



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
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February 7, 2008

Mr. David 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
05000336/2007005 AND 05000423/2007005

Dear Mr. Christian:

On December 31, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Millstone Power Station Unit 2 and Unit 3. The enclosed inspection report documents the inspection results, which were discussed on January 10, 2008, 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 two NRC-identified findings and one self-revealing finding of very low safety significance (Green). All of these findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Millstone.

In accordance with 10 CFR Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the

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Sincerely,

/RA/

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

Docket Nos. 50-336, 50-423
License Nos. DPR-65, NPF-49
Enclosure: Inspection Report No. 05000336/2007005 and 05000423/2007005
w/ Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-336, 50-423

License No.: DPR-65, NPF-49

Report No.: 05000336/2007005 and 05000423/2007005

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Power Station, Units 2 and 3

Location: P. O Box 128
Waterford, CT 06385

Dates: October 1, 2007 through December 31, 2007

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Enclosure

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SUMMARY OF FINDINGS

IR 05000336/2007-005, 05000423/2007-005; 10/01/2007 – 12/31/2007; Millstone Power Station Unit 2 and Unit 3; Adverse Weather Protection, Licensed Operator Requalification, and Surveillance Testing.

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

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for Dominion's failure to identify that the engineered safety featured (ESF) building was not adequately protected against the effects of postulated missiles generated by a design basis tornado. Specifically, the inspectors identified that Dominion had missed multiple opportunities from May 2007 through November 2007 to identify significant challenges in shutting the normally open ESF building tornado doors. When shut, these doors ensure that the associated portion of the ESF building is protected from a spectrum of postulated missiles generated by a design basis tornado. Corrective actions for this issue included performing an operability assessment to address immediate operability/functionality concerns and an engineering evaluation to address the door's material condition. In addition, Dominion plans to develop long term corrective action and implement that action prior to entering a season of increased tornado risk.

This finding was more than minor because it was associated with the protection against external factors (i.e., tornado) attribute of the Mitigating System Cornerstone, and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, Dominion did not ensure safety-related systems and components were adequately protected against postulated missiles generated by a design basis tornado. The inspectors, in consultation with the Region I Senior Reactor Analyst, determined that this finding was of very low risk significance (Green), because, given the low initiating event probability and segregation of the safety-related equipment within cubicles in the ESF building, the probability of two or more trains of a single safety function being adversely impacted by this condition is extremely low. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution (PI&R), Corrective Action Program, because Dominion did not identify that significant time

delays would have interfered with the station's ability to protect safety-related equipment in the ESF buildings from a design basis tornado in a timely manner [P.1(a)]. (Section 1R01.2)

- Green. The inspectors identified a non-cited violation (NCV) of 10 CFR 55.53(e) for the licensee's failure to complete the requirements of 10 CFR 55.53(f) prior to an inactive licensed operator resuming control room watchstanding duties. Specifically, because a Reactor Operator interrupted his shift for administrative functions (for over one hour) during one of five required proficiency watches in the first quarter of 2007, he did not fulfill the requisite number of 12 hour watches, and his license became inactive at the end of that quarter. When he subsequently stood Reactor Operator watches during the second and third quarters of 2007, prior to completing the requirements of 10 CFR 55.53(f), a violation of 10 CFR 55.53(e) requirements occurred. The licensee entered this deficiency into their corrective action program as CR-07-10776. The licensee completed a 100 percent review of all staff licenses for proficiency watches between July 2006 and September 2007 and found no further violations.

This finding was more than minor because the issue was associated with the human performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, licensed operators that are not current in watchstanding proficiency may commit operator errors that could cause mitigating systems to fail to respond properly. The finding is of very low safety significance because, per the SDP Appendix I flowchart, more than 20 percent of records reviewed (1 out of 2 staff licensed Reactor Operators) had deficiencies. (Section 1R11.2)

Cornerstone: Barrier Integrity

- Green. A self-revealing non-cited violation (NCV) of Dominion Nuclear Connecticut (DNC), Inc.'s Unit 3 License, Number NPF-49, Section 2.C.(1) was identified for Dominion's failure to maintain reactor core thermal power less than or equal to 3411 megawatts thermal (MWTH). Specifically, during performance of turbine overspeed protection system testing, the Unit 3 reactor's four minute power average exceeded 3479 MWTH. The power transient was due, in part, to Dominion's continuance of the surveillance following an unexpected plant response after turbine control was transferred to "load set." Corrective actions for this issue include performing the surveillance at a lower power and providing just-in-time training to operating crews prior to performing the surveillance.

The finding was more than minor because it was associated with the human performance attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective of providing reasonable assurance that physical design barriers (i.e., fuel cladding) protect the public from radionuclide releases caused by accidents or events. The finding was determined to be of very low safety significance (Green) because it only involved the potential to affect the fuel cladding barrier. This finding has a cross-cutting aspect in the area of Human Performance,

Decision-making, because Dominion did not use conservative assumptions in decision making in proceeding with turbine control valve testing after an unexpected plant response had a significant effect on reactivity [H.1(b)]. (Section 1R22)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Units 2 & 3 operated at or near 100 percent throughout the inspection period with the following exception. On December 16, 2007, Unit 2 performed an unplanned down power to 53 percent when adverse weather conditions caused main condenser water box fouling which challenged main condenser vacuum. The Unit was returned to 100 percent power on December 17, 2007, and remained there 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 Seasonal Site Inspectiona. Inspection Scope (1 Sample)

The inspectors performed a review of severe weather preparations prior to hurricane Noel approaching the site on November 2 and 3, 2007. The inspectors reviewed selected equipment, instrumentation, and supporting structures to determine if they were configured in accordance with Dominion's procedures, and that adequate controls were in place to ensure functionality of the systems. The inspectors reviewed the Unit 2 and 3 Updated Final Safety Analysis Report (UFSAR) and Technical Specifications (TS) and compared the analysis with procedure requirements to ascertain that procedures were consistent with the UFSAR. The inspectors performed partial walkdowns of the Unit 2 and Unit 3 intake structures, service water systems, intake structure traveling screens, and emergency diesel generators (EDGs) to determine the adequacy of equipment protection from the effects of hurricanes. The inspectors also walked down the yard areas to determine if materials were properly secured for the impending severe weather. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 System Inspectiona. Inspection Scope (1 Sample)

The inspectors reviewed the design and readiness of the Unit 3 ESF building rolling doors for missile protection in the event of a tornado or hurricane. The inspectors reviewed licensee procedures and design basis documents, performed a system

walkdown, and interviewed operations, engineering, and maintenance staff. On November 14, 2007, the inspectors observed Dominion personnel shutting a sample of the rolling doors. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

Introduction. The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for Dominion's failure to identify that the ESF building was not adequately protected against the effects of postulated missiles generated by a design basis tornado. Specifically, the inspectors identified that Dominion had missed multiple opportunities from May 2007 through November 2007 to identify significant challenges in shutting normally open ESF building tornado doors.

Description. In August 2007, the inspectors questioned whether the normally open Unit 3 ESF building tornado doors could be closed in a timely manner, in order to protect safety-related equipment from a design basis tornado. The inspectors noted it appeared that shutting these relatively large rolling doors could be a challenge due to their size and existing material condition (i.e., rust and dirt in the door tracks). The inspectors noted that abnormal operating procedure (AOP) 3569, "Severe Weather Conditions," Revision 016-00, required these doors to be shut upon the station's receipt of a tornado watch or tornado warning. The AOP noted that maintenance support may be required to close the doors. The inspectors noted that, on May 16, 2007, an actual tornado watch was issued at 4:37 p.m., and the specified ESF doors were not shut prior to the tornado watch expiring at 6:10 p.m. The inspectors identified that a condition report (CR) was not written to address the fact that the doors were not shut, as required by station procedures.

From September 2007 to November 2007, the inspectors questioned whether Dominion could meet design basis and procedural requirements. Specifically, the inspectors questioned the timeliness of shutting the ESF building tornado doors given that maintenance may have to be called into the station during backshift hours or weekends. Additionally, the inspectors questioned whether or not the outdoor work could be performed given a tornado watch or warning and related weather conditions. On November 13, 2007, Dominion initiated CR-07-11274 to evaluate the potential impact of the material condition on the ability to close the doors. Dominion determined that the tornado doors were operable based on the fact that they could not find specific closure time requirements in the plant's licensing basis documents and the doors had been shut during past preventative maintenance (PM) activities.

On November 14, 2007, the inspectors observed Dominion close two of the doors using a fork lift. During the activity, the inspectors observed that a significant and repetitive force was required to shut the doors. In the case of the "B" Safety Injection/Quench Spray system room door, the fork lift could not be utilized in the same manner as it had been used in the past, since metal staging had been attached adjacent to the door. The inspectors identified that this staging had not been considered as a potential time delay in shutting the door (CR-07-11707). In addition, the inspectors identified an additional

delay since the fork lift would have to be brought into a radiologically controlled area (RCA).

