



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

October 27, 2014

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

**SUBJECT: MILLSTONE POWER STATION – NRC INTEGRATED INSPECTION REPORT
05000336/2014004 AND 05000423/2014004**

Dear Mr. Heacock:

On September 30, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Millstone Power Station, Units 2 and 3. The enclosed inspection report documents the inspection results, which were discussed on October 7, 2014, with Mr. Stephen E. Scace, Site Vice President, 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.

No findings were identified during this inspection.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390 of the NRCs "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available

D. Heacock

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Sincerely,

/RA/

Raymond R. McKinley, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000336/2014004 and 05000423/2014004
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos. 50-336 and 50-423

License Nos. DPR-65 and NPF-49

Report Nos. 05000336/2014004 and 05000423/2014004

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Power Station, Units 2 and 3

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

Dates: July 1, 2014 through September 30, 2014

Inspectors: J. Ambrosini, Sr. Resident Inspector, Division of Reactor Projects (DRP)
N. Day, Resident Inspector (Acting), DRP
B. Haagensen, Resident Inspector, DRP
L. McKown, Resident Inspector, DRP
J. DeBoer, Project Engineer, DRP
S. Shaffer, Senior Project Engineer, DRP

Approved By: Raymond R. McKinley, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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SUMMARY

IR 05000336/2014004, 05000423/2014004; 07/01/2014 – 09/30/2014; Millstone Power Station (Millstone) Units 2 and 3, Routine Integrated Inspection Report.

This report covered a three-month period of inspection by resident inspectors and regional project engineers. No findings were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4.

Other Findings

Two violations of very low safety significance that were identified by Dominion were reviewed by the inspectors. Corrective actions taken or planned by Dominion have been entered into Dominion's corrective action program (CAP). These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Millstone Units 2 and 3 began the inspection period operating at 100 percent power and operated at or near 100 percent power for the period with one exception. On July 26, Unit 2 began a shutdown required by technical specifications (TS) because the turbine-driven auxiliary feedwater pump (TDAFW) was inoperable for greater than the allowed outage time. Unit 2 returned to 100 percent power on July 31.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

.1 External Flooding

a. Inspection Scope

During the week of August 4, the inspectors performed an inspection of the external flood protection measures for Millstone. The inspectors reviewed TS, procedures, design documents, and the Updated Final Safety Analysis Report (UFSAR), which depicted the design flood levels and protection areas containing safety-related equipment to identify areas that may be affected by external flooding. The inspectors conducted a general site walkdown of external areas of the plant and the emergency diesel generator (EDG) enclosures to ensure that Dominion erected flood protection measures in accordance with design specifications. The inspectors also reviewed operating procedures for mitigating external flooding during severe weather to determine if Dominion planned or established adequate measures to protect against external flooding events. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04 – 3 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

Unit 2

- High Pressure Safety Injection, Facility 1, while Facility 2 was out of service for planned surveillance testing on August 12

- 'B' EDG due to recent scaffolding setup/removal and painting in the area on August 18 – 20

Unit 3

- AC [alternating current] Distribution System Normal and Emergency 4.16 kilovolt buses and 480 volt load centers, during TDAFW pump inoperability for condition monitoring on September 17

The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the UFSAR, Technical Specifications (TS), work orders, condition reports (CR), and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether Dominion staff had properly identified equipment issues and entered them into the CAP for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 7 samples)

a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that Dominion controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of service, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

Unit 2

- Reactor Coolant Pump Rebuild Shop Preparation Room, Area A-29 on August 4
- West Piping Penetration Area, Area A-8C on August 13

Unit 3

- Intake Structure East Service Water Cubicle Area CSW-3 on July 2
- Fire Areas EG-3A, North Enclosure, 'A' EDG and EG-4A, South Enclosure, 'B' EDG on July 30
- East Switchgear Room (Inverter Room), Area CB-17 on August 7
- West Switchgear Room, Area CB-1 on September 17
- Engineered Safety Features Building 'B' Motor-Driven Auxiliary Feedpump Cubicle, Area ESF-9 on September 22

b. Findings

No findings were identified.

1R07 Heat Sink Performance (711111.07A – 1 sample)

a. Inspection Scope

The inspectors reviewed the Unit 3 EDG thermal performance test, which tested the jacket water, lube oil cooler, and intercooler heat exchangers to determine readiness and availability to perform safety functions. The inspectors reviewed the design basis for the component and verified Dominion's commitments to NRC Generic Letter 89-13. The inspectors observed actual performance tests for the heat exchangers and/or reviewed the results of previous inspections of the 'A' EDG jacket water, intercooler, and lube oil heat exchangers. The inspectors discussed the results of the most recent inspection with engineering staff and reviewed pictures of the as-found and as-left conditions. The inspectors verified that Dominion initiated appropriate corrective actions for identified deficiencies and properly computed the bio-fouling factors. The inspectors also verified that the number of tubes plugged within the heat exchanger did not exceed the maximum amount allowed.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11Q – 4 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training

a. Inspection Scope

The inspectors observed Unit 3 licensed operator requalification simulator training on August 6, which included response to a reactor coolant system leak, a failed power range channel nuclear instrument, and a large break loss of coolant accident with containment sump blockage. The inspectors observed Unit 2 licensed operator requalification simulator training on September 25, which included two scenarios. The first scenario began from 100 percent power with the failure of a feedwater heater extraction valve. The crew reduced turbine load using abnormal operating procedure 2525, "Rapid Downpower," and stabilized power at 92 percent. Subsequently, the simultaneous failure of the 'B' channel of the reactor protection system caused an

anticipated transient without scram and the failure of the 'D' reactor coolant pump seal caused a loss of coolant accident into the reactor building closed cooling water (RBCCW) system which bypassed containment to the auxiliary building. The operators tripped the reactor, initiated a safety injection actuation signal, and manually isolated the leak outside of containment and cooled down the plant. The second scenario began from 100 percent power with an earthquake causing a pressurizer level control failure. Subsequently, the failure of the circulating water pump caused a loss of condenser vacuum which lead to a reactor trip. The main steam line to #1 Steam Generator (S/G) failed causing a faulted generator and the #2 S/G experienced a tube rupture. The inspectors evaluated operator performance during the simulated events and verified completion of risk significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the TS action statements entered by the shift technical advisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room

