006 which lowered

Tave by an additional 4 degrees F and lowered the Quick-Open Tave signals for the atmospheric and condenser dump valves from 557 degrees F to 554 degrees F to limit the likelihood of MSSV opening. These actions were demonstrated as successful during a February 23, 2006, reactor trip due to a loss of feedwater in which the MSSVs remained shut for the duration of the transient. The inspectors had no further questions on this issue, and therefore, URI 05000336/2004007-05 is closed. The inspectors determined that no additional violations of regulatory requirements occurred.

.2 (Closed) URI 05000336/2005301-02, Potential Gap in Technical Specification Requirements for Nuclear Instrument Operability

This URI was opened to address a potential TS issue noted during development of the Unit 2 2005 written examination as follows:

- Wide Range Nuclear Instruments (WRNIs) are required to be operable in modes 3, 4, 5.
- Power Range Nuclear Instruments (PRNIs) are required to be operable in modes 1, 2.
- Mode 2 is defined as Keff > .99.
- Power Range Nuclear Instruments come on scale at 0.1 percent power.

The inspectors noted that it was possible to be in compliance with Technical Specifications with the plant in Mode 2 with power still below the range of the PRNIs, but with no requirement for operable WRNIs. This issue was been entered into Dominion's corrective action program as CR-05-03176, and was unresolved pending further NRC review .

Introduction: The inspectors identified a Green NCV for the failure to comply with TS 3.3.1.1, "Reactor Protection Instrumentation," during routine monthly surveillance testing of the WRNIs.

Description: The inspectors reviewed Unit 2 TS requirements, licensee amendments, and the FSAR associated with the WRNIs. In addition, the inspectors interviewed Operations, Training, and Licensing personnel. The inspectors determined that TS 3.3.1.1, "Reactor Protective Instrumentation," required that the reactor protective instrumentation channels and bypasses of Table 3.3-1 be operable. Table 3.3-1 of TS 3.3.1.1 required four operable channels of Reactor Coolant Flow-Low and Thermal Margin/Low Pressure (TMLP). The WRNIs provided an input to the zero power mode bypass relays for Reactor Coolant Flow-Low and TMLP reactor protective instrumentation channels. In accordance with Table 3.3-1 of TS 3.3.1.1, this ensures the availability of the automatic removal of the zero mode bypass function when thermal power is greater than or equal to 5 percent of rated thermal power. The bypass relays allow bypassing these trip functions when the reactor is at very low power (< 5 percent) in order to perform certain pre-startup checks.

Based on the review of applicable technical references and interviews, the inspectors determined that when a WRNI is out of service, the automatic removal of the zero mode

bypass function is inoperable and thus the associated protective channels of Reactor Coolant Flow-Low and TMLP are also inoperable. During a review of control room logs from January 1 through March 31, 2006, the inspectors identified that Operations did not enter TS 3.3.1.1 on two occasions during WRNI testing. The inspectors determined that on January 17, 2006, the "B" channel WRNI was inoperable for approximately 8 hours and on February 13, 2006, the "A" WRNI channel was inoperable for approximately 8 hours. In accordance with TS 3.3.1.1, operators should have taken action to place the associated Reactor Coolant Flow-Low and TMLP protective channels to either bypassed or tripped condition within 1 hour. Following a discussion with Operations, the inspectors determined that Operations do not routinely entered TS 3.3.1.1 for surveillance testing of the WRNIs. In addition, the inspectors identified weaknesses in licensed operator knowledge of the relationship between the WRNIs and the Reactor Coolant Flow-Low and Thermal Margin/Low Pressure protective instrumentation channels. Dominion took immediate corrective action to inform the operators of the deficiency and entered this issue into their corrective action program under CR-06-02295 and CR-06-03586 for resolution. The performance deficiency associated with this issue was the failure of operators to enter TS 3.3.1.1 during surveillance testing of WRNIs.

Analysis: The failure by the operators to trip the inoperable channels or place in bypass within 1 hour was more than minor because it affected the configuration control attribute of the Mitigating Systems Cornerstone. Specifically, deliberate operator action is required by TS, to ensure that proper reactor protection system coincidence and reliability are maintained. Because there were no loss of safety function and the zero mode bypass switch was later determined to be in the "OFF" position (this ensured that the required protection for TMLP and Reactor Coolant Flow-Low was actually maintained), the failure to meet the TS was considered to be a very low safety significance (Green). This finding is related to the cross-cutting aspects of problem identification and resolution in that Operations did not identify the requirement to enter TS 3.3.1.1 for WRNIs during testing and failures.

Enforcement: Technical Specification 3.3.1.1, "Reactor Protective Instrumentation," requires four channels of Reactor Coolant Low-Flow and TMLP be operable with the availability to automatically remove the zero mode bypass when thermal power is greater than or equal to 5 percent of rated thermal power. Contrary to this, on January 17, 2006, and February 13, 2006, Dominion did not comply with the required TS 3.3.1.1 LCO action statement which states "the inoperable channel is placed in a either the bypassed or tripped condition within 1 hour." Dominion continued in this condition for approximately 8 hours on January 17, 2006, and February 13, 2006, respectively. This violation has been determined to be of very low safety significance and was entered into Dominion's corrective action program (CR-06-02295 and CR-06-03586). Therefore, this violation is being treated as a non-cited violation (NCV), consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000336/2006002-02, Failure to comply with TS during WRNI surveillances)**.