The inspectors conducted a detailed review of the station's licensing basis related to these doors. The inspectors identified that Section 3.5.1.4 of the UFSAR required the ESF building, and systems and components within, be protected against a design basis tornado, as referenced in Regulatory Guide 1.76, "Design Basis Tornado for Nuclear Power Plants." This requirement, in part, satisfies the station's compliance with General Design Criteria (GDC) 4, "Environmental and Missile Design Bases."

The performance deficiency is that Dominion missed multiple opportunities, from May 2007 through November 2007, to identify that a portion of the ESF building was vulnerable to postulated missiles generated by a design basis tornado. Specifically, the inspectors identified multiple, unrecognized, delays that the station would have encountered in shutting the ESF building tornado doors during an actual event.

Analysis. This finding was more than minor because it was associated with the protection against external factors (i.e., tornado) attribute of the Mitigating System Cornerstone and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, Dominion did not ensure safety-related systems and components were adequately protected against postulated missiles generated by a design basis tornado.

The inspectors conducted a Phase 1 screening in accordance with Inspection Manual Chapter (IMC) 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The inspectors, in consultation with the Region I Senior Reactor Analyst, determined that this finding was of very low risk significance, because, given the low initiating event probability and segregation of the safety-related equipment within cubicles in the ESF building, the probability of two or more trains of a single safety function being adversely impacted by this condition is extremely low.

This finding has a cross-cutting aspect in the area of Problem Identification and Resolution (PI&R), Corrective Action Program, because Dominion did not identify that significant time delays would have interfered with the station's ability to protect safety-related equipment in the ESF buildings from a design basis tornado in a timely manner [P.1.(a)].

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states in part that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, Dominion failed to promptly identify that a significant time delay existed in shutting the ESF building tornado doors, as directed in AOP 3569, "Severe Weather Conditions," Revision 016-00. As a result, Dominion could not ensure the ESF building would be protected against postulated missiles generated by a design bases tornado as required by GDC 4, "Environmental and Missile Design Bases," and the associated section of the UFSAR, 3.5.1.3, "Missiles Generated by Natural Phenomena." Corrective actions for this issue included

performing an operability assessment to address immediate operability/functionality concerns and an engineering evaluation to address the door's material condition. In addition, Dominion plans to develop long term corrective action and implement that action prior to entering a season of increased tornado risk. Because this violation was of very low safety significance (Green) and was entered into the licensee's corrective action program (CR-07-11707), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000423/2007005-01, Failure to Ensure ESF Building Protection from Missiles Generated by a Design Based Tornado).**

1R02 Evaluations of Changes, Tests, or Experiments (71111.02)

a. Inspection Scope (25 samples - 7 Safety Evaluations, 18 Screenings)

The inspectors reviewed seven safety evaluations to determine whether changes and tests were evaluated and documented in accordance with 10 CFR 50.59, "Changes, Tests, and Experiments," and, if required, Dominion obtained NRC approval prior to implementation. The inspectors assessed the adequacy of the safety evaluations through interviews with Dominion personnel and review of the supporting information, such as calculations, engineering analyses, design change documentation, the UFSAR, and TS. The inspectors also reviewed 18 changes that Dominion had evaluated using a screening process and determined that safety evaluations were not required. The inspectors performed this review to assess Dominion's conclusions with respect to 10 CFR 50.59 applicability. The safety evaluations and screenings were selected based on the safety significance of the affected structures, systems, and components. Finally, the inspectors reviewed the administrative procedures that control the screening, preparation, and issuance of the safety evaluations to ensure that the procedures adequately implemented the requirements of 10 CFR 50.59. A listing of the safety evaluations, safety evaluation screenings, and other documents reviewed is provided in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

Partial System Walkdowns

a. Inspection Scope (3 Samples)

The inspectors performed three partial system walkdowns during this inspection period. The inspectors reviewed the documents listed in the Attachment to determine the correct system alignment. The inspectors conducted a walkdown of each system to determine if the critical portions of the selected systems were correctly aligned, in accordance with the procedures, and to identify any discrepancies that may have had an effect on operability. The walkdowns included selected switch and valve position

checks, and verification of electrical power to critical components. Finally, the inspectors evaluated other elements, such as material condition, housekeeping, and component labeling. The following systems were reviewed based on their risk significance for the given plant configuration:

Unit 2

- Station Blackout (SBO) Diesel and “A” EDG while the “B” EDG was inoperable on October 3, 2007; and
- Charging System following system maintenance on December 5, 2007.

Unit 3

- “A” EDG with the “B” EDG unavailable during planned maintenance on November 20, 2007.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q)

a. Inspection Scope (10 Samples)

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

Unit 2

- Auxiliary Building, “A” Emergency Diesel Generator Room, 14’6” Elevation (Fire Area A-15);
- Auxiliary Building, “B” Emergency Diesel Generator Room, 14’6” Elevation (Fire Area A-16);
- Turbine Building, Motor-Driven Auxiliary Feedwater Pump Room, 1’6” Elevation (Fire Zone T-3);
- Turbine Building, Turbine-Driven Auxiliary Feedwater Pump Room, 1’6” Elevation (Fire Zone T-4);

- Main Control Room, 36'7" Elevation (Fire Area A-14C); and
- Auxiliary Building, "A" Containment Spray and HPSI/LPSI Pump Room, Elevation - 45'6" Elevation (Fire Area A-8, Zone A).

Unit 3

- Southeast Floor Area Auxiliary Feed Pump Cubicle elevations 4'-6" & 21'-6" (Fire Area ESF-5);
- Auxiliary Building East Floor Area elevation 24'-6" (Fire Areas AB-1, AB-1C, AB-1D, and AB-6A);
- Auxiliary Building West motor control center (MCC) and Rod Control Area elevation 24'-6" (Fire Area AB-6); and
- Engineered Safety Features Building, North Residual Heat Removal/Heat Exchanger Cubicle elevation 21'-6" (Fire Area ESF-3).

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.7A)

Inspection Scope (1 Sample)

The inspectors reviewed one sample associated with the Unit 3 ESF room cooler heat exchanger (HVQ ACUS1B). The inspectors observed the as-found condition of the heat exchanger after it was opened to verify that any adverse fouling concerns were appropriately addressed. The inspectors reviewed the results of the inspections against the acceptance criteria contained within the procedure to determine whether all acceptance criteria had been satisfied. The inspectors also reviewed the UFSAR to ensure that heat exchanger inspection results were consistent with the design basis. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope (2 Samples)

The inspectors observed simulator-based licensed operator requalification training for Unit 2 on November 13, 2007, and for Unit 3 on November 14, 2007. The inspectors evaluated crew performance in the areas of clarity and formality of communications; ability to take timely actions; prioritization, interpretation, and verification of alarms;

procedure use; control board manipulations; oversight and direction from supervisors; and command and control. Crew performance in these areas was compared to Dominion management expectations and guidelines as presented in OP-MP-100-1000, "Millstone Operations Guidance and Reference Document." The inspectors compared simulator configurations with actual control board configurations. The inspectors also observed Dominion evaluators discuss identified weaknesses with the crew and/or individual crew members, as appropriate. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Biennial Review (71111.11B)

a. Inspection Scope

The following inspection activities were performed using NUREG-1021, Revision 9, "Operator Licensing Examination Standards for Power Reactors," Inspection Procedure Attachment 71111.11, "Licensed Operator Requalification Program," NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)," and 10 CFR 55.46, "Simulator Rule" (sampling basis) as acceptance criteria.

The inspectors reviewed documentation of operating history since the last requalification program inspection. The inspectors also discussed facility operating events with the resident staff. Documents reviewed included NRC inspection reports, licensee CRs, and Assignment Requests that involved human performance issues of licensed operators to ensure that operational events were not indicative of possible training deficiencies. Documents reviewed during the inspection are listed in the Attachment.

The inspectors reviewed 22 scenarios and five job performance measures (JPMs) administered during this current exam cycle to ensure the quality of these exams met or exceeded the criteria established in the Examination Standards and 10 CFR 55.59. In addition the inspectors did a detailed review of three of the five comprehensive written exams administered last year.

The inspectors observed the administration of operating examinations to one operating crew and one staff crew. The operating examinations for each crew consisted of two crew simulator scenarios and five JPMs. The examiners observed seven training personnel administering the various components of the exam. On October 24, 2007, the inspectors observed the administration of two crew scenarios to an additional operating crew.

Conformance with Simulator Requirements Specified in 10 CFR 55.46

For the site specific simulator, the inspectors observed simulator performance during the conduct of the examinations, and discrepancy reports to verify compliance with the requirements of 10 CFR 55.46.

The inspectors reviewed a sample of simulator tests including transients, normal, steady state, core performance tests and scenario based tests. The inspectors also reviewed a sample of completed simulator deficiency reports from the past two-year period to determine whether the described issues were effectively addressed. Documents reviewed during the inspection are listed in the Attachment.