a. Inspection Scope

The inspectors observed and reviewed reactor startup activities for Unit 2 on July 29, and July 30, 2014. The inspectors observed the Unit 3 end of life reactor coefficient testing in accordance with SP 31005A, "Moderator Temperature Coefficient and Power Coefficient Measurements, Power Exchange Method," during a four hour period on August 8, 2014. The inspectors observed the pre-test briefings and reactivity control briefings to verify that the briefings met the criteria specified in Dominion's Operations Section Expectations Handbook and Dominion's Administrative Procedure OP-AA-100, "Conduct of Operations." Additionally, the inspectors observed control room behavior to verify that procedure use, crew communications, and coordination of activities between work groups similarly met established expectations and standards.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 6 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that Dominion performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that Dominion

personnel performed risk assessments as required by Title 10 of the *Code of Federal Regulations* (10 CFR) 50.65(a)(4) and that the assessments were accurate and complete. When Dominion performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

Unit 2

- Yellow Risk scheduled for concurrent testing of 'A' service water (SW) pump and TDAFW pump on July 11
- Yellow Risk scheduled for concurrent 'C' SW strainer overhaul and 'C' RBCCW Pump in-service test on August 11
- Yellow Risk scheduled during 'A' EDG post-maintenance testing on September 30

Unit 3

- High Risk Contingency Plan for South Bus outage on September 5
- Planned entry into Red Risk state following the restoration of the TDAFW pump after the full flow test on September 13
- Plant Risk Assessment during performance of TDAFW pump confidence run scheduled concurrent with activities which could challenge S/G Feedwater on September 24

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 7 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

Unit 2

- CR553433, DB3-201D Battery Cell (Unit 2 Turbine Battery) Temps Above Max Cell Temp of 95 degrees on July 25
- CR554612, Terry Turbine failed SP2610BO-002, Quarterly Surveillance, on July 26
- CR 548846, Ultrasonic testing of feedwater piping on August 28

Unit 3

- ODM000334, 'A' power operated relief valve (PORV) Leakage on July 3
- CR556453, 'B' EDG crankcase vacuum pump out of service for maintenance on August 25
- CR557043, 'B' EDG recirculation damper failed closed on August 28
- CR558542, TDAFW Pump following full flow test on September 15

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to Dominion's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by Dominion. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 4 samples)a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

Unit 2

- RBCCW Outlet Valve Stroke and Timing Test following the drop test and addition of actuator oil on September 9

Unit 3

- Auxiliary Feedwater Pump 3FWA*P2 Operational Readiness Test following replacement of the failed K1 relay and associated power supply on July 16
- Station Blackout (SBO) Diesel following maintenance overhaul on July 23
- TDAFW pump full flow test following governor replacement on September 13

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 7 samples)a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant structures, systems, and components to assess whether test results satisfied TS, the UFSAR, and Dominion procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

Unit 2

- SP 2610BS, TDAFW Pump Full Flow Test in Mode 3 on July 27
- SP 2612A, 'A' SW Pump and Facility 1 Discharge Check Valve in-service test on August 8

Unit 3

- SP 3646A.1, 'A' EDG Start from the Emergency Generator Loading Sequencer on July 8
- SP 3622.3, Auxiliary Feedwater Pump 3FWA*P2 Operational Readiness Test on July 15
- SP 3670.4-015, Quarterly SBO preventive maintenance on July 23
- SP 3601F.5-007/008, Quarterly PORV Block Valve Stroke Testing change of In-service Testing frequency via relief request and Surveillance Testing frequency via surveillance frequency control program, on September 9 – 11
- SP 3622.3, Auxiliary Feedwater Pump 3FWA*P2 Operational Readiness Test on September 29

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index (10 samples)

a. Inspection Scope

The inspectors reviewed Dominion's submittal of the Mitigating Systems Performance Index for the following systems for the period of July 1, 2013 through June 30, 2014:

Unit 2

- Emergency AC System (EDGs) on September 29
- High Pressure Injection System on September 8
- Heat Removal System (Auxiliary Feedwater System) on September 8
- Residual Heat Removal System on September 8
- Cooling Water Systems on September 8

Unit 3

- Emergency AC System (EDGs) on September 23
- High Pressure Injection System on September 23
- Heat Removal System (Auxiliary Feedwater System) on September 25
- Residual Heat Removal System on September 23
- Cooling Water Systems on September 23

To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7. The inspectors also reviewed Dominion's operator narrative logs, CRs, mitigating systems performance index derivation reports, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 2 samples)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that Dominion entered issues into their CAP at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive

equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the CAP and periodically attended CR screening meetings.

b. Findings

No findings were identified.

.2 Annual Sample: Unit 3 Reactor Plant Closed Cooling Water (RPCCW) Heat Exchanger Tube Deterioration

a. Inspection Scope

The inspectors performed an in-depth review of Dominion's apparent cause analysis and corrective actions associated with CR 553047, "MP-3 Coating Damage in Inlet/Outlet End Channel Head over gasket area of 3CCP*E1A." Specifically, the 'A' and 'B' RPCCW heat exchangers, 3CCP*E1A/B, have experienced multiple tube leaks over a period of several years.

The inspectors assessed Dominion's problem identification threshold, cause analyses, extent of condition reviews, compensatory actions, and the prioritization and timeliness of Dominion's corrective actions to determine whether Dominion was appropriately identifying, characterizing, and correcting problems associated with this issue and whether the planned or completed corrective actions were appropriate. The inspectors compared the actions taken to the requirements of Dominion's corrective action program and 10 CFR 50, Appendix B. In addition, the inspectors performed field walkdowns and interviewed engineering personnel to assess the effectiveness of the implemented corrective actions.

b. Findings and Observations

No findings were identified.

The RPCCW heat exchangers have experienced tube leaks for several years. These leaks have resulted in several unplanned entries into TS 3.7.3 action statement which provides 72 hours to isolate or repair the leak. The RPCCW system is currently in an A(1) status for the maintenance rule and the heat exchangers are scheduled for replacement in refueling outages 3RFO17, 18, and 19.