.3 (Closed) URI 05000423/2005012-02, DNC Integrated Assessment of Charging System Performance following the April 17, 2005 Inadvertent Safety Injection

The inspectors evaluated Dominion's actions to assess the performance of the charging system in its high head safety injection (SI) function during the event on April 17, 2005. The inspector reviewed Dominion's assessments and other documents, interviewed station personnel, and performed walkdowns of the charging system. During a walkdown of the charging system, the inspectors identified uneven alignment of packing followers for two manual valves, one of which suffered packing extrusion during the April 17, 2005 event. The inspector noted that this misalignment could potentially contribute to loss of packing integrity similar to that seen during the event, though records indicated that this condition was not observed prior to the event. Dominion wrote condition reports CR-06-03022 and CR-06-03024 to further assess this issue.

In reviewing this URI, the inspectors determined that Dominion adequately decreased the likelihood of a future water hammer event by improving fill and vent procedures and by using post-maintenance ultrasonic inspection techniques to verify the system free of voids. The higher than expected contamination levels (and the potential to result in post-accident accessibility issues) in the charging cubicle following the event were adequately evaluated by Dominion and attributed to the letdown system alignment during system recovery from its high head SI lineup. To address valve packing extrusion during the event and the potential existence of a containment bypass path, Dominion performed an assessment which identified likely causes for the loss of valve packing integrity, the principle likely causes being potential design issues with the alternative minimum flow system resulting in pressure transients, coupled with weakness in the valve packing program which resulted in degraded packing conditions. Actions to prevent recurrence were also identified, including changes to the alternative minimum flow system, using higher gland stress for composite packing in certain systems, and recommendations to improve the overall valve packing program. Based on the actions planned and taken to date, the inspector concluded that they were sufficient to address this URI. No violations of regulatory requirements were identified. This item is closed.

4OA6 Meetings, Including Exit

Access Controls to Radiologically Significant Areas Exit Meeting Summary

On February 16, 2006, the inspector presented the inspection results to members of Dominion management. Dominion acknowledged the conclusions presented.

Integrated Report Exit Meeting Summary

On April 20, 2006, the resident inspectors presented the overall inspection results to Mr. J. Alan Price and other members of his staff, who acknowledged the findings. The inspectors asked Dominion whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee Identified Violations

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

Unit 2

Technical Specification 4.8.1.1.2.C.9, “Emergency Diesel Generator [EDG] Hot Restart Surveillance,” requires that the EDGs be tested to verify their hot restart capability. Contrary to this, it was identified by Dominion that this surveillance requirement was not performed within the required periodicity plus grace period for the “B” EDG. This was identified in Dominion’s corrective action program as CR-06-01050. This finding is of very low safety significance because an evaluation was performed, risk was adequately managed, and the “B” EDG was satisfactorily tested.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

J. Armstrong, Fire Protection Engineer
M. Bain, Unit 2 Shift Manager
S. Baker, Assistant Operations Manager
W. Bartron, Licensing Lead Engineer
B. Blain, Instrumentation & Control Supervisor
J. Borlie, System Engineer
W. Brown, Nuclear Technical Analyst
P. Calandra, ALARA Coordinator
A. Chyra, Nuclear Engineer
M. Cody, Unit 2 Supervisor, Requalification Training
W. Collins, Radiation Protection Technician
K. Cortis, Specialist III
R. DeConto, Design Engineer
D. DelCore, Supervisor Health Physics Operations
D. Dodson, Supervisor - Licensing
J. Doroski, Senior Health Physicist
W. Eakin, Engineer
S. Garvin, Fire Marshall
M. Garza, Plant Equipment Operator
R. Gosse, Technician, Condition Based Maintenance
R. Griffin, Acting Director - Operations and Maintenance
J. Grogan, Unit 2 Instrumentation & Control Supervisor
P. Grossman, Engineering Manager
A. Jordan, Director, Nuclear Station Operations and Maintenance
J. Joswick, Radiation Protection Technician
B. Kaufman, Supervisor Nuclear Oversight
J. Kunze, Unit 2 Operations Manager
E. Laine, Manager, Radiological Protection & Chemistry
P. Luckey, Emergency Preparedness Manager
R. MacManus, Director, Nuclear Engineering
J. Mangeno, Fire Protection Engineer
F. Matovic, Unit 2 Senior Radiation Protection Technician
W. McCollum, Unit Supervisor
R. McGinnis, System Engineer
R. McIntosh, Licensing
K. Miles, Shift Supervisor Health Physics
T. Moore, Service Water System Engineer
K. Muccino, Supervisor Corrective Actions
M. Nappi, Supervisor Radiation Protection Services
M. O'Connor, Shift Manager
F. Perkins, EDG System Engineer
D. Perry, Component Engineer

F. Perry, Supervisor Exposure Control and Instrumentation
J. Powers, Nuclear Engineer
A. Price, Site Vice President - Millstone
D. Regan, Supervisor, Radiation Protection Support (ALARA)
N. Sacco, Supervisor of Piping and Mechanics
J. Salvatore, Control Room Supervisor
S. Scace, Director, Nuclear Station Safety and Licensing
J. Semancik, Supervisor, Nuclear Shifts Ops/Unit 3
A. Smith, EDG System Engineer
H. Thompson, System Engineer
P. Tulba, Supervisor Radioactive Material Control
S. Turowski, Supervisor Health Physics Tech Services
J. Wasylik, Shift Manager