Conformance with Operator License Conditions

The inspectors determined conformance by reviewing:

- Six medical records to determine whether the records were complete, that restrictions noted by the doctor were reflected on the individual's license, and that the exams were given within 24 months. License restrictions were compared to the NRC's Operator Licensing Tracking System report 14 dated October 15, 2007.
- A sample of two licensed operator reactivation records and two non-shift licensed personnel watch-standing documentation for time on shift to verify currency and conformance with the requirements of 10 CFR 55.
- Two remediation training records from the past two-year training cycle. These records were associated with two operators who failed cycle written exams.

Licensee's Feedback System

The inspectors interviewed three instructors, training and operations management, and two licensed operators for feedback regarding the implementation of the licensed operator requalification program to ensure the requalification program was meeting their needs and was responsive to their noted deficiencies/recommended changes. In addition, the inspectors reviewed Feedback Summaries submitted by the operators.

Operator Requalification Exam Results

On November 20, 2007, the inspectors conducted an in-office review of operator requalification exam results. These results reflect performance on the annual operating tests, as the comprehensive written exams were not required in 2007 (comprehensive written exams were given in the fall of 2006). The inspection assessed whether pass rates were consistent with the guidance of NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The inspectors reviewed the exam results to determine whether:

- Crew failure rate on the dynamic simulator was less than or equal to 20 percent. (Failure rate was 0.0 percent)
- Individual failure rate on the dynamic simulator test was less than or equal to 20 percent. (Failure rate was 0.0 percent)
- Individual failure rate on the walkthrough test (JPMs) was less than or equal to 20 percent. (Failure rate was 2.0 percent)
- More than 75 percent of the individuals passed all portions of the exam (98 percent of the individuals passed all portions of the exam).

b. Findings

Introduction. The inspectors identified a Green NCV of 10 CFR 55.53(e), "Conditions of License," for the failure to meet requirements (10 CFR 55.53(f)) for the restoration of an inactive operator's license prior to the operator resuming control room watch standing activities.

Description. The inspectors determined that a staff Reactor Operator (RO) had been relieved for over one hour (to attend to non-control room activities) during one of the five credited proficiency watches completed in the first quarter of 2007. Therefore, the individual only completed four complete 12-hour watches in that quarter.

To maintain an active license, an individual must actively perform the functions of an operator or senior operator for a minimum of seven 8-hour or five 12-hour shifts per calendar quarter. In this instance, because the staff RO had not completed the necessary number of watches, his operator license became inactive at the end of the first quarter of 2007. As such, the staff RO subsequently performed duties in the control room without having an active license. The inspectors determined that the failure to meet the requirements for the restoration of an inactive operator's license prior to allowing the operator to resume control room watch standing activities was a performance deficiency.

Analysis. This finding is more than minor because the issue is associated with the human performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, licensed operators that are not current in watchstanding proficiency may commit operator errors that could cause mitigating systems to fail to respond properly.

The inspectors reviewed this issue in accordance with Manual Chapter 0609, "Significance Determination Process (SDP)," Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." The Appendix I flowchart, decision box 27, focuses on general record deficiencies exceeding a specified threshold of 20 percent of the records reviewed. The sample review of two staff ROs

(Unit 3 has only two staff ROs) revealed that one staff RO had failed to maintain an active status (50 percent). Therefore, the inspectors determined that this finding was of very low safety significance (Green).

Enforcement. 10 CFR 55.53(e), "Conditions of Licenses," states, in part, "If a licensee has not been actively performing the functions of an operator or senior operator, the licensee may not resume activities authorized by a license issued under this part except as permitted by paragraph (f) of this section." Contrary to the above, a staff RO with an inactive license performed license duties in the control room prior to completing the requirements of 10 CFR 55.53(f) to restore his license to active status. The licensee completed a 100 percent review of all staff licensees for proficiency watches between July 2006 and September 2007 and found no further violations. Corrective actions taken or planned include a read and sign for all operators detailing expectations and standards and development of an additional tracking system to assist operators in ensuring proficiency watches are appropriately completed.

Because this violation was of very low safety significance and was entered into the licensee's corrective action program (CR 07-10776), this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy.

(NCV 05000423/2007005-02, Failure to Complete Specified Requirements (10 CFR 55.53(f)) Prior to Allowing the Operator to Resume Control Room Watch Standing Activities).

1R12 Maintenance Effectiveness (71111.12Q)

a. Inspection Scope (2 Samples)

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 Dominion's implementation of the Maintenance Rule. The inspectors reviewed Dominion's ability to identify and address common cause failures, the applicable maintenance rule scoping document for each system, the current classification of these systems in accordance with 10 CFR 50.65 (a)(1) or (a)(2), and the adequacy of the performance criteria and goals established for each system, as appropriate. The inspectors also reviewed recent system health reports, CRs, apparent cause determinations, function failure determinations, operating logs, and discussed system performance with the responsible system engineer. Documents reviewed are listed in the Attachment.

The specific systems/components reviewed were:

Unit 2

- EDGs.

Unit 3

- EDGs.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope (5 Samples)

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

Unit 2

- Planned maintenance including the SBO diesel, "A" EDG, and off-site line 310 on October 11, 2007; and
- Planned maintenance on MCC B61 on October 19, 2007.

Unit 3

- Dominion's response to identification of a fire safe shutdown design issue on September 28 through October 4, 2007;
- Planned maintenance on the "A" EDG on October 11, 2007; and
- Dominion's troubleshooting efforts following the "B" EDG's failure to load properly on October 20, 2007.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)a. Inspection Scope (6 Samples)

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

Unit 2

- CR-07-11113, and OD MP2-019-07, Leaks in the Unit 2 Control Room Roof.

Unit 3

- CR-07-10676, CR-07-10682, and CR-07-10761, "B" EDG failure to properly start and load;
- CR-07-10363, Postulated Fire in West MCC/Rod Control Area could Disable Credited Charging for Post Fire Shutdown;
- CR-07-09670 and OD MP3-016-07 which evaluated gas in the discharge piping of the "B" Safety Injection (SIH) pump;
- CR-07-011821, CR-07-11828, and OD MP3-016-07 Revision 1, which evaluated gas found in the discharge piping of both the "B" SIH pump and the "A" SIH pump; and
- CR-07-11826, Reasonable Assurance of Safety associated with ESF tornado doors.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (IP 71111.17B)a. Inspection Scope (12 samples)

The inspectors reviewed twelve permanent plant modification packages to determine whether the design bases, licensing bases, and performance capability of risk significant structures, systems, and components had been degraded through the plant modifications. The plant changes were selected for review based on risk insights. To assess the adequacy of the modifications, the inspectors performed walkdowns of selected plant systems and components, interviewed plant staff, and reviewed applicable documents, including procedures, calculations, modification packages, engineering evaluations, drawings, corrective action program documents, the UFSAR, and TS.

For the modifications reviewed, the inspectors determined whether selected attributes (component safety classification, energy requirements supplied by supporting systems, seismic qualification, instrument setpoints, uncertainty calculations, electrical coordination, electrical loads analysis, and equipment environmental qualification) were consistent with the design and licensing bases. Design assumptions were reviewed to verify that they were technically appropriate and consistent with the UFSAR. For each modification, the 10 CFR 50.59 screenings or safety evaluations were reviewed, as described in Section 1R02 of this report. The inspectors also verified that procedures, calculations, and the UFSAR were properly updated with revised design information. In addition, the inspectors verified that the as-built configuration was accurately reflected in the design documentation and that post-modification testing was adequate to ensure the structures, systems, and components would function properly. A listing of documents reviewed is provided in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (5 Samples)

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

Unit 2

- “B” EDG retest following fuel and air adapter gasket replacement on November 18, 2007;
- “B” Reactor Building Closed Cooling Water (RBCCW) heat exchanger header outlet isolation valve retest following solenoid valve replacement on November 19 & 20, 2007, (SP 2611D, RBCCW System Alignment and Valve Tests, Facility 2, Revision 10); and
- “B” Engineered Safety-Feature Actuation System (ESAS) containment high pressure alarm troubleshooting and re-test on December 1, 2007 (Work Order M2-07-09247, M2-07-09303).

Unit 3

- “B” EDG retest following governor replacement on October 25, 2007, (SPROC OPS07-3-02); and
- “E” Circulating water pump retest following pump replacement November 28 through December 8, 2007, (Work Orders M3-03-04631, M3-03-13816, M3-07-16573).

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)a. Inspection Scope (5 Samples)

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

Unit 2

- SP 2613L, “Emergency Generator Slow Start Operability Test Facility 1,” Revision 004-02, on October 3, 2007;
- SP 2613K, “Emergency Generator Slow Start Operability Test Facility 2,” Revision 004-02, on November 18; and
- SP 2402PB, “Channel ‘B’ SPEC 200 Safety Parameters Functional Test,” Revision 003-01, on December 1, 2007.