Although the number of plugged tubes in each heat exchanger is below 115 (the current design limit), the number of plugged tubes added to the number of significantly damaged tubes which may require plugging in the near future exceeds the limit of allowable plugged tubes. For the 3CCP*E1A heat exchanger there are 117 tubes and for 3CCP*E1B heat exchanger there are 180 tubes that are either plugged or significantly degraded. If left unmitigated, the current rate of degradation may exceed the tube plugging limit prior to the scheduled heat exchanger replacement.

The inspectors noted that several proposed corrective actions were being pursued. CR 557017 directed preparation of work orders to implement a bridging strategy to coat the tube internals with a Plastacor epoxy for the first pass tubes of all three heat exchangers, 3CCP*E1A/B/C. This coating is designed to reduce the flow erosion rate and extend the life of the tubes until they are replaced.

.3 Annual Sample: Unit 2 Group 1 Pressurizer Proportional Heaters

a. Inspection Scope

The inspectors reviewed root cause evaluation 001114, associated with CR 538495, "Entry into 2 hour shutdown TSAS [technical specification action statement]". On January 30, 2014, Unit 2 entered a 2 hour shutdown action statement due to an unplanned loss of the Group 1 pressurizer proportional heaters concurrent with a planned maintenance outage on the B EDG. Dominion determined the root cause of the event was the continued failure of pressurizer heaters due to manufacturing defects associated with replacement heaters and determined this was a repeat failure because corrective actions to prevent recurrence (CAPRs) from a previous event in 2009 were not complete.

The inspectors assessed Dominion's problem identification threshold, cause analyses, extent of condition reviews, compensatory actions, and the prioritization and timeliness of Dominion's corrective actions to determine whether Dominion was appropriately identifying, characterizing, and correcting problems associated with this issue and whether the planned or completed corrective actions were appropriate. The inspectors compared the actions taken to the requirements of Dominion's CAP and 10 CFR 50, Appendix B.

b. Findings and Observations

No findings were identified.

In March 2009, Dominion completed a root cause analysis on a series of pressurizer heater and/or heater circuit failures that happened from 2007 – 2009, which determined that the root cause was fabrication deficiencies during the heater manufacturing process. CAPRs for this root cause included: (1) design engineering to determine manufacturing process changes and/or assessment of alternate heaters; (2) determination of appropriate replacement interval for heaters; and (3) development of control scheme to increase heater longevity. CAPR 1 was closed because Dominion determined the heater design had more impact than the manufacturing process. CAPR 2 was closed with no action taken. CAPR 3 was closed to the Request for Engineering Assistance (REA) process, with no follow on assignment. According to the CAP process at the time, the CAPR should have directed a follow on assignment for an REA and should have remained open until the REA was complete. This REA was later cancelled by the plant health committee.

For the January 2014 event, Dominion developed one CAPR (CAPR 000982), to "evaluate and determine the optimum solution for the Unit 2 pressurizer heater repeat failures." According to PI-AA-300, "Cause Evaluation," Revision 7, CAPR is defined as actions designed to prevent recurrence of the root cause. The inspectors determined that CAPR 000982 as stated was not sufficient on its own to prevent recurrence, as it did

not actually change anything related to the pressurizer heaters. However, this CAPR was closed on August 25, with an assignment to engineering to develop and present an REA for a new pressurizer heater design. Millstone Plant Health Working Group approved REA MP-2014-055 for scoping on August 11. The REA contains a reference to the CAPR, which acts as a safeguard to prevent inadvertent REA closure without an appropriate level of oversight. Completion and installation of the new heater design is not currently scheduled until 2RFO24 (2017), although there is a standing order for operators to monitor for a failed heater element as a short term corrective action. The inspectors noted that the REA creation completes the CAPR requirements as stated; however, at the close of the inspection period, there was nothing in the CAP driving the actual replacement of the heaters. The inspectors documented a licensee-identified corrective action violation for this issue in Section 4OA7 of this report. The inspectors noted that there are many steps in the REA process (scoping, funding, scheduling) to go until full restoration is complete.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 9 samples)

.1 Plant Events

a. Inspection Scope

For the plant events listed below, the inspectors reviewed and/or observed plant parameters, reviewed personnel performance, and evaluated performance of mitigating systems. The inspectors communicated the plant events to appropriate regional personnel, and compared the event details with criteria contained in Inspection Manual Chapter (IMC) 0309, "Reactive Inspection Decision Basis for Reactors," for consideration of potential reactive inspection activities. As applicable, the inspectors verified that Dominion made appropriate emergency classification assessments and properly reported the event in accordance with 10 CFR Parts 50.72 and 50.73. The inspectors reviewed Dominion's follow-up actions related to the events to assure that Dominion implemented appropriate corrective actions commensurate with their safety significance.

Unit 2

- TDAFW Pump In-service Test Failure on July 23

On July 23, Dominion entered the 72 hour Limiting Condition for Operation, TS 3.7.1.2, to perform scheduled in-service test surveillances. Following performance of SP 2610BO, "TDAFW Tests, Operating," the TDAFW failed to meet the acceptance criteria for minimum recirculation flow. Dominion could not find a definitive cause for the test failure within the 72 hour allowed outage time and shut the plant down as required by the TS on July 26. On July 27, in Mode 3, Dominion performed a full flow TDAFW test in accordance with SP 2610BS, "TDAFW Tests, Shutdown," with satisfactory results, which indicated the cause of the initial test failure was limited to the recirculation line. Dominion found a small piece of debris in the chambers of the recirculation line flow orifice and successfully ran the operational test on July 28 before returning the unit online.