NRC personnel

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P. A. Presby, Operations Engineer, DRS
S. M. Schneider, Senior Resident Inspector, DRP
D. M. Silk, Senior Emergency Preparedness Inspector, DRS
D. L. Werkheiser, Acting Senior Resident Inspector, DRP

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

Opened and Closed

05000423/2006002-01	NCV	Mis-positioning of Boric Acid Valves Resulting in Unintended Positive Reactivity Addition (1R14)
05000336/2006002-02	NCV	Failure to comply with TS during WRNI surveillances (4OA5.2)

Attachment

Closed

05000423/2005-001-00	LER	Hydrogen Recombiners Out of Service (4OA3.2)
05000423/2005-003-00	LER	Manual Reactor Trip Due to Loss of Two Circulating Water Pumps in Same Condenser Section (4OA3.3)
05000336/2004007-05	URI	Main Steam Code Safety Valve Testing (4OA5.1)
05000336/2005301-02	URI	Potential Gap in Technical Specification Requirements for Nuclear Instrument Operability (4OA5.2)
05000423/2005012-02	URI	DNC Integrated Assessment of Charging System Performance following the April 17, 2005 Inadvertent Safety Injection (4OA5.3)

Discussed

05000336/2006006-03	NCV	Inadequate Suitability of Application Evaluation for Dampener Modification (1R14)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

AOP-2560, Revision 010-01, Storms, High Winds and High Tides
AOP-3569, Revision 015-02, Severe Weather Conditions

Section 1R04: Equipment Alignment

Partial System Walkdown

OP-304A, Revision 029-05, Charging and Letdown
OP-2308-001, Revision 000-00, HPSI System Valve Alignment, Facility 1
SP-3626.5, Revision 012-03, Service Water Pump 3SWP*P1B Operational Readiness Test
P&I Drawing 25203-26017, Sheet 3 of 3, Revision 34, Boric Acid System
P&I Drawing 25203-26017, Sheet 1 of 3, Revision 50, Charging System
P&I Drawing 25203-20150, Sheet 56, Revision 11, HCB-19 By-Pass from Boric Pump Discharge to Volume Control Tank Discharge
P&I Drawing 25203-20150, Sheet 54, Revision 28, Charge Pump Suction from Volume Control Tank
P&I Drawing 25203-20150, Sheet 164, Revision 14, Boric Acid Pump Discharge to Charge Pump
P&I Drawing 25203-20150, Sheet 167, Revision 19, Demin. Water Make Up to Vol. Control Tk.

& Charge Pumps
P&I Drawing 25203-20150, Sheet 168, Revision 12, Primary Water to Reactor Coolant Makeup Chemical Volume Control System HCD-36
P&I Drawing 25203-20150, Sheet 394, Revision 18, Charge Pump Suction from Volume Control Tank
P&I Drawing 25203-20177, Sheet 1, Revision 3, Charging Pump PI8B & C Replacement Suction & Disch

Complete System Walkdown

OP-2322, Revision 026-00, Auxiliary Feedwater System
OP-3322-001, Revision 006-05, TDAFW Pump and Components Common to Both Trains
SP-2669A-002, Revision 037, Unit 2 Aux Building Rounds
CR-05-13810, P9B, "B" AFW Pump Did Not Start When Switch Was Put In Start
CR-05-13009, Unknown Substance Exuding From Motor Driven AFW Pump Room Wall
CR-05-05495, During Performance of AFW Pump and Check Valve Testing of 2610BK, A Water Hammer Situation Was Noted

Section 1R05: Fire Protection

Millstone Unit 2 Fire Hazards Analysis, Revision 9
CR-06-00372, Transient Combustible Fire Loading Did Not Have a Permit
UFSAR 9.10.3, Revision 22, Safety Evaluation and Fire Hazards Analysis
Unit 2 Fire Area Report
Unit 3 Fire Protection Evaluation Report
Calculation No. COMBLOAD-1325M3, Revision 0, Auxiliary Building Fire Loading Calculation
FPI 50-001, Revision 010-00, Fire Brigade Drill Assessment Data Sheet
WC 7, Revision 005-02, Attachment 7, Fire Protection Program
AWO M3-05-15001, Emergency Diesel Generator "B"

Section 1R06: Flood Protection Measures

Unit 2 Internal Flooding Evaluation
Sump Alarm Responses, CA-22, BB-22
IC 2440, Revision 0, Circulating Water Pump Trips Functional Test
EN 21243, Revision 001, Millstone Unit 2 Service Water System Pipe Liner/Coating Inspection, Preventative Maintenance and Surveillance Program
Calculation No. 12179-P-1073, Revision 0, Change No. 02, Maximum Flood Levels and Effect on Safety Related Equipment in the Diesel Generator Building
Drawing No. EM-157A, Revision 23, Plant Drainage

Section 1R11: Licensed Operator Requalification Program

Millstone Simulator Exercise Guide Approval Sheet, OP Exam 4, Revision 1, ID Number S06104, NUTIMS Module #01394
Millstone Simulator Exercise Guide Approval Sheet, LORT Cycle 06-2 Simulator Progress