Unit 3

- SP 3623.2, “Turbine Overspeed Protection System Test,” Revision 8, on November 10, 2007; and
- SP 3604A.1, “Charging Pump ‘A’ Operational Readiness Test,” Revision 13, on December 5, 2007.

b. Findings

Introduction. A Green self-revealing NCV of Dominion Nuclear Connecticut (DNC), Inc.'s Unit 3 License, Number NPF-49, Section 2.C.(1), was identified for Dominion's failure to maintain reactor core thermal power less than or equal to 3411 MWTH. Specifically, on November 10, 2007, during performance of control valve testing, reactor core thermal power reached 3482.6 MWTH on a four minute average, exceeding the license limit of 3411 MWTH.

Description. On November 10, 2007, operations personnel were performing SP 3623.2, "Turbine Overspeed Protection System Test," Revision 8. To perform the control valve testing, reactor power was lowered to 3377 MWTH. The turbine was then placed in "load set." After the turbine was placed in "load set," the turbine load began to decrease which resulted in a significant reactivity change. Upon completion of the number 1 control valve test, a T-average high alarm (Reactor Coolant System Temperature) was received in the control room. T-average was increasing due to the turbine unloading. Operations personnel increased turbine load in order to stabilize the plant, which decreased the margin of safety added by the initial downpower prior to starting the control valve testing.

During testing of the number 2 control valve, the turbine began to increase load, which increased reactor power. Reactor power reached 3482.6 MWTH on a four minute average, exceeding the license limit for Unit 3. The increase in reactor power caused a corresponding reactor pressure decrease. The Unit 3 Core Operating Limits Report establishes Departure from Nucleate Boiling (DNB) temperature and pressure safety limits. These limits are set to ensure fuel clad integrity. Both DNB limits were challenged, but not exceeded, during the control valve testing. Operations personnel took immediate actions to terminate the surveillance and return reactor power to within license limits. The turbine was then returned to "load limit."

The inspectors identified a performance deficiency, in that, Dominion personnel did not stop the test following an unexpected response after the turbine control was transferred to "load set." Dominion initially attributed the change to an electrical grid frequency perturbation, but is now performing extensive troubleshooting on the Electro-Hydraulic Control (EHC) system since the EHC appears to be more sensitive to frequency changes at full power than expected, which is challenging the operators when the turbine is in "load set." Regardless of the specific cause, the magnitude of the reactivity change was not expected. Dominion procedure OP-AA-100, "Conduct Of Operations," Attachment 1, "Leadership and Management," states, in part, "Do not proceed in the face of uncertainty." Additionally, Dominion procedure OP-AP-300, "Reactivity Management," Attachment 1, "Management Expectations," item E states "All reactivity changes are done in a planned manner and in accordance with approved procedures, the effects of reactivity changes are known beforehand and monitored afterward, and any unexpected indications are followed by conservative actions" and item G states "Plant personnel stop and question unexpected situations involving reactivity, criticality, power levels, or core anomalies at all times and resolve the situation before proceeding." The continuation of the control valve testing following the plant response

after turbine control was transferred to “load set” did not meet the standards and expectations outlined in the Dominion procedures.

Analysis. The finding was more than minor because it is associated with the human performance attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective of providing reasonable assurance that physical design barriers (i.e., fuel cladding) protect the public from radionuclide releases caused by accidents or events. Specifically, the transients experienced during the tests sufficiently upset plant stability to challenge both DNB limits.

The inspectors conducted a Phase 1 screening of the finding in accordance with IMC 0609, Appendix A, “Determining the Significance of Reactor Inspection Findings for At-Power Situations.” The finding was determined to be of very low safety significance (Green) because it only involved the potential to affect the fuel cladding barrier. This finding has a cross-cutting aspect in the area of Human Performance, Decision-making, because Dominion did not use conservative assumptions in decision making in proceeding with turbine control valve [H.1.(b)].

Enforcement. The Millstone Unit 3 License (Number NPF-49), Section 2.C.(1) states in part that, “DNC is authorized to operate the facility at reactor core power levels not in excess of 3411 megawatts thermal.” Contrary to the above, on November 10, 2007, during performance of control valve testing, reactor core thermal power reached 3482.6 MWTH on a four minute average. Corrective actions included performing the surveillance at a lower power and providing just-in-time training to operating crews prior to performing the surveillance. Dominion is also performing extensive troubleshooting on the EHC, since the EHC appears to be more sensitive to frequency changes at full power than expected, which is challenging the operators when the turbine is in “load set.” Because this violation was of very low safety significance and was entered into the licensee’s corrective action program (CR-07-11322), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000423/2007005-03, Failure to Maintain Core Thermal Power at or below 3411 MWTH.)**

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope (1 Sample)

The inspectors reviewed a Unit 2 temporary modification which installed a temporary jumper to prevent an inadvertent recirculation actuation signal during “B” emergency ESAS sensor cabinet maintenance on November 30, 2007. The inspectors evaluated whether the temporary modification adversely affected the function of the associated safety systems. The inspectors reviewed the temporary modification and its associated 10 CFR 50.59 screening against the UFSAR and TS to determine whether the modification affected system operability or availability. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY**Cornerstone: Public Radiation Safety**2PS3 Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program (71122.03)a. Inspection Scope (10 Samples)

During the period October 29 - November 2, 2007, the inspector conducted the following activities to determine whether the licensee implemented the radiological environmental monitoring program (REMP) consistent with the TS and the Off-Site Dose Calculation Manual (ODCM) to validate that radioactive effluent releases met the design objectives of Appendix I to 10 CFR 50. Additionally, the inspector determined whether radiological surveys and controls were adequate to prevent the inadvertent release of radioactive material into the public domain. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20 & 50, TS, and Dominion procedures. This inspection activity represents completion of ten samples relative to this inspection area.

REMP Inspections:

- The inspector reviewed the 2006 Annual Radiological Environmental Operating Report and the 2006 REMP Land Use Census Report to determine whether the environmental monitoring programs were implemented as required by the ODCM (Revision 25).
- The inspector walked down eight (of eight) air sampling stations (Nos. 1-I, 2-I, 3-I, 4-I, 10-I, 11-I, 15-C, 27-I), three (of three) goat milk/pasture grass sampling stations (Nos. 21-I, 22-I, 24-C), three (of five) vegetation sampling stations (Nos. 1-I, 10-I, 17-I), two (of two) sea water stations (Nos. 32-I, 37-C), one (of five) bottom sediment sampling locations (39-X), two (of four) oyster sampling trays, and 21 (of 40) thermoluminescent monitoring stations. The inspector determined if sampling was conducted as described in the ODCM related procedures, and evaluated the sampling equipment material condition.
- The inspector observed a technician collect and prepare for analysis air particulate/iodine filter samples, leafy vegetation, pasture grass, sea bottom sediment, and water samples, and verified that environmental sampling was representative of the release pathways as specified in the ODCM, and that sampling techniques were in accordance with procedures.
- Based on direct observation and review of records, the inspector determined whether the meteorological instrumentation was operable, calibrated, and

maintained in accordance with the guidance contained in the UFSAR, NRC Safety Guide 23, and Dominion procedures. The inspector verified that the meteorological data readout and recording instruments in the control room and at the tower were operable for wind direction, wind speed, temperature, and delta temperature. The inspector confirmed that redundant instrumentation was available and that the annualized recovery rate for meteorological data was greater than 90 percent.

- The inspector reviewed the calibration records for eight air samplers and observed the technician verifying the calibration of an air sampler (15-C).
- The inspector reviewed CRs, Nuclear Oversight Assessment Reports, and a departmental self-assessment report, relevant to the REMP requirements, to evaluate the threshold for which issues are entered into the corrective action program, the adequacy of subsequent evaluations, and the effectiveness of the resolution. The inspector also reviewed monthly RETS/ODCM effluent occurrence reports to evaluate the adequacy and timeliness of performance indicator information.
- The inspector reviewed the results of Dominion's quarterly laboratory cross-check program to determine the accuracy of the licensee's environmental air filter, charcoal cartridge, water, biota, and milk sample analyses.
- The inspector reviewed any significant changes made by the Dominion to the ODCM as a result of changes to the land use census or sampler station modifications since the last inspection. The inspector also reviewed technical justifications for any change in sampling location (or frequency) and verified the licensee performed the reviews required to ensure that the changes did not affect its ability to monitor the radiological condition of the environment.

Unrestricted Release of Material from the Radiologically Controlled Area (RCA)

- The inspector reviewed the contamination control procedures and observed several locations in Units 2 and 3, where personnel monitor potentially contaminated material leaving the RCA for unrestricted use.
- The inspector determined whether the radiation monitoring instrumentation (SAM-9, SAM-11, Frisker) was appropriate for the radiation types potentially present and was calibrated with appropriate radiation sources. The inspector reviewed the licensee's criteria for the survey and release of potentially contaminated material; verified that there was guidance on how to respond to an alarm which indicates the presence of contamination; and reviewed instrument alarm set points to ensure that radiation detection sensitivities are consistent with the NRC guidance contained in NRC Circular 81-07 and NRC Information Notice 85-92 for surface contamination and HPPOS-221 for volumetrically contaminated material. The inspector also reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters, and verified that the licensee has not established a release

limit by altering the instruments sensitivity through such methods as raising the energy discrimination level or locating the instrument in a high radiation background area.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES [OA]**

4OA1 Performance Indicator (PI) Verification (71151)

.1 Cornerstone: Initiating Events

a. Inspection Scope (4 Samples)

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

Unit 2

- Unplanned Scrams, 2nd Quarter 2006 through 3rd Quarter 2007; and
- Unplanned Scrams with Complications, 2nd Quarter 2006 through 3rd Quarter 2007.