Unit 3

- TDAFW Pump Failure to Start on July 15

At 3:58 AM on July 14, Dominion entered the 72 hour Limiting Condition for Operation, TS 3.7.1.2, to perform maintenance activities associated with the TDAFW pump that consisted of a lube oil pressure calibration, a discharge pressure calibration, centering two pins located in the overspeed trip latch mechanism, and a limit switch calibration on the AOV-31A Steam Admission valve. At 5:25 AM on July 15, 2014, when attempting to start the TDAFW pump, the pump failed to start and come up to rated speed. Dominion performed subsequent troubleshooting and concluded that the K1 under-speed relay and associated power supply was not functioning properly and they were both replaced. At 8:00 PM on July 16, 2014, Dominion successfully ran a TDAFW surveillance run and post-maintenance test. Following completion of the surveillance, while removing the test equipment, the technician accidentally shorted the test leads and blew two fuses in the speed controller circuit. Following completion of the fuse replacement and circuit testing, the TDAFW was declared operable at 2:17 AM on July 17, 2014.

- TDAFW Pump Failure to Start on September 10

On September 10, the Unit 3 TDAFW pump failed to start during routine surveillance testing. Due to the similarities with the July events and the NRC's continued concern with the reliability of the TDAFW, the NRC decided to launch a Special Inspection Team to review the events and Dominion's troubleshooting activities. The Special Inspection Team began onsite activities on September 15 to review the adequacy and completeness of testing on the pump and causal evaluations of the problems. The results of the Special Inspection will be discussed in a report expected to be issued within 45 days after the completion of the inspection.

b. Findings

No findings were identified.

As stated above, the Special Inspection Team is ongoing and may identify further performance deficiencies which will be evaluated and documented in future inspection reports.

.2 (Closed) Licensee Event Report (LER) 05000336/2014-006-00: Millstone Power Station Dual Unit Reactor Trip on Loss of Offsite Power

At 7:01 AM, on May 25, 2014, a dual-unit reactor trip occurred at Millstone. Prior to the event, the station had one offsite line out-of-service (Line 371) for maintenance. A suspected ground fault on the grid in the Northeast Utilities' Card substation caused the loss of offsite line 383. Line 310 tripped on instantaneous ground over current which was unexpected. The final line (Line 348) tripped on over current when both units attempted to feed the full power output of both Millstone units through the single remaining line (Line 348). All onsite EDGs started and powered their respective safety

busses. Dominion declared a Notice of Unusual Event (NOUE) for both units at 7:15 AM due to a loss of offsite power for greater than 15 minutes. Offsite power was restored to at least one safety bus at each unit by approximately 10:30 AM and fully restored at 12:56 PM on May 25, 2014. Dominion exited the NOUE at 2:14 PM on May 25, 2014.

The NRC completed a Special Inspection in response to this plant event on July 15 and the enforcement aspects of this event are discussed in the Special Inspection report 05000336/2014011 and 05000423/2014011 (ML14240A006). The inspectors did not identify any new issues during the review of the LER. This LER is closed.

- .3 (Closed) LER 05000423/2014-001-00: Limiting Condition for Operation Exceeded Upon Approval of Enforcement Discretion

and

- .4 (Closed) LER 05000423/2014-003-00: TDAFW Pump Operability Impacted by Incorrect Bearing

On January 26, Dominion requested and received a Notice of Enforcement Discretion (NOED) from the requirements of TS 3.7.1.2, Action C, to complete restoration and post-maintenance testing of the TDAFW following a failed surveillance test. Following the successful test and after declaring the TDAFW system operable, Dominion determined that the installed cam follower bearing, that rolls in the cam plate slot, was an inappropriate part. Specifically, the installed bearing lacked an aluminum bronze insert that provided inherent lubricity. On February 3, Dominion took the TDAFW pump out of service, replaced the cam follower bearing with the correct part, successfully completed post-maintenance testing, and declared TDAFW operable.

The NRC completed a Special Inspection in response to the TDAFW system failure and the enforcement aspects are discussed in the Special Inspection Report 05000423/2014008 (ML14240A051). The inspectors did not identify any new issues during the review of the LERs. These LERs are closed.

- .5 (Closed) LER 05000423/2013-008-00: Loss of Licensed Radioactive Material, Trijicon Rifle Scopes

On December 11, 2013, Dominion reported the theft of two security rifle scopes to the NRC in accordance with 10 CFR 20.2201(a)(ii). These rifle scopes are similar to ones commonly sold for general use by the public without additional regulatory controls due to the low level of radioactivity contained within (57.766 milli-Curies and 60.528 milli-Curies of tritium for each scope). Because Millstone is an NRC licensee, Dominion is subject to additional regulatory requirements related to the reporting of devices containing licensed material. Dominion worked with the Waterford, Connecticut Police Department to conduct an investigation and recovered one of the scopes in question. The inspectors did not identify any new issues during the review of the LER. This LER is closed.

- .6 (Closed) LER 05000336/2014-005-00: Train 'A' Containment Spray Inoperable Due to Gas Voids

On May 17, while returning Unit 2 to power following a refueling outage, Dominion discovered the presence of gas voids in the 'A' containment spray system, which

rendered the system inoperable. The gas was introduced into the system during maintenance work earlier in the refueling outage, but was not detected until Dominion completed surveillance testing on May 17. Dominion vented the system and restored the containment spray system to operable on May 17, 88 hours after entering TS 3.6.2.1. The enforcement aspects of this issue are discussed in Section 4OA7. The inspectors did not identify any new issues during the review of the LER. This LER is closed.

.7 (Closed) LER 05000336/2014-001-00: Completion of Plant Shutdown Required by Technical Specifications

On January 30, 2014, Unit 2 entered a 2 hour shutdown action statement due to an unplanned loss of the Group 1 pressurizer proportional heaters concurrent with a planned maintenance outage on the B EDG. Dominion determined the root cause of the event was the continued failure of pressurizer heaters due to manufacturing defects associated with replacement heaters and determined this was a repeat failure because CAPRs from a previous event in 2009 were not complete. The inspectors reviewed this issue as a Problem Identification and Resolution sample which is documented in Section 4OA2. The enforcement aspects of this issue are discussed in Section 4OA7. The inspectors did not identify any new issues during the review of the LER. This LER is closed.

4OA6 Meetings, Including Exit

On October 7, the inspectors presented the inspection results to Mr. Daniel G. Stoddard, Senior Vice President for Nuclear Operations, Mr. Stephen E. Scace, Site Vice President, and other members of the Millstone staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by Dominion and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as non-cited violations.