Review Exam, Revision 0, ID Number ES06201
TRN-1, Administering Training
TRN-11.4, Continuing Training for Licensed Personnel

Section 1R12: Maintenance Effectiveness

MP-24-MR-FAP710, Revision 1, Maintenance Rule Functional Failures & Evaluations
CR-06-01796, Reactor Trip due to Instrument Air Loss
CR-05-10238, Approximately 1 Quart of Freestanding Water was Drained for the "B" Diesel Rocker Arm Lube Oil Reservoir Following OP Test on 9/27/05
10 CFR 50.65, Requirements of Monitoring the Effectiveness of Maintenance at Nuclear Power Plants
NUMARC 93-01, Revision 2, NEI Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants
Millstone Unit 2 Maintenance Rule Scoping Documents
Millstone Unit 3 Maintenance Rule Scoping Documents
Maintenance Rule Functional Failure Evaluation for CR-06-01796
Maintenance Rule Functional Failure Evaluation for CR-05-10238

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Millstone Unit 2 Technical Specification Limiting Condition of Operation 3.5.2 and Bases
CR-06-00699, "A" ESF Room Cooling Isolation Failed to Fully Open
Millstone Unit 2 EOOS Output dated February 3, 2006
Millstone Unit 2 eSOMS Log dated 2/2/06-2/3/06
Work Week Schedule 0605, 2/3/06
MP-13-PRA-FAP01.1, Revision 0, Performing Risk Reviews
TM2-06-002, Disconnect U2 PMG and Supply Substitute 120 VAC Power to EHC Backup Power Supplies
SPROC ENG06-2-003, Revision 001, Connection of Substitute 120VAC Power to EHC Back Up Power Supplies
Major Equipment Schedule

Section 1R14: Operator Performance During Non-Routine Evolutions and Events

AOP-2504A, Revision 003-07, Loss of Non Vital Instrument Panel VR-11
AOP-2517, Revision 000-04, Circulating Water Malfunctions
AOP-2563, Revision 009-02, Loss of Instrument Air
AOP-3573, Revision 014-02, Radiation Monitor Alarm Response
AOP-2568, Revision 007-01, Reactor Coolant System Leak
OP-3313C, Revision 006-02, CRDM Cooling System
OP-2325A, Revision 027-01, Circulating Water System
OP-2385, Revision 010-00, Feedwater Control System Operation
OP-2202, Revision 021-00, Reactor Startup IPTE
OP-2301C, Revision 016-04, Reactor Coolant Pump Operation
OP-2304E, Revision 015, Charging Pumps

EOP 2525, Revision 020-00, Standard Post Trip Action
EOP 2526, Revision 011-00, Reactor Trip Recovery
EOP 2541, Revision 006-00, Shutdown Margin
Dominion ERT Timeline dated January 9, 2005, Loss of Charging
USNRC ENS Report 42367 Dated February 24, 2006
NERF No. 2006049, Non-emergency Report Form dated 2/23/2006
CR-06-01165, 3HVU-FN2B, "B" CRDM Fan Tripped Off Line
CR-06-01167, Entered AOP 3573, Radiation Monitor Alarm Response CMS-RE22, Channel 2 in Alert and High Alarm
CR-06-01292, Unit 2 Intake Temperature Indication T6690 Appears Inaccurate
CR-06-01893, Unit 2 Main Turbine Permanent magnet Generator Appears To Have Failed
CR-06-01833, EOP-2541, Appendix 4, Doesn't Direct Restoration of Auto Aux Feed Over Ride
CR-06-01796, Reactor Trip due to Instrument Air Loss
CR-06-01457, Single Point Vulnerability for Plant Trip from 2-IA-623 (Instrument Air to Turbine Building Excess Flow Check)
CR-06-01823, VR-11 Swapped to the Emergency Source on the Plant Trip
CR-06-01828, Non-vital 120 VAC Panel VR-11 Shifted to Alternate Supply during Reactor Trip
CR-06-01791, No Backup Air to "A" Aux Feed Reg Valve
CR-06-01891, Entered DNB Tech Spec Due Low Pressurizer for 2 Minutes
CR-06-02310, Service Water Line 6-JGD-7 ("B" EDG) has a Pin Hole Leak
CR-06-02321, Need AWO to Perform GL 90-05 Ultrasonic Testing of Additional Service Water Spools due to Leak on "B" EDG Service Water Discharge Spool P-032
GL 90-05, Guidance for Performing Temporary Non-code Repair of ASME Class 1, 2 and 3 Piping
SP-3604C.5, Revision 008-03, Boric Acid Pump 3CHS*P2B Operational Readiness Test
SP-21238, Revision 002-03, RCS Leak Test
MS3-FSAR 9.4.7.4, Revision 17, CRDM Ventilation and Cooling Subsystem
TRM 3/4.1.2, Boration Flow Paths
DWG #12179-EM-104C-30, PI&D CVCS
Millstone Power Station Operational Focus Report, February 7, 2006
U2 Control Room SPDS Display for Feedflow/Drains dated 2/24/2006
U2 Control Room SPDS Display for Main Steam Safety Valves dated 2/23/2006
U2Control Room SPDS Display for Analog Point P7079 Instrument Air Dated 2/23/2006
Millstone Unit 2 Sequence of Events LOU dated 2/23/2006
U2 Control Room Analog Point Display Post Trip For Pressurizer Pressure dated 2/23/06
U2 Control Room Analog Point Display Post Trip For Pressurizer Level dated 2/23/2006
U2 Control Room Analog Point Display Post Trip For #1 S/G Pressure dated 2/23/2006
U2 Control Room Analog Point Display Post Trip For #2 S/G Pressure dated 2/23/2006
U2 Control Room Analog Point Display Post Trip For #1 & #2 Feed Flow dated 2/23/2006
U2 Control Room Analog Point Display Post Trip For Containment Temperature dated 2/23/2006
U2 Control Room Analog Point Display Post Trip For Condensate Storage Tank Level dated 2/23/2006
U2 Control Room Analog Point Display Post Trip For Reactor Power dated 2/23/2006
U2 Control Room Analog Point Display Post Trip for Total Charging Flow dated 2/23/2006
U2 LBDCR 05-MP2-005, Core Operating Limits Report dated 4/12/2005