Unit 3

- Unplanned Scrams, 2nd Quarter 2006 through 3rd Quarter 2007; and
- Unplanned Scrams with Complications, 2nd Quarter 2006 through 3rd Quarter 2007.

b. Findings

No findings of significance were identified.

.2 Cornerstone: Mitigating Systems

a. Inspection Scope (12 Samples)

The inspectors reviewed Dominion submittals for the PIs listed below to verify the accuracy of the data reported during that period. The PI definitions and guidance contained in NEI 99-02 were used to verify the basis for reporting each data element. The inspectors reviewed portions of the operations logs, monthly operating reports, and

LERs and discussed the methods for compiling and reporting the PIs with cognizant licensing and engineering personnel. Documents reviewed during this inspection are listed in the Attachment.

Unit 2

- Safety System Functional Failures, 4th Quarter 2006 through 3rd Quarter 2007;
- Mitigating System Performance Indication (MSPI) Emergency Alternating Current (AC) Power System;
- MSPI High Pressure Safety Injection System;
- MSPI Auxiliary Feedwater System;
- MSPI Residual Heat Removal System; and
- MSPI Support Cooling Water System.

Unit 3

- Safety System Functional Failures, 4th Quarter 2006 through 3rd Quarter 2007;
- MSPI Emergency AC Power System;
- MSPI High Pressure Safety Injection System;
- MSPI Auxiliary Feedwater System;
- MSPI Residual Heat Removal System; and
- MSPI Support Cooling Water System.

b. Findings

No findings of significance were identified.

.3 Cornerstone: Physical Protection

a. Inspection Scope (3 samples)

The inspector performed a review of PI data submitted by the licensee for the Physical Protection Cornerstone. The review was conducted of the licensee's programs for gathering, processing, evaluating, and submitting data for the Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment PIs. The inspector verified that the PIs had been properly reported as specified in NEI 99-02. The review included the licensee's tracking and trending reports, personnel interviews and security event reports for the PI data collected since the last security baseline inspection. The inspector noted from the licensee's submittal that there were no reported failures to properly implement the requirements of 10 CFR 73 and 10 CFR 26 during the reporting period. This inspection activity represents the completion of three samples relative to this inspection area; completing the annual inspection requirement.

b. Findings

No findings of significance were identified.

.4 Cornerstone: Occupational Radiation Safety

a. Inspection Scope (1 Sample)

The inspector reviewed implementation of the licensee's Occupational Exposure Control Effectiveness PI Program. Specifically, the inspector reviewed CRs, and associated documents, for occurrences involving locked high radiation areas, very high radiation areas, and unplanned exposures against the criteria specified in NEI 99-02, to verify that all occurrences that met the NEI criteria were identified and reported as performance indicators. This inspection activity represents the completion of one sample relative to this inspection area; completing the annual inspection requirement.

b. Findings

No findings of significance were identified.

.5 Cornerstone: Public Radiation Safety

a. Inspection Scope (1 Sample)

The inspector reviewed relevant effluent release CRs for the period October 1, 2006, through September 30, 2007, for issues related to the PI, which measures radiological effluent release occurrences that exceed 1.5 mrem/qtr whole body or 5.0 mrem/qtr organ dose for liquid effluents; 5mrads/qtr gamma air dose, 10 mrad/qtr beta air dose, and 7.5 mrads/qtr for organ dose for gaseous effluents. This inspection activity represents the completion of one sample relative to this inspection area; completing the annual inspection requirement.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for followup, the inspectors performed a daily screening of items entered into Dominion's corrective action program. This was accomplished by reviewing the

description of each new CR and attending daily management review committee meetings. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

2. Annual Sample: Fire Fighting Program Readiness

a. Inspection Scope (1 Sample)

The inspectors reviewed selected CRs associated with station fire fighting program readiness. The inspectors noted a marked increase in associated CRs after the station transitioned the fire brigade from an independent brigade to Operations. The reports were reviewed to ensure that the full extent of the issues were identified and corrective actions were specified, prioritized and implemented. The inspectors evaluated the reports against the requirements of Dominion's corrective action program as delineated in MPO-16-CAP-FAP01.1, "CR Screening and Review," and 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions." This review included a review of station self-assessments related to the fire protection program. Documents reviewed for this inspection activity are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. The inspectors concluded that Dominion had appropriately identified issues related to fire fighting protection readiness in 2007. In addition, the inspectors identified that Dominion has taken appropriate corrective action at addressing various issues identified in the CRs. The inspectors observed that a Unit 3 Fire Protection Program self-assessment identified the need for a transition plan in March 2007. The proposed transition plan was intended to document regulatory requirements, define rolls and responsibilities, and establish training and qualification requirements for all brigade members and related positions. The inspectors noted that this type of plan could have been used to proactively manage the fire brigade staffing and reduce the number of adverse conditions following the transition. The inspectors noted that the due date for implementing the transition plan had been changed from December 31, 2007, to May 31, 2008, for a staffing transition that had already occurred.

.3. Annual Sample: Unit 2 Failed Fuel

a. Inspection Scope (1 Sample)

The inspectors reviewed Dominion's corrective actions in response to fuel failures that occurred during fuel cycles 15, 16, 17 and 18, as identified as M2-00-3553, CR-02-05718, CR-05-00056, CR-05-13211 and CR-07-09024. The inspectors reviewed various procedures, including those used to identify and respond to indications of failed fuel, design change request for fuel design and core reload changes, CR's generated for the fuel failures in each cycle, root cause analysis and implementation of corrective

actions. The inspectors interviewed personnel associated with creating and implementing procedures for operation with failed fuel, evaluating the root cause of the failed fuel and implementing corrective actions to prevent recurrence of failed fuel. Documents reviewed for this inspection activity are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified. Following identification of failed fuel during cycle 14, Dominion initiated corrective actions to prevent recurrence of fuel failures by implementing a design change to new fuel for cycle 15 and all future cycles. The design change was expected to address the prominent cause, fretting due to baffle jetting of peripheral fuel assemblies, of the fuel failure. The design change was reviewed and implemented by M2-01013, Reload Design for Millstone Unit 2 Cycle 15. This corrective action was understood to prevent fuel failure in the new design bundles, but would not prevent additional fuel failures in fuel assemblies of the older design being reinserted in Cycles 16 and 17. Dominion recognized that additional fuel failures during Cycles 16 and 17 could occur in the reinserted fuel. Fuel failures were not anticipated in fuel cycles beyond Cycle 17, based on this design change.

CR-06-10030/06-10747 was generated following indication of fuel failures in Cycle 18. All Cycle 18 fuel was of the new design which was suppose to prevent repetition of the fuel failures identified in Cycle 14. Evidence of fuel failures in Cycle 18 indicated that the corrective actions implemented since Cycle 14 either did not adequately address the root cause of the fuel failures or that the fuel failures which occurred during Cycle 18 were the result of a new failure mechanism. The inspectors noted that Dominion took actions to address an industry known fuel failure mechanism which was determined to be the cause of their fuel failures in Cycle 14. The root cause of the Cycle 17 fuel failures was not complete at the time of this inspection.

.4 Operator Work-Around

a. Inspection Scope (1 Sample)

The inspectors reviewed the current listing of operator work-arounds for Units 2 and 3. The review was conducted to verify that Dominion procedures and practices provided necessary guidance to plant personnel, that the cumulative effects of the known operator work-arounds were addressed, and that the overall impact on the affected systems were assessed. The inspectors independently assessed the cumulative impact of known operator work-arounds to determine if they adversely affected the ability of operators to implement operating procedures (both normal and off-normal) and/or respond to plant transients. In support of this assessment, the inspectors reviewed various CRs regarding operator work-arounds and verified that work-arounds were being identified, tracked, and resolved in accordance with Dominion's corrective action program.

b. Assessments and Observations

No findings of significance were identified. The inspectors determined that operator work-arounds are adequately classified, tracked, and assessed in accordance with Dominion's procedures.

.5 Semi-Annual PI&R Trend Review

a. Inspection Scope (1 Sample)

As required by Inspection Procedure 71152, the inspectors performed a review of the Dominion corrective action program and associated documents to identify trends that may indicate existence of safety significant issues. The inspectors' review was focused on repetitive equipment and corrective maintenance issues, but also considered the results of daily inspector corrective action program item screening. The inspectors also reviewed Dominion Nuclear Trend Reports for Millstone Station quarters 2 and 3, 2007. The inspectors focused on unplanned TS entries to see if there was an identifiable trend. Unplanned TS entries were reviewed for the calendar year 2007.

b. Assessments and Observations

No findings of significance were identified. Although no identifiable trends were identified that were not already addressed by the licensee, it is noted that Unit 3 averages between two and three times as many unplanned TS entries per month as Unit 2.