- TS 3.6.2.1, "Containment Spray and Cooling Systems," requires two containment spray trains and two containment cooling trains to be operable in Modes 1, 2, and 3. If one containment spray train is inoperable, the TS required action is to restore the inoperable train within 72 hours or be in Hot Standby within 6 hours. Contrary to the above, at 7:33 PM on May 16, Dominion exceeded the 72 hour allowed outage time for the 'A' containment spray train, due to the delayed completion of the gas void detection surveillance test. In addition, TS 3.0.4 prohibits entry into an Operational Mode without all requisite limiting conditions of operation met. Contrary to the above, at 7:33 PM on May 13, Unit 2 entered Mode 3 with pressure greater than 1750 psia and an inoperable 'A' containment spray train. Dominion entered the issue into the CAP as CR 549280. The inspectors determined that this finding was of very low safety significance using IMC 0609, Appendix A, because the period of unavailability was of short duration (approximately 88 hours) and occurred during Mode 3. The 'B' train of containment spray remained unaffected by the voids found in the 'A' train.

- 10 CFR 50, Appendix B, Criterion XVI, states, in part, that “measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.” Contrary to the above, for the January 30 Unit 2 pressurizer heater failure, Dominion determined the root cause of the event was the continued failure of pressurizer heaters due to manufacturing defects associated with replacement heaters and determined this was a repeat failure because CAPRs from a previous event in 2009 were not complete. Dominion entered the issue into the CAP as CR 538495. The inspectors determined that this finding was of very low safety significance using IMC 0609, Appendix A, because the finding did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION**KEY POINTS OF CONTACT**Licensee Personnel

M. Adams	Plant Manager
L. Armstrong	Director, Nuclear Station Safety & Licensing
G. Auria	Nuclear Chemistry Supervisor
B. Bartron	Supervisor, Licensing
P. Baumann	Manager, Nuclear Protection Services
J. Beaudoin	Unit 3 Control Operator
T. Berger	Unit 3 Shift Manager
R. Borchert	Consulting Engineer, Reactor Engineering
E. Brodeur	Unit 3 Shift Manager
J. Chadourne	Unit 2 IST Engineer
C. Chapin	Assistant Operations Manager Unit 2
W. Chesnutt	Unit 2 Supervisor Nuclear Shift Operations
C. Chatman	Unit 3 Shift Manager
W. Chestnut	Supervisor, Nuclear Shift Operations Unit 2
F. Cietek	Nuclear Engineer, PRA
T. Cleary	Licensing Engineer
J. Claire	Unit 2 Unit Supervisor
G. Closius	Licensing Engineer
J. Cote	Unit 3 Control Operator
M. Cote	Senior Instructor, Nuclear Operations
L. Crone	Supervisor, Nuclear Chemistry
J. Curling	Manager, Protection Services
D. Daugherty	RBCCW System Engineer
S. DoBoe	Unit 3 Shift Manager
J. Dorosky	Health Physicist III
E. Dundon	Nuclear Engineer III
B. Ferguson	Unit 2 Shift Manager
M. Finnegan	Supervisor, Health Physics, ISFSI
J. Foster	Unit 3 Plant Equipment Operator
J. Gardner	Nuclear Engineer III
A. Gharakhanian	Nuclear Engineer III
M. Goolsbey	Nuclear Operations Manager
W. Gorman	Supervisor, Instrumentation & Control
J. Grogan	Supervisor Nuclear Training
C. Houska	I&C Technician
J. Keith	Unit 3 Senior Reactor Operator
T. Killalea	Engineer
G. Knight	Unit 3 Plant Equipment Operator
J. Laine	Manager, Radiation Protection/Chemistry
J. Langdon	Manager, Nuclear Oversight
L. Lash	Unit 3 Control Operator
M. Legg	Nuclear Engineer III
G. Marshall	Manager, Outage and Planning
R. McDonald	Senior Instructor, Nuclear Operations

M. O'Conner	Nuclear Specialist Station Support
J. Palmer	Manager, Training
K. Perkins	Unit 3 Shift Technical Advisor
D. Reed	Unit 3 Shift Manager
J. Rigatti	Manager, Nuclear Site Engineering
M. Roche	Senior Nuclear Chemistry Technician
D. Rowe	Unit 3 Shift Manager
J. Rogers	Senior Instructor Nuclear Operations
P. Russell	Unit 3 Shift Manager
R. Sadler	Unit 3 Unit Supervisor
L. Salyards	Licensing, Nuclear Technology Specialist
S. Scace	Site Vice President
M. Scott	Unit 3 Shift Manager
P. Scott	Unit 3 Shift Manager
H. Searle	Unit 2 Control Operator / Senior Instructor
S. Stanley	Director, Nuclear Engineering
D. Smith	Manager, Emergency Preparedness
E. Smith	System Engineer
S. Smith	Manager, Nuclear Operations
J. Spalter	Unit 3 Supervisor
T. Spakowski	Unit 2 Control Operator / Senior Instructor
J. Stoddard	Supervisor Nuclear Shift Operations Unit 3
S. Turowski	Supervisor, Health Physics Technical Services
K. Truesdale	Senior Instructor Nuclear Operations
C. Vournazos	IT Specialist, Meteorological Data
J. Wasyluk	Unit 2 Shift Manager
K. Woods	Unit 3 Control Operator
J. Young	Senior Instructor, Nuclear Operations

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATEDClosed

05000336/2014-006-00	LER	Millstone Power Station Dual Unit Reactor Trip on Loss of Offsite Power (section 4OA3)
05000123/2014-001-00	LER	Limiting Condition for Operation Exceeded Upon Approval of Enforcement Discretion (section 4OA3)
05000423/2014-003-00	LER	Turbine Driven Auxiliary Feedwater (TDAFW) Pump Operability Impacted by Incorrect Bearing (section 4OA3)
05000423/2013-008-00	LER	Loss of Licensed Radioactive Material, Trijicon Rifle Scopes (section 4OA3)
05000336/2014-005-00	LER	Train 'A' Containment Spray Inoperable Due to Gas Voids (section 4OA3)
05000336/2014-001-00	LER	Completion of Plant Shutdown Required by Technical Specifications (section 4OA3)