Control Room Logs

Section 1R15: Operability Evaluations

CR-05-13098, Received "Pri Clnt Loop Loose Parts" Alarm
CR-05-13098, Received C04 Alarm "Pri Clnt Loop Loose Parts" Indicating An Alarm On The Loose Parts Monitor
CR-05-12607, Loose Parts Monitoring System Channel 751, Upper Reactor Vessel, Is Detecting Multiple Events Daily
CR-05-14294, CRPD - Loose Parts Monitor Causing Frequent Alarms
CR-06-00584, Pipe Support Missing on Discharge of the "A" Charging Pump Discharge Relief Valve 2-CH-326
CR-06-00604, Ground Strap on "C" Charging Pump has a Branch Connection That Is Not Connected to Anything
CR-06-00605, Conduit Hanger has Missing Nut on Hanger Clamp Half
CR-06-00482, Potential Part 21 on EDG Governing System DRU (Speed Control Unit)
CR-04-04200, Fairbanks Morse Engine has Determined a Potential Safety Hazard with the Woodward Digital Reference Unit (DRU)
CR-06-00866, RCS Leakage (due to work on 3CHS*P3B) Exceeds Tech Spec 6.8.4.A Limit
CR-06-00775, 3CHS*P3B Tagging - Experiencing Approximately 15 GPH Boundary Leakage
CR-06-00892, The Unit 3 "B" Charging Pump, 3CHS*P3B, is Out of Service
CR-06-01050, "B" EDG Missed Tech Spec Surveillance
CR-06-00233, Unplanned Entry into TSAS 3.0.3 - Loss of All Charging Pumps
CR-05-13753, Minor Boric Acid Leakage from "B" Charging Pump Dampener Plus
CR-06-00651, Minor Service Water Leak (Sweepage) from T-Fitting Located Between 3SWP*V204 and 3SWP*V195
CR-06-00244, 3FWA&P2, Turbine Driven Auxiliary Feedwater Pump Started From Slave Relay Per 3622.3. 3MSS*V005 Tripped During Start-up. Terminated Procedure
CR-06-02955, Separate Strainer Elements Had a Missing Weld in the "C" Strainer
CR-06-02039, The Unit 3 Turbine Driven Aux Feed Pump (3FWA*P2) Steam Control Valve (3MSS*MCV5) Stuffing Box ID is Larger than Specified in the Technical Manual
CR-06-00808, Extent of Condition Review from 3CHS*P3B Shaft Failure
CR-06-00774, Upon Disassembly of 3CHS*P3B Found the Pump Shaft Sheared into Two Pieces
CR-06-00724, Repetitive Attempts to Restore Charging Pump 3CHS*P3B Operability Were Unsuccessful
CR-06-00638, MP3 3CHS*P3B Charging Pump and Motor Exhibit Vibration That Indicated Coupling and Alignment Problems
SP-3612B.5, Revision 0, Primary Coolant Leakage Outside Containment
MP2-002-06, MP2 Charging Pumps P-18A, P-18B, and P-18C Pulsation Dampeners
MP2-003-06, Missed TS 4.8.1.1.2.C.9 Surveillance on "B" Diesel
MP3-005-06, Turbine Driven Auxiliary Feedwater Pump Steam Control Valve Stuffing Box ID is Larger Than Specified in the Technical Manual
MP3-006-06, Two Missing Welds on "C" Service Water Pump Strainer
MP3-001-061, Minor Leak in a Tee Fitting Downstream of "B" CCE HX Inlet Valve
MP3-002-06, Upon Disassembly of 3CHS*P3B, Found the Pump Shaft Sheared into Two