40A5 Other Activities

.1 Independent Spent Fuel Storage Installation (ISFSI) Monitoring Controls

a. Inspection Scope (1 Sample)

The inspector reviewed routine operations and monitoring of the ISFSI, including the radiological/contamination survey records for the transfer of three dry shielded canisters (Nos 6, 7, 8) conducted during the week of October 14, 2007. The inspector walked down the ISFSI with a Health Physics Supervisor, performed independent dose rate surveys of the storage modules, and confirmed module temperatures were within the required limits. The inspector also reviewed plant equipment operator logs for ISFSI surveillances, environmental (ISFSI) dosimetry records, and observed a technician taking a ground water sample, for analysis, from a ISFSI monitoring well (MW-2A). Radiological control activities for the ISFSI were evaluated against 10 CFR 20, ISFSI TS, and Dominion procedures.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including ExitExit Meeting Summary

On October 18, 2007, the Emergency Preparedness (EP) inspector presented the inspection results to Mr. Skip Jordan, Plant Manager, and members of his staff. The inspector confirmed that proprietary information was not provided or examined during the inspection. In addition on November 20, 2007, the licensee was contacted via telephone and a final summary exit was conducted.

On November 2, 2007, the radiation protection inspector presented the inspection results to Mr. J. Alan Price, and members of his staff. The inspector confirmed that no proprietary information was provided or examined during the inspection.

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

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

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000336/2007005-01	NCV	Failure to Ensure ESF Building Protection from Missiles Generated by a Design Basis Tornado (Section 1R01)
05000423/2007005-02	NCV	Failure to Complete Specified Requirements (10 CFR 55.53(f)) Prior to Allowing the Operator to Resume Control Room Watch Standing Activities (Section 1R11Q)
05000423/2007005-03	NCV	Failure to Maintain Core Thermal Power at or below 3411 MWTH (Section 1R22)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Millstone Unit 3 UFSAR
 Millstone Unit 3 IPEEE
 NRC IMC Part 9900 Guidance, Operability Determination Process
 Operation Logs Date May 16, 2007
 CR-07-11473, Closure of tornado Doors SF-24-14A, B SI/QSS RM to Outside is Challenged by Safety Rail
 CR-07-11707, Tornado Doors Require Mechanical Means to Shut
 CR-07-11274, Tornado Door Material Condition Impact on Effort to Closed Doors
 CR-07-11826, Additional Actions Required to Resolve Tornado Door Material Condition
 CR-01-06911, The ESF Tornado Doors have been Closed with the Emergency Exit Only Sign Still Attached
 OP 3261, Revision 007, Response to Door Inoperability
 AOP 3569, Revision 016-00, Severe Weather Conditions

Section 1R02: Evaluation of Changes, Tests, or Experiments

10 CFR 50.59 Safety Evaluations

S2-EV-05-0001, Independent Spent Fuel Storage Installation (ISFSI) for Millstone Unit 2, Rev. 0
 S2-EV-06-0009, DCR M2-02006 Millstone Unit 2 PORV Replacement, Rev. 4
 S2-EV-06-0001, 50.59/72.48 Evaluation for Reactor Regulating System Upgrade & ADV Controller Replacement, Rev. 0
 S3-EV-07-0004, Unit 3 50.59/72.48 Evaluation for Operating the High Pressure Turbine with the Indications Found During 3R11 Phased Array Testing, Rev. 0
 S3-EV-07-0002, Unit 3 Alternate Minimum Flow Lines, Rev. 0

S3-EV-07-0003, Design Change for Recirculation Spray System Pump Start From Time Delay Signal to RWST Low Low Level Signal Coincident with CDA Following LOCA, Rev. 0
S3-EV-07-0001, DCR M3-06001, Reload Design for MP3 Cycle 12, Rev. 0

10 CFR 50.59 Safety Evaluation Screens

EOP 35 ES-1.3, Transfer to Cold Leg Recirculation, Rev. 13
EOP 3506, Loss of All Charging Pumps, Rev. 9
AOP 3562, Loss of Instrument Air, Rev. 5
CRED CR-05-00398, Diesel Generator Trip Circuitry, Rev. 0
EOP 35 FR-H.1, Response to Loss of Secondary Heat Sink, Rev. 18
DM3-00-0099-07, 480 Volt Load Center Breaker 32T13-2 Trip & Reset Logic Modification, 4/16/07
DM3-00-0064-05, Addition of IAS Header Isolation Valve to Allow Isolation of the Intake Structure, 4/25/05
DM2-00-0477-05, Revised Heat Tracing Details for Unit 2 CST Cross Tie Vent Line, Rev. 0
DM2-00-0195-06, Feedwater Pump Min Flow Controller Configuration Change FIC-5237 & FIC-5240, 7/28/06
DM2-00-0027-06, Disable EDG Auto Field Flash on Slow Start, Rev. 0
DM2-00-0399-05, Millstone Unit 2 Turbine Driven AFW Pump Governor Replacement, Rev. 0
DM2-00-0112-05, Turbine Trip Reduction Low Hydraulic Fluid Pressure, Rev. 0
EOP 35 ECA-0.3, Loss of All AC Power – Recovery with the SBO Diesel, Rev. 11
EOP 35 ES-1.2, Post LOCA Cooldown and Depressurization, Rev. 15
EOP 35 ES-1.2, Post LOCA Cooldown and Depressurization, Rev. 14
DM2-00-0489-05, Unit Two Condensate Storage Tank Level Instrumentation, Rev. 0
DM2-00-0029-06, Safety Injection Valves 2-SI-618, 628, 638 and 648 Positioner Replacement, Rev. 0
DM3-00-0463-05, Power Supply Replacements for SBO Diesel, Rev. 0

Section 1R04: Equipment Alignment

MP-PROC-OPS-OP 2340E11, Revision 000-003, Charging Pump Maintenance
MP-PROC-OPS-OP 2704E, Revision 015-03, Charging Pump
MP-PROC-OPS-OP 3346D, Revision 011-12, Station Blackout Diesel
MP-PROC-OPS-OP 2343, Revision 020-06, 4160 Volt Electrical System
MP-PROC-OPS-OP 2346A, Revision 026-09, A Emergency Diesel Generator

Section 1R05: Fire Protection

Millstone Unit 2 Fire Hazards Analysis, Revision 9

Section 1R11: Licensed Operator Requalification Program

Millstone Unit 2 Simulator Exam, November 13, 2007

Training Procedures

TQ-1, Revision 007-03, "Personnel Qualification and Training"
Operating Procedures

Simulator Procedures

NTB-134 Developing Simulator Training and Examinations
NSEM-6.06 Simulator Scenario Based Testing
NSEM-3.02 Control of Simulator Design Documentation

Transient Tests

Annual Transient Performance Testing:

- T1, Manual Reactor Trip
- T2, Simultaneous Trip of All Feedwater Pumps
- T3, Simultaneous Closure of All MSIVs
- T4, Simultaneous Trip of All Reactor Coolant Pumps
- T5, Trip of One Reactor Coolant Pump
- T6, Main Turbine Trip without Reactor Trip, < P9
- T7, Maximum Rate power Ramp
- T8, Maximum LOCA with Loss of Normal Power
- T9, Maximum Size Unisolable Main Steam Line Rupture
- T10, Slow RCS Depressurization
- T11, Maximum Load Rejection

Scenario Based Tests

SO7601L dated 10/2/07 Loss of Feedwater Heater String, Reactor Trip and Manual SI
SO7602L dated 10/4/07 Unisolable LOCA Outside of Containment
S07201L - Reactor Startup
S07202L - Plant Startup Part Tasks

Steady State Tests

Annual Real Time Steady State Test 2007

Normal Evolution Tests:

Reactor Startup
Plant Startup

Core Performance Tests (BOC)

Simulator Reactor Core Testing Core Cycle 12 MOL
Simulator Reactor Core Testing Core Cycle 12 BOL

Condition Reports/ Work Requests

DRs 2005-3: 0081

DRs 2006-3: 0005, 0020, 0034, 0058, 0065, 0072

DRs 2007-3: 0002, 0010, 0011, 0023, 0025, 0030

DR 2006-3-0066 Review Results of 2005 Core Performance Testing Differential Rod Worth

CR-07-10776 CR-07-05596 CR-07-10630

CR-06-07979 CR-06-03265 CR-06-08023

CR-05-10821 CR-05-11771

LERs

LER 2006-001-01, "Loss of Safety Function of the Control Room Emergency Ventilation System

Section 1R12: Maintenance Effectiveness

Condition Reports

CR-06-12317, "B" EDG Needs ½ Barrel of Lube Oil Added

CR-06-12414, LCO Entry for B EDG Due to Low Starting Air Pressure

CR-07-01673, 'B' Diesel Generator Jacket Cooling Water Expansion Tank

CR-07-02244, B EDG Jacket Water Surge Tank Overflowed During Surveillance Test

CR-07-03190, "B" EDG Jacket Coolant Expansion Tank Overflowed During Run

CR-07-03568, Fairbanks Morse Issued a 10 CFR Part 21 Applicable to the Unit 2 EDGs