LIST OF DOCUMENTS REVIEWED**Section 1R01: Adverse Weather Protection**Procedures

OP 2336A, Station Sumps and Drains, Revision 21
 AOP 2560, Storms, Winds, and High Tides, Revision 010-15
 OP 2356, Doors, Revision 003-09
 SP 2665, Building Flood Gate Inspections, Revision 0005-05

Miscellaneous

Work Order 53102699968
 M2-EV-970072, Emergency Diesel Generator Building Floor Drains Backflow Prevention, Revision 0
 Drawing 25203-24028, Area Floor Drains, Aux Bldg, Sheet 1
 M2-EV-04-0021, Evaluation of EDG Flood Door 205-14-11 for Event Described in CR-04-06625

Section 1R04: Equipment AlignmentProcedures

OP 2308-001, High Pressure Safety Injection System Valve Alignment, Facility 1, Revision 000-04

OP 2346C, "B" Emergency Diesel Generator, Revision 002-06
OP 2346C-007, B DG Lube Oil Valve Alignment, Revision 000-03
OP 2346C-005, B DG Starting Air Valve Alignment, Revision 000-00
OP 2346C-008, "B" DG Breaker/Control Switch Alignment, Revision 000

Condition Reports

555790

Miscellaneous

25203-26015, Sheet 2, Piping & Instrumentation Diagram, High Pressure Safety Injection Pumps, Revision 46
25212-30001, Main One Line Phasing Diagram Power Distribution, Revision 25
Millstone Power Station Unit 3 Final Safety Analysis Report, Chapter 8, Electrical Power, Revision 24.4

Section 1R05: Fire Protection

Procedures

EOP 3509.13, Train 'B' SW Cubicle Fire Procedure
U3-24-FFS, Millstone Unit 3 Fire Fighting Strategies, Revision 0
U2-24-FFS, Millstone Unit 2 Fire Fighting Strategies, Revision 0
SP 3641C.2, Revision 015-07, Function Check of the CO₂ Fire Protection System
AOP 2579B, Fire Procedure for Hot Standby Appendix R Fire Area R-2, Revision 007-01

Miscellaneous

Drawing U3-24-FFS-BAP01-IS-Map Revision 0, Circulating and SW Pump House Fire
Drawing MP-PROP-ENG-U-24-FFS-BAP01-AB-Map, Aux Building 38'6" East Floor Revision 0
Impairment 42996-14-H, for hourly fire watch of West Switchgear Room
Impairment 42995-14-H, for hourly fire watch of East Switchgear Room
COP 200.17, Fire Watch and Impairment Tracking

Section 1R07: Heat Sink Performance

Procedures

EN 31084, Operating Strategy for Service Water Systems at Millstone 3, Revision 007-03
EN 31174, 3EGS*E1A/2B/1B/2B Thermal Performance Test, Revision 001-03

Condition Reports

557236 557248

Miscellaneous

Lesson Plan EDG064C, Emergency Diesel Generator, Revision 004 change 04
Excel Data Sheet from the DAS – by Ed Dundon
MP3-TS-98-189, MP3 Service Water Heat Exchanger Testing SPROC 95-3-26 Revision 1
Change 2
MP3-TS-97-308, Unit 3 Service Water Heat Exchanger Testing SPROC 95-3-26 Revision 1
MP3-EV-02-0031, Service Water Heat Exchanger Monitoring Millstone Unit 3, Revisions 0, 1,
and 2
Letter NU Docket #50-245, B15801, Attachment 2

Licensing Commitment B17205-06 and 10, Service Water System – Generic Letter 89-13
Response

Section 1R11: Licensed Operator Requalification Program

Procedures

AOP 2568, RCS Leak, Revision 007-06
 AOP 2575, Rapid Downpower, Revision 004-10
 AOP 2585, Immediate Operator Actions, Revision 000
 AOP 3555, Reactor Coolant Leak, Revision 017-02
 AOP 3571, Instrument Failure, 010-00
 AOP 3581, Immediate Operator Actions, Revision 000-00
 EOP 2525, Standard Post Trip Actions, Revision 25-00
 EOP 2532, Loss of Coolant Accident, Revision 030-00
 EOP 2540, Functional Recovery, Revision 23-00
 EOP 35 E-0, Reactor Trip or Safety Injection, Revision 27-00
 EOP 35 FRP.1, Response to Imminent Pressurized Thermal Shock, Revision 15-00
 EOP 35 E-1, Loss of Reactor or Secondary Coolant, Revision 26
 EOP 35 ECA 1.1, Loss of Emergency Coolant Recirculation, Revision 016-02
 EOP 35 ES 1.3, Transfer to Cold Leg Recirculation, Revision 016-00
 MP-26-EPI-FAP06, Classification and PARs, Revision 009-01
 OP 2202, Reactor Startup ICCE, Revision 022-05
 OP-AA-100, Conduct of Operations, Revision 26
 SP 31005A, Moderator Temperature Coefficient and Power Coefficient Measurements, Power Exchange Method, Revision 003-02

Condition Reports

555033 555072

Miscellaneous

SEG#S14404L Revision 1, LOCA and Sump Blockage, dated July 23, 2014
 SEG# S14401L Revision 0, RCS Leak dated July 23, 2014
 SEN 216, Leakage from Reactor Vessel Nozzle-to-Hot Leg Weld
 AOE#6, MP2 LORT Annual Operating Exam Scenario, Approved September 18, 2014
 AOE#23, MP2 LORT Annual Operating Exam Scenario, Approved September 17, 2014

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures

WM-AA-301, Operational Risk Assessment, Revision 11
 WM-AA-20, Risk Assessment of Maintenance Activities, Revision 2
 NF-AA-PRA-370, Probabilistic Risk Assessment Procedures and Methods: MRule (a)(4) Risk Monitor Guidance, Revision 15
 OP-AA-1500, Operational Configuration Control, Revision 11
 WM-AA-100, Work Management, Revision 24
 SP 3622.3 Auxiliary Feedwater Pump 3FWA*P2 Operational Readiness Test, Revision 017-24
 OP-AA-300, Protected Equipment, Revision 4
 OP-MP-601, Protected Equipment, Revision 15