Pieces
MP-2783, Revision 001-02, Charging Pump Pulsation Dampener
MP-24-ENG-FAP947, Revision 000-01, Non-Code Repairs in Safety Class 3 Piping
MP-13-PRA-REF01, Revision 001, PRA Reference for Missed TS Surveillances
Millstone Unit 2 TS 4.0.3 and TSSR 4.8.1.1.2.C.9
RAC 12-001, Revision 001, 50.59/72.48 Screen Form
Esoms Log dated 2/2/06 - 2/3/06
Technical Specification Amendment #277 for OL-DPR-65, dated July 25, 2003
RP-5, Revision 005, Operability Determination
Unit 3 TRM 7.4.1, Action a.3, Fire Related Safe Shutdown Components
Unit 3 Technical Specification
Unit 3 FSAR, Revision 17.3, Section 9.5-1, Fire Protection System
Unit 3 Fire Protection Evaluation Report for Fire Area AB-1
EOP-3509.3, Revision 001-01, Aux Bldg 4'6" Area and 24'6" North Floor Area
OD MP3-003-06 dated 1/31/06, Basis for Initial Reasonable Expectation of Continued Operability or Reasonable Assurance of Safety for Non-Technical Specification SSC's
Unit 3 Technical Specification 6.8.4.a, Primary Coolant Sources Outside Containment
Engine Systems, Inc. Report 10CFR21-0091, Revision 0, 10CFR21 Reporting of Defects and Non-Compliance, dated January 23, 2006
Fairbanks Morse Engine Report, 10CFR21 for Woodward Digital Reference Unit FM ID#06-01, dated January 12, 2006
Letter from Dominion to the NRC dated May 27, 2004 regarding Millstone 3, Proposed Technical Specification Changes Implementation of Alternate Source Term, SN-04-285
10 CFR 50.67, Revision 02, Accident Source Term
U3-24-PCS-PRG, Revision 02, Technical Specification 6.8.4a - Primary Coolant Sources Outside Containment Program Manual

Section 1R19: Post Maintenance Testing

AWO M2-06-00601, "B" Charging Pump P18B Suction and Discharge Valve Replacement
AWO M2-06-00880, "A" ESF Room Cooling Isolation 2RB-68.1A Repair
AWO M3-06-00181, MCC Starter for 3CHS*MV8105 Charging Pump to Reactor Cooling Isolation Valve
AWO M3-02-03896, Control Room Ventilation Outlet Isolation Valve 10 Year Overhaul
AWO M2-04-12273, "B" LPSI Pump Breaker Modification PMT
AWO M2-06-01915, Main Turbine Electrohydraulic Control System
AWO M3-06-02484, Control Room Door Contingency AWD
AWO M3-06-00466, 3FWA*P2 Control Valve Rebuild and Governor Replacement
SPROC ENG06-2-003, Revision 001, Connection of Substitute 120 VAC Power to EHC Backup Power Supply
MP-3762BK. Revision 005-01, Bettis Model 500C and 700C Series Actuator Maintenance
CMP-780A, Revision 002-02, GE Model AM Magne-Blast Circuit Breaker PM
SFP-5, Revision 002-05, Fire Door Inspections
SPIP-85H, Revision 001-03, Security Equipment Inspection and Testing
SP-3614I.5, Revision 004-00, SLCRS and Control Room Habitability Door Inspection
SP-3614F.3, Revision 008-07, Control Room Envelope Pressurization Test

Section 1R20: Refueling and Other Outage Activities

CP 3802E, Revision 001-02, Reactor Coolant Gas Sampling and Analysis
OP-2202, Revision 021-00, Reactor Startup IPTE
OP-2201, Revision 030-01, Plant Heatup
OP-2264, Revision 009-10, Conduct of Outages
OP-2203, Revision 017-00, Plant Startup
OP-2208, Revision 013-07, ECP Data Sheet Dated 2/24/06
Control Room Logs
Event Review Report, Manual Reactor Trip Following Loss of Main Feedwater due to Loss of Instrument Air in the Turbine Building on February 23, 2006, dated 2/24/06
Management Readiness Review Prior to Unit 2 Reactor Startup, dated 2/24/06
DNAP-1604, Revision 3, Cause Evaluation Program
Millstone Unit 2 Forced Outage Schedule, MP2F05

Section 1R22: Surveillance Testing

SP-2613L-001, Revision 002-02, Periodic DG Slow Start Operability Test, Facility 1 (Loaded Run)
SP-2601H-001, Revision 010-02, "C" Charging Pump and Discharge Check IST, Operating;
SP-2663-003, Revision 000-02, "C" Charging Pump Suction Stabilizer;
SP-2830, Revision 007-02, Sampling Reactor Coolant for Dissolved Oxygen Chloride and Fluoride Analysis
SP-3626.5, Revision 012-03, Service Water Pump 3SWP*P1B Operational Readiness Test
SP-3610A.1, Revision 011-02, Residual Heat Removal Pump 3RHS*P1A Operational Readiness Test
SP-3622.2-001, Revision 013-07, TDAFW Pump Operational Readiness Test
SP-2401GD, Revision 002, RPS "D" Bistable Trip Test
SP-2401FB, Revision 002-03, Reactor Protection System Channel "B" High Power Trip Test
SP-3680.1, Revision 005-1, General Trending Procedure
SP-3612B.5, Revision 0, Primary Coolant Leakage Outside Containment
SP-3680.1-003, Revision 002-01, Containment Leakage Trending, dated 1/7/06
SP-3680.1-003, Revision 002-01, Containment Leakage Trending, dated 1/8/06
SP-3680.1-003, Revision 002-01, Containment Leakage Trending, dated 1/9/06
SP-3680.1-003, Revision 002-01, Containment Leakage Trending, dated 1/30/06
Special Program-3J3, Revision 2, Reactor Coolant System Leakage
CR-06-00775, 3CHS*P3B Tagging - Experiencing Approximately 15 GPH Boundary Leakage
CR-06-00866, RCS Leakage Exceeds TS 6.8.4A Limit
CR-06-01975, The Thrust Circuit of a Strain Gauge Mounted on the Stem of SGAFW Turbine Control Valve 3MSS*MCV5 Failed During Surveillance Testing
OP-2346C-002, Revision 000-01, "B" DG Data Sheet
Unit 3 Technical Specification 6.8.4.a, Primary Coolant Sources Outside Containment