CR-07-06155, Active Fuel Oil Leak, 'B' Diesel-Generator Fuel Return Line

CR-07-06193, Request Investigation of Jacket Cooling Expansion Tank

CR-07-06624, SP26130, "A" EDG Hot Restart Procedure Was Not Changed

CR-07-07252, "B" Emergency Diesel Generator Low on Oil

CR-07-09413, A EDG Output Breaker Did Not Close While attempting to Sync to the Grid

CR-07-09710, Unexplained 2" Rise in EDG Expansion Tank Level

CR-07-10388, Noted During "B" EDG Run Lube Oil Level was 1 Inch Low

CR-07-10676, B EDG Failure to Start During Maintenance Run

CR-07-10681, Washer Found on #8 Cylinder Air start Check Valve on U-3 "B" EDG

CR-07-10682, B Diesel Autotrip During Maintenance Run

CR-07-10761, 'B' EDG Stopped Running During the Maintenance Run Unexpectedly

CR-07-10861, Binding Fuel Control Rack

CR-07-10862, New Installed Mechanical Governor Rotated Backwards

CR-07-10883, Two Out of Specification Readings During Unit 3 'B' EDG Run

CR-07-10906, Oil Compatibility Concern on Unit 3 "B" EDG Replacement Governor

CR-07-10928, B EDG Governor Oil Level Lower than Expected

CR-07-11225, "A" EDG Fuel Rack #12 Cylinder Micrometer Broken

CR-07-11454, 'B' EDG Jacket Water Expansion Tank Overflow and Bubbles in Jacket Cooling Water

CR-07-11544, 'B' Emergency Diesel Generator Lube Oil Level ½" Low

CR-07-11614, Parameters Discovered Out of Normal Operating Band

Procedures

ER-AA-MRL-100, Implementing Maintenance Rule, Revision 0

MP 3720CD, Slow Speed Start and Run-In of EDG Following Maintenance, Revision 008-17

Work Orders

M3 05 06832, PM, 2 Year – ‘B’ D/G Inspection

M3 07 14906, B Diesel Autotrip During Maintenance Run

Other Documents

Unit 2 A&B EDG Train 24 Month Unavailability

Unit 2 Diesel Generator Maintenance Rule Scoping Table

Unit 2 Emergency Diesel Generator and Fuel Oil System System Health Reports, 4th Quarter 2006 through 3rd Quarter 2007

Unit 3 A&B EDG Train 24 Month Unavailability

Unit 3 Emergency Diesel Generator and Fuel Oil System System Health Reports, 4th Quarter 2006 through 3rd Quarter 2007

Unit 3 Emergency Diesel Generator Maintenance Rule Scoping Table

Section 1R13 Maintenance Risk Assessments and Emergent Work Control

MP-16-CAP-FAP01.1, Revision 008-05, Condition Report Screening and Review

MP-13-PRA-FAP01.1, Revision 002-04, Performing (a)(4) Risk Reviews

MP-20-WM-FAL02.1, Revision 013-01, Conduct of On-Line Maintenance

CR-07-10129, Review and Revise MP-13-PRA, FAP01.1, “Performing (a)(4) Risk Reviews”
Associated with Switchyard Work

Section 1R15: Operability Evaluations

OD MP2-019-07, Leaks in the Unit 2 Control Room Roof, Revision 0

CR-07-07-11113, Leaks in the Unit 2 Control Room Roof

CR-07-10363, Postulated Fire in West MCC/Rod Control Area could Disable Credited Charging
for Post Fire Shutdown

CR-07-11826, Additional Actions Required to Resolve Tornado Door Material

Section 1R17: Permanent Plant Modifications

Note: This listing includes those documents reviewed associated with Evaluation of Changes, Tests, or Experiments (Section 1R02)

Modifications

DM3-00-0099-07, 480 Volt Load Center Breaker 32T13-2 Trip & Reset Logic Modification,
4/16/07

DM2-00-0281-05, Modification to Minimum Flow Recirculation Line 1"JBD for Unit 2 Fire Pump
P-82, 1/12/06

DM3-00-0064-05, Addition of IAS Header Isolation Valve to Allow Isolation of the Intake
Structure, 4/25/05

DM3-00-0245-06, AFW Terry Turbine, Throttle Valve Linkage, Rev. 0

DM3-00-0088-06, Debris Blockage RWST Level Modification Train A, Rev. 0

A-7

DM2-00-0477-05, Revised Heat Tracing Details for Unit 2 CST Cross Tie Vent Line, Rev. 0
DM2-00-0042-07, Emergency Diesel Generator: Implementation of Ultra Low Sulfur Diesel Fuel, Rev. 0
DM3-00-0049-07, Emergency Diesel Generator: Implementation of Ultra Low Sulfur Diesel Fuel, Rev. 0
DM2-00-0112-05, Turbine Trip Reduction Low Hydraulic Fluid Pressure, Rev. 0
DM2-00-0489-05, Unit Two Condensate Storage Tank Level Instrumentation, Rev. 0
DM2-00-0029-06, Safety Injection Valves 2-SI-618,628, 638 and 648 Positioner Replacement, Rev. 0
DM2-00-0181-07, Tube Plugging in The B Emergency Diesel Generator Lube Oil Heat Exchanger X53B, Rev. 0

Procedures

EOP 35 GA-1, Energizing MCC 32-3T, Rev. 2
C SP 600.5, QA Diesel Fuel Oil Delivery Sampling Requirements, Rev. 0
DCM-01, Millstone power Station Design Control Manual Program Policy and Overview, Rev. 11
MC 1, Receipt, Control, and Identification of QA Material, Rev. 3
MPM 5.00, Receipt and QC Inspection, Rev. 5
NGP 6.02, Quality Requisitions and Quality Purchase Orders, Rev. 12
NGP 6.05, Processing and Control of Purchased Material, Equipment, Parts, and Services, Rev. 12
OP 2346B, Diesel Fuel Oil System, Rev. 11
D-NOCP-0212, Internal Audit Program, Rev. 5
EOP 35 ES-1.2, Post LOCA Cooldown and Depressurization, Rev. 15
OP 2319B, Condensate Storage and Surge System, Rev. 15
ARP 2590D-045, Condensate Storage Tank Level Hi/Lo, Rev. 0
EOP 35 ECA-0.3, Loss of All AC Power – Recovery With the SBO Diesel, Rev. 11
DCM-01, Program Policy and Overview, Rev. 11
DCM-03, Plant Changes, Rev. 15
MP-13-SA-REF12.01, 10 CFR 50.59 Definitions, Rev. 0
MP-13-SA-REF12.02, Determining Applicability of 10 CFR 50.59, Rev. 0
MP-13-SA-REF12.03, Guidance for Performing 50.59 Screens, Rev. 0

Calculations / Evaluations

MP58B-138EM, Service Water Supply to Diesel Engine Coolers - Stress Problem 118, Rev. 3
91-BOP-00813ES, Change 1, MP2 EDG Operating Time with 24,000 Gallons of Diesel Fuel Oil Available at a Continuous Rated Load of 2750 kW, Rev. 4
97-DES-01787M2, Change 2, Minimum Level Required in MP2 Diesel Fuel Oil Storage Tank to Support Seven Day EDG Run, Rev. 4
89-094-0990ES, Millstone Unit 3 Target Thrust/Torque Calculation for 3CHS*MV8511A, Rev. 4
92-120, MP2 SWS Design Basis Alignments – Summer and Winter, Rev. 2
BAT1-96-1241E3, Battery 1 & Charger, Associated Cable & Device Electrical Verification Calculation, Rev. 2

Drawings

12179-EM-138B, Compressed Air, Rev. 30

Condition Reports

07-11282	06-12343	06-05137	07-01796	07-06566
05-05873	05-13012	06-05346	07-02149	07-08295
05-07488	06-06695	06-10000	07-00484	06-09721
05-11885	06-11341	06-11085	07-08413	07-08413
06-02071	06-02722	07-01007	07-04626	07-04711
06-07861	06-04763	07-10550	07-04657	

Orders

M3 05 17555	M2 06 05687	M2 05 12381	M3 06 06228	M2 05 10179
M3 07 04960	M2 06 05686	M3 07 04929	M3 06 10430	M3 05 00675

Section 1R19: Post Maintenance Testing

SP 2611D, RBCCW System Alignment and Valve Tests, Facility 2, Revision 10
 SP 2613K, Revision 004-02, Emergency Generator Slow Start Operability Test Facility 2
 SP 2613B-001, Revision 004-02, Periodic DG Operability Test Facility 2 Fast Start Loaded Run
 CR-07-11831, ESAS Restoration Work not Performed due to Wrong Part from Warehouse
 M2-07-09247, Containment Pressure SIAS/CIAS Bistable (Hi) Troubleshooting
 M2-07-09303, Containment Pressure Bistable Repair
 CR-07-11063, BA201, BA202, ESAS CTMT Pressure Hi and CTMT Pressure Hi Hi
 CR-07-11454, "B" EDG Jacket Water Expansion Tank Overflow and Bubbles in Jacket Cooling Water
 ARP 2590A, Revision 004-03, Alarm Response for Control Room Panel, C-01
 M2-07-01994, Troubleshooting/Repair Plan for Unit 2 Jacket Water In-leakage
 MA-AA-1002, Revision 2, Leakage Management

Section 1R22: Surveillance Testing

SP 2613L, Revision 004-02, Emergency Generator Slow Start Operability Test Facility 1;
 SP 2613K, Revision 004-02, Emergency Generator Slow Start Operability Test Facility 2;
 SP 2402PB, Revision 003-01, Channel B RPS and ESAS Spec 200 Safety Parameter Functional Testing.