Condition Reports

557758 558541 559667

Work Orders

53102766239 53102495654 53102768040 53102733017

Miscellaneous

EOOS risk projections for July 14, 2014
Plant Status Daily Report of July 11, 2014
Work Week Schedules for week 1428 and 1429
Operator’s Risk Report for August 20, 2014
Scheduler’s Evaluation for Millstone Unit 2 for August 20, 2014
Plant Status Daily Report for August 20, 2014
High Risk Contingency Plan Actions for CL&P Request (AOR) 14-3811
EOOS Operator Risk Report September 5, 2014
ISO New England Morning Report for September 5, 2014
ISO New England Short List of Term Transmission Outages for September 5, 2014
EOOS Scheduler’s Evaluation for Millstone Unit 3 for September 24, 2014
EOOS Operator Risk Report for September 13, 2014

Section 1R15: Operability Evaluations

Procedures

OP 2315C, Turbine Building Ventilation System, Revision 014-00
OP-AA-102-1001, Development of Technical Basis to Support Operability Determinations,
Revision 8
SP3622.10, TDAFW Pump Full Flow Test in MODE 1, Revision 000-00
SP3622.10.001, TDAFW Pump Full Flow Test in MODE 1, Revision 000-00

Drawings

DWG 12179-ESK-7RF, Elementary Diagram 125 VDC Turbine Driven Auxiliary Feedwater
Pump Motor Speed Changer, Revision 11
DWG 12179-ESK-7GZ, Turbine Driven Auxiliary Feedwater Pump, Revision 12

Condition Reports

404259	423336	511678	531908	503881
551162	553129	553173	553250	553433
554612	554849	548846	516584	557043
556453	556496	557107*	558213	558264
558318	558385	558389	558478	558497
558524	558528	558539	558541	558213
558264	558313	558383	558389	558478
558497	558524	558528	558539	558541
558542	558700	558738	558712	558559
558892	558897	558909*	558920	

Work Orders

53102753316
53102767854
53102767340
53102707556

Miscellaneous

AR 03006072

AP-01-009 Letter, dated January 13, 2001, Turbine Battery Enclosure maximum Ambient Temperature

Vendor Technical Manual 25203-127-001, For DB3-201 U2 Turbine Battery

97-ENG-1776E2, Engineering Calculation for Battery 201D, Revision. 01

LBDCR 07-MP2-009, U2 Tech Spec Bases, Section B3/4, dated March 29, 2007

MPS-2 FSAR, Table 9.9-22, Revision 21

IEEE Standard 485-2010, Table 1, Cell Correction Factors

ODM000334, Long-Term actions required to address potential seat leakage for U3 PORV

SP 2610BO-002, TDAFP and Recirculation Check Valve IST, Revision 000-06

SP 2610BS-003, TDAFP Comprehensive Pump Test (MODE 3), Revision 001-04

Summary of Troubleshooting Low [U2 TDAFP] Recirc Flow, dated 07/28/2014

Nuclear Engineering Memo NUCENG-14-07, Operability Assessment of Thinned MP2 Feedwater Piping at Containment Penetrations

PROBL025-02133-C2, Piping Design Basis Analysis

ETE-MP-2013-1228, MPS-2 RFO-22 FW Containment Penetration Remaining Life Projections at Various Measured Wall Thicknesses, Revision 0

Dwg 12179-EM-150C

Lesson Plan EDG064-CR4, Emergency Diesel Generator and Support Systems, Change 3

Equipment Reliability Success Days Indicator Station Clock Reset Briefing Sheet CR558213 on September 10, 2014

Complex Troubleshooting Sheet for 3FWA*P2 (Unit 3 Terry Turbine)

Troubleshooting Summary for Event CR558213

Section 1R19: Post-Maintenance TestingProcedures

SP 3622.3 Auxiliary Feedwater Pump 3FWA*P2 Operational Readiness Test, Revision 017-21

SP 3670.4, Routine PMs, revision 023-12

OP 3353.SBO, Station Blackout Diesel Annunciator Response Procedure, Revision 004-05

SP 2611D, RBCCW System Alignment and Valve Tests, Facility 2, Revision 010-08

SP 2611D-003 RBCCW Valve Stroke and Timing IST, Facility 2, Revision 003-05

MP 2708B, Bettis Robotarm Actuator Maintenance, Revision 004-04

SP3622.10, TDAFW Pump Full Flow Test in MODE 1, Revision 000-00

SP3622.10.001, TDAFW Pump Full Flow Test in MODE 1, Revision 000-00

Condition Reports

553896	410717	529097	554437
554438	554441	554486	554487
554544	557858	558111	558153
558213	558264	558313	558383
558389	558478	558497	558524
558528	558539	558541	558542
558700	558738	558712	558559
558892	558897	558909*	558920

Maintenance Orders/Work Orders

53102485080	5310275335	53102446388	53102463697
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53102446400	53102446403	53102368399	531M3080510
53M30806607	53102694623	53102637831	53M30607182
53102549184	53102549188	53102549186	53102549182
53102652094	53102652092	53102693713	53102577701
53102736563	53102717225	53102689775	53102369037
53102689702	53102652189	53102361150	53102766659
53102753316	53102767854	53102767340	53102707556

Miscellaneous

Technical Specifications 4.7.1.2.2, "Plant Systems, Auxiliary Feedwater Systems"
 Surveillance Form, TDAFW Pump Operational Readiness and Quarterly IST Group 'B' Pump Tests, Revision 014-09
 Control Room Log entries from July 15, 2014 to July 17, 2014
 SBO Outage FEG Notes BGS00 – WWW1430
 SBO Diesel system Health Report dated July 24, 2014
 U2 Control Room Log entries from September 7, 2014 to September 9, 2014
 Equipment Reliability Success Days Indicator Station Clock Reset Briefing Sheet CR558213 on September 10, 2014
 Complex Troubleshooting Sheet for 3FWA*P2 (Unit 3 Terry Turbine)
 Troubleshooting Summary for Event CR558213