Section 1R23: Temporary Plant Modifications

SPROC ENG06-2-003, Connection of Substitute 120 VAC Power to EHC Backup Supply

DWG EM-112A, Revision 42, Low Pressure Safety Injection
DWG EM-102A, Revision 25, Reactor Coolant System
DWG EM-102B, Revision 20, Reactor Coolant System
DWG EM-102D, Revision 17, Reactor Coolant System
DWG EM-102E, Revision 20, Reactor Coolant System
DWG EM-112B, Revision 21, Low Pressure Safety Injection
DWG EM-113A, Revision 24, High Pressure Safety Injection

Section 1EP4: Emergency Action Level and Emergency Plan Changes

50.54(q) Review Number MP-05-60
MP-26-EPI-FAP01, Revision 002-02, Control Room Emergency Operations
MP-26-EPI-FAP04, Revision 002-02, Emergency Operations Facility Activation and Operation
MP-26-EPI-FAP07, Revision 004-02, Notifications and Communications
MP-26-EPI-FAP08, Revision 002-03, Evacuation and Assembly
MP-26-EPA-FAP05, Revision 003, EP Facility Maintenance

Section 2OS1: Access Control to Radiologically Significant Areas

Procedures

RPM 1.1.1, Revision 8, Radiation Protection Organization Responsibilities of Key Personnel
RPM 1.3.8, Revision 8, Criteria for Dosimetry Issue
RPM 1.4.1, Revision 7, ALARA Reviews and Reports
RPM 1.4.2, Revision 2, ALARA Engineering Controls
RPM 1.4.4, Revision 2, Temporary Shielding
RPM 1.5.1, Revision 10, Routine Survey Frequency
RPM 1.5.2, Revision 4, High Radiation Area Key Control
RPM 1.5.5, Revision 5, Guidelines for Performance of Radiological Surveys
RPM 1.5.6, Revision 4, Survey Documentation and Disposition
RPM 1.6.4, Revision 3, Siemens Electronic Dosimetry System
RPM 2.1.1, Revision 6, Issuance and Control of RWPs
RPM 2.1.2, Revision 2, ALARA Interface with the RWP Process
RPM 2.1.3, Revision 1, Identification & Control of High Radiological Risk Work
RPM 2.2.6, Revision 11, Continuous Air Monitors
RPM 2.4.1, Revision 4, Posting of Radiological Control Areas
RPM 2.5.1, Revision 1, Health Physics Requirements for Diving Operations
RPM 2.5.2, Revision 2, Guidelines for Spent Fuel Pool & Flooded Reactor Cavity Work
RPM 2.5.7, Revision 0, SAIC Underwater Personnel Dosimetry Operation
RPM 2.5.8, Revision 2, Staytime Tracking & Multi-badging for Special Work
RPM 2.8.2, Revision 2, Requirements for Entry into MIDS Very High Radiation Areas
RPM 2.10.2, Revision 11, Air Sample Counting and Analysis
RPM 2.11.1, Revision 10, Survey & Decontamination of Personnel and Clothing
RPM 5.2.2, Revision 11, Basic Radiation Worker Responsibilities
RPM 5.2.3, Revision 4, ALARA Program and Policy
RPM-GDL-008, Revision 0, Electronic Dosimeter Alarm Set Points

OPS-FH210, Revision 0, Spent Fuel Pool Operations
OP 3361A, Revision 8, Personnel Access Control to the MID System Components Inside Containment

Nuclear Oversight Field Observations (QCFOB)/Audit

NODFOB-05-096, Unit 3 Radiological Control Area Walkdown
NODFOB-06-006, "B" Charging Pump Work
NODFOB-05-094, Pressurizer Weld Overlay
Audit 05-06, RP/PCP/CHEM Programs
Nuclear Oversight Assessment No. 05-034-M, Millstone Unit 3 Refueling Outage 10 Assessment

Radiation Protection Department Self-Assessment

MP-SA-05-052, ALARA Dose Goal Investigation Criteria

Condition Reports

06-01598, 06-01487, 06-00138, 06-00610, 06-00702, 06-00748, 05-13331, 05-13609, 05-13638, 05-13656, 05-13745, 05-14087, 05-14236, 05-12574, 05-12604, 05-12889, 05-13228, 05-11232

ALARA Council Meeting Notes

Meeting conducted on: December 13, 2005

Section 4OA1: Performance Indicator (PI) Verification

SP-2830, Revision 007-02, Sampling Reactor Coolant for Dissolved Oxygen, Chloride and Fluoride Analysis
SP-2619A-001, Revision 044-04, Control Room Daily Surveillance, Modes 1 & 2
SP-2619A-001, Revision 044-05, Control Room Daily Surveillance, Modes 1 & 2
SP-2619A-001, Revision 044-07, Control Room Daily Surveillance, Modes 1 & 2
SP-3670.1-001, Revision 023-02, Mode 1-4 Daily and Shiftly Control Room Rounds
SP-3670.1-001, Revision 024-02, Mode 1-4 Daily and Shiftly Control Room Rounds
SP-3670.1-001, Revision 024-03, Mode 1-4 Daily and Shiftly Control Room Rounds
Millstone 2 4th Quarter/2005 Performance Indicators
Millstone 3 4th Quarter/2005 Performance Indicators
NEI 99-02, Revision 1, Regulatory Assessment Performance Indicator Guideline
MP2 PI-DVS 9 - MP2 Reactor Coolant System Activity (RCSA)
MP3 PI-DVS 9 - MP3 Reactor Coolant System Activity (RCSA)
RCS Specific Activity (NRC Indicator) Unit 2
RCS Specific Activity (NRC Indicator) Unit 3
Millstone Unit 2 & 3 RCS Leakage Data January 2004 thru January 2006
Millstone Unit 2 & 3 RCS Specific Activity Data January 2004 thru January 2006

CP-3802E, Revision 001-02, Reactor Coolant Gas Sampling and Analysis

Section 4OA5: Other Activities

Technical Specifications (TS) Amendment 38 and supporting information:
NNECO letter dated February 22, 1978, “Proposed Revisions to Technical Specifications”
NRC Letter dated April 19, 1978, “Issuance of Amendment 38 to Facility Operating License No. DPR-65 for the Millstone Nuclear Power Station Unit No. 2"
System Description SD-52, Revision 2, Wide Range Neutron Instrumentation
OP-2202, Revision 021-00, Reactor Startup ITPE
Footnote (a) of TS Table 3.3-1, September 25, 2003
SP-2401BB1, Revision 002, Channel “A” Wide Range Logarithmic Flux Monitor Start-Up Functional Test
SP-2401GA, Revision 002-04, RPS Channel A Bistable Trip Test
EN 21022, Revision 007-03, Control of Reactor Engineering
Calculation 00-ENG-02986-F2, Revision 03, Evolution of Millstone 2 Core Neutron Leakage
Millstone Power Station Unit 2 FSAR, Revision 22.6, Section 14.4.1, Uncontrolled Control Rod/Bank Withdrawal from a Subcritical or Low Power Startup Condition
Root Cause Evaluation CR-05-03735, Charging System Alternate Minimum Flow System Loss of Valve Packing Integrity, 5/25/05
Summary Report of the Millstone Unit 3 Reactor Trip of April 17, 2005, Undated
April 17, 2005 MP3 Safety Injection Actuation Event Radiological Review
SP-ME-883, Standard Specification for Alternate Valve Stem Packing Replacement, Revision 0, 1/12/93
AWO M3-04-08166, 3CHS*V661 has Dry, White Boric Acid Film on its Packing, 4/18/05
AWO M3-05-10145, 3CHS*V661 has Active Packing Leak, 7/20/05
AWO M3-05-15654, Increase of Torque Preload Required, 10/24/05
EPRI NP-5697, Valve Stem Packing Improvements, May 1988
DWG 12179-CP-374521, Revision 5, Sheet 3 of 3, Chemical and Volume Control Piping Auxiliary Building
DWG 25212-26904, Revision 46, Sheet 1 of 4, Piping & Instrumentation Diagram Chemical and Volume Control, 3/14/06
DWG 25212-26904, Revision 24, Sheet 2 of 4, Piping & Instrumentation Diagram Chemical and Volume Control, 9/20/99
DWG 25212-26904, Revision 30, Sheet 3 of 4, Piping & Instrumentation Diagram Chemical and Volume Control, 9/20/99
CR-05-03735, CHS*V661, CHS*MV8511B Packing Leaks
CR-05-03926, Request AWO Be Generated To Support Proper Fill and Vent of 3CHS*RV8510A(B) Following Maintenance of Upstream Valves
CR-05-04472, During a Plant Walkdown, With the NRC, A question Came Up On The Methodology Used In SP3608.4, HPSI Vent and Valve Lineup
CR-05-11917, 3CHS*V661 and 3CHS*V663 Packing

LIST OF ACRONYMS

ALARA	as low as is reasonably achievable
AOP	abnormal operating procedure
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CHS	Charging System
CR	condition report
CRDM	control rod drive mechanism
DNB	Departure from Nucleate Boiling
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	emergency diesel generator
EOP	emergency operating procedure
FSAR	Final Safety Analysis Report
gpm	gallons per minute
I&C	instrumentation and control
IMC	Inspection Manual Chapter
LCO	limiting conditions of operations
LER	Licensee Event Report
LHRA	locked high radiation area
MR	Maintenance Rule
MSSVs	main steam code safety valves
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PI	performance indicator
PMG	permanent magnet generator
PMT	post-maintenance tests
PPC	primary plant computer
PRNIs	power range nuclear instruments
RCS	reactor coolant system
RPS	reactor protection system
RWP	radiation work permits
SDP	significance determination process
SG	steam generator
SI	safety injection
SP	surveillance procedure
TMLP	Thermal Margin/Low Pressure
TS	technical specification
TSAS	technical specification action statement
URI	Unresolved Item
VCT	volume control tank
WRNIs	wide range nuclear instruments