Section 1R23: Temporary Plant Modifications

50.59 Screen, dated 11/29/2007, Temporary Jumpers to Prevent an Inadvertent RAS during "B" ESAS Maintenance

Section 2PS3: Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program

Procedures:

RPM 5.5.9, Rev 001 Dry Shielded Canister (DSC) Surveys (ISFSI)

RPM 1.3.9, Rev 005	Area Monitoring
MP-22-REC-PRG, Rev 000	Radiological Effluent Control
MP-22-REM-PRG, Rev 000	Radiological Environmental Monitoring Program
MP-22-GWP-PRG, Rev 000	Groundwater Protection Program
REMP-2.8, Rev 000	Groundwater Sampling
REMP 1.1, Rev 000	Environmental Collection Schedule
REMP 1.2, Rev 000	Radiological Environmental Monitoring (REMP) Sampling & Analysis
REMP 1.3, Rev 000	Land Use Census
REMP 1.4, Rev 000	Quality Control of the Radiological Environmental Monitoring Program
REMP 1.5, Rev 000	Annual Radiological Environmental Operating Report
REMP 2.1, Rev 000	Sample Identification and Transmittal to the Contractor for Analysis
REMP 2.2, Rev 000	Environmental TLD Collection and Distribution
REMP 2.3, Rev 001	Airborne Particulate and Iodine Sampling
REMP 2.4, Rev 000	Soil Sampling
REMP 2.5, Rev 000	Milk Sampling
REMP 2.6, Rev 000	Terrestrial Biota Sampling
REMP 2.7, Rev 000	Terrestrial Water Sampling
ENV 2003, Rev 000	Aquatic Sampling for Radiological Environmental Monitoring Program
REMP 2.8, Rev 000	Groundwater Sampling
C SP 400.2, Rev 003	Meteorological Tower Instruments Calibration
RPM 4.6.24, Rev 006	Small Articles Monitor Calibration
RPM 4.7.3, Rev 006	Small Articles Monitor Operation
RPM 2.4.2, Rev 014	Radiological Control of Material & Vehicles
RAB C-1, Rev 001	10 CFR 75 (g) Decommissioning Records

Sampling Sites:

Goat Milk/Pasture Grass: Nos.21-I, 22-I, 24-C
 Air Particulate/Iodine: 1-I, 2-I, 3-I, 4-I, 10-I, 11-I, 15-C, 27-I
 Sea Water: Nos. 32-I, 37-C
 Leafy Vegetation: Nos. 1-I, 10-I, 17-I
 Sea Bottom Sediment: No. 39-X
 Oyster Sampling Trays Nos. 32-I, 34-X
 Thermoluminescent Dosimeters Nos.1-I, 2-I, 3-I, 4-I, 7-I, 10-I, 11-I, 13-C, 14-C, 15-C, 27-I, 41-I, 51-I, 52-I, 53-I, 56-I, 57-I, 59-I, 61-I, 62-I, 65-I

Nuclear Oversight /Self-Assessment Reports:

Audit NO-05-10, Offsite Dose Calculation Manual, Radiological Environmental Monitoring Program, Environmental Protection Program
 Audit SA-06-014, NUPIC Joint Audit Report of AREVA NP, Inc. Environmental Laboratories
 Self-Assessment Report No. MP-SA-04-49, REMF

Condition Reports:

07-11036, 07-10474, 07-09900, 07-07823, 06-08664, 07-05842, 07-01280, 06-03493, 06-02285, 07-05825, 07-09528, 07-01529, 07-07529, 07-07532, 07-07534, 07-08520, 07-04949, 07-03629,

Calibration Records

Air Sampler Nos. 6083, 6085, 6298, 6339, 6279, 6084, 6384, 6147
Meteorological Instrumentation (Primary & Backup) dated 07/11/2007 and 07/09/2007
Small Article Monitors Nos. 65, 70, 72, 135, 493, 494, 495, 497, 498, 537, 579

Miscellaneous Reports:

2005 and 2006 Annual Radioactive Effluent Release Reports
10 CFR 50.75(g), Decommissioning Records
On-site Ground Water Monitoring Report, 2nd Quarter 2007
Environmental Cross-Check Results of AREVA Environmental Laboratory, January - June 2007

Section 40A1 – Performance Indicator (PI) Verification

Condition Reports

CR-07-04662, Snubber Found Locked, Replacement Required
CR-07-04165, 3SIH*MV8813 Stroked into the Backset before Breaker was Opened
CR-07-09670, During Performance of SP 3608.4-003, Gas Accumulation was Identified in the "B" SIH Pump Discharge Piping
CR-07-00196, "A" EDG Fuel Oil Tank Level Switch has a Slow Fitting Leak
CR-07-09350, "A" EDG Fuel Oil Vault Tech Spec Temperature Exceeded while Diesel is Inoperable
CR-07-09610, Unit 3 A D/G Sync Relay Findings
CR-07-11218, MP2 P41B HPSI Pump Motor Continues to Exhibit Elevated Vibration Levels
CR-07-06510, P41A HPSI Pump Inboard Bearing Oil Analyses Indicates Presence of Fine Wear Debris
CR-07-06129, MP2 P41B HPSI Pump Motor Continues to Exhibit Elevated Vibration Levels
CR-07-08018, Oil Sample is not Taken on the P9B Motor
CR-07-09498, Containment Spray Valve Checked Closed but was Still a Turn-and-Half Open
CR-07-00737, Service Water Leak on "A" EDG Service Water Supply Flange Upstream of 2-Sw-23 1A
CR-07-01414, Unplanned TSAS Entered due to 2-SW-231B Stroke Closed Time did not Meet Acceptable Normal Time in SP 2612B-003
CR-07-01382, Engineering Required for 2-SW-231B
CR-07-01399, 2-SW-231B Failed to Operate with Demand Signal Applied
CR-07-09076, MP2 P5C Service Water Pump Exhibits Vibration that is in the IST "Alert" Range
CR-07-06941, 2-RB-8.1.B Leaks
CR-07-06945, 2-RB-8.1.A Leak
CR-07-08442, Both RBCCW Surge Tank Level Transmitters Repeatedly found Outside Acceptance Criteria
CR-07-09225, MP2 P11A RBCCW Pump Motor Vibration Continues to be in Alert
CR-07-05627, Oil Leaks on 3 FWA*P1A

CR-07-07888, Condensate Standpipe for the TDAFW Pump found to have Water during the Weekly Draining Surveillance
CR-07-02147, FWA*V030 Inadequate Isolation for Isolating FWA*P2 for MNTC
CR-07-05910, 3RSS*P1D Motor Oil Level at Minimum Level Oil
CR-07-02946, Broken Bolts on 3RSS*MOV23C
CR-07-03040, Failed Bolts on 3RSS*MOV23D
CR-07-12020, 3SWP*P3A, Pump Failed its Operability Test due to Low Differential Pressure
CR-07-01191, Unplanned LCO – Packing Leak on “A” Service Water Pump Seal
CR-07-01391, H7B Threads in the Fuel Return Header are Worn at Control Side #1 CYL
CR-07-06989, “B” EDG Unavailability Extended due to Poor Scheduling
CR-07-09413, Unit 3 A EDG Output Breaker did not Close while Attempting to SYNC to the Grid

LERs

2006-006-00 & 2006-006-01, Scaffold Built for Work on Main Steam Isolation Valve (2-MS-64A) Prevented the Valve From Closing
2006-007-00, Vendor Technical Manual Used in Common Maintenance Procedure on Support System Results in Inoperability of Redundant 480V Emergency Load Centers
2006-008-00, Scaffold Impairment of Turbine Driven Auxiliary Feedwater Pump Room HELB Blowout Panel
2007-001-00, Failure of Two Main Steam Safety Valves to Lift Within the Acceptance Criteria
2007-002-00, Loss of Offsite Power Caused by Transmission System Operator While Defueled

Drawings

25203-30008, Single Line Diagram 480V Unit Substa. Emerg. 22E (B5)& 22F (B6), Revision 14
25203-30025, Single Line Riser Diagram Lighting Panels and Transformers, Revision 37

Other Documents

NUENG-