Drawings

12179-ESK-7RF, Elementary Diagram 125 VDC Turbine Driven Auxiliary Feedwater pump motor speed changer, 3FWA*M7
 25203-29053, Robotarm Actuator with MF03
 12179-ESK-7RF, Elementary Diagram 125 VDC Turbine Driven Auxiliary Feedwater Pump Motor Speed Changer, Revision 11
 12179-ESK-7GZ, Turbine Driven Auxiliary Feedwater Pump, Revision 12

Section 1R22: Surveillance TestingProcedures

SP 3646A.1, EDG 'A' Operability Test, Revision 019-04
 SP 3646A.1, EDG 'A' Operability Test, Revision 019-05
 OP 3346A, EDG, Revision 025-04
 OP 3346A-014, EDG 'A' – Operating Log, Revision 012
 SP 3646A.1-001, EDG 'A' Operability Tests, Revision 018-08
 OP 3346A-013, EDG – Data Set, Revision 007-02
 SP 3622.3 Auxiliary Feedwater Pump 3FWA*P2 Operational Readiness Test, Revision 017-21
 SP 3622.3 Auxiliary Feedwater Pump 3FWA*P2 Operational Readiness Test, Revision 017-24
 SP 3670.4-015, Quarterly SBO PM, Revision 001-06
 OP 3346D, Station Blackout Diesel, Revision 012-07
 SP 3670.4, Routine PMs, Revision 023-12
 SP 2612A, 'A' Service Water Pump Tests, Revision 012-05
 SP 2612A-003, 'A' SW Pump and Facility 1 Discharge Check Valve IST, Revision 004-04
 SP 3601F.5-007, PORV Block Valve Stroke Testing – Train A, Revision 001-01
 SP 3601F.5-008, PORV Block Valve Stroke Testing – Train B, Revision 005-01
 CM-M3-STI-101, Millstone Unit 3 Technical Specification Surveillance Test Interval (STI) List, Revision 1
 CM-AA-STI-101, Risk Informed Technical Specification Surveillance Frequency Control Program, Revision 1

Condition Reports

553896	555375	558367	558524
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Maintenance Orders/Work Orders

AWO 53102485080

Miscellaneous

Technical Specifications 4.7.1.2.2, "Plant Systems, Auxiliary Feedwater Systems"
 Surveillance Form, TDAFW Pump Operational Readiness and Quarterly IST Group B Pump
 Tests, Revision 014-09

Control Room Log entries from July 14, 2014 to July 15, 2014

Control Room Log entries from August 8, 2014

Drawing 1201163-W-25203-26008, Piping and Instrument Diagram Service Water, Revision 0

Drawing 1201163-W-25203-26700, Service Water Inservice Inspection Program, Revision 0

Millstone Unit 3 Technical Specification and Surveillance Requirement 3.4.4/4.4.4, Reactor
 Coolant System, Relief ValvesATJ-042, Alternate Test Justification for Millstone Unit 3 Power Operated Relief Valve (PORV)
 IST Frequency

U3-24-IST-PLAN, Millstone Unit 3 Inservice Testing Program, Revision 4

STI-M3-2014-002, Surveillance Test Interval Evaluation for Millstone Unit 3 PORV Blocking
 ValvesML14023A748, Millstone Power Station Unit No. 3 Issuance of Amendment, Re: Risk-Informed
 Justification for the Relocation of Specific Surveillance Frequency Requirements to a
 Licensee Controlled Program (Adoption Of TSTF-425, Revision 3)ML14163A586, Millstone Power Station, Unit Nos. 2 and 3 - Relief from the Inservice Testing
 Requirements of American Society of Mechanical Engineers Code for Operation and
 Maintenance of Nuclear Power PlantsNEI 04-10, Risk-Informed Technical Specifications Initiative 5b, Risk-Informed Method for
 Control of Surveillance Frequencies, Industry Guidance Document, Revision 1**Section 40A1: Performance Indicator Verification**Procedures

ER-AA-SPI-1002, Maintaining the MSPI Basis Document, Revision 1

Condition Reports

526014	560262	478872	477532	485044	489277
525633	322921	351300	504236	528520	527356

Section 40A2: Problem Identification and ResolutionProcedures

PI-AA-300-3001, Root Cause Evaluation, Revision 4

PI-AA-200, Corrective Action, Revision 023

Condition Reports

443501	538495	541162	552782	552988	553047
557017					

Miscellaneous

Reactor Coolant System Health Report, 2Q2014

REA MP-2014-055, U2 Reactor Coolant Pressurizer Proportional Heater Element
MRE014218

System Health Report, 3330A, Reactor Plant Component Cooling (CCP), Period Q1-2014
Plant Health Issues List – Top 10, dated as of August 14, 2014

ACE018875, Leak Identified on “A” CCP HX, Dated September 18, 2011

ACE018978, 3SWP*MOV24D and 3SWP*STR1D did not move with demand causing SW
unavailability”, Dated November 26, 2011

Section 4OA3: Followup of Events and Notices of Enforcement Discretion

Procedures

SP 2610BS, TDAFP Tests, Operating, Revision 001-06

SP 2610BO, TDAFP Tests, Operating, Rev 000-13

MA-AA-103, Conduct of Troubleshooting, Revision 11

Condition Reports

555072 554150 554849

LIST OF ACRONYMS

10 CFR	Title 10 of the <i>Code of Federal Regulations</i>
AC	alternating current
ADAMS	Agencywide Documents Access and Management System
CAP	Corrective Action Program
CAPR	corrective actions to prevent recurrence
CFR	Code of Federal Regulations
CR	condition reports
DRP	Division of Reactor Projects
EDG	emergency diesel generator
IMC	Inspection Manual Chapter
LER	licensee event report
NOUE	Notice of Unusual Event
NRC	Nuclear Regulatory Commission
PORV	power operated relief valve
RBCCW	reactor building closed cooling water
RCS	reactor coolant system
REA	Request for Engineering Assistance
RPCCW	reactor plant closed cooling water
SBO	station blackout
S/G	steam generator
SW	service water
TDAFW	turbine-driven auxiliary feedwater
TS	technical specifications
UFSAR	Updated Final Safety Analysis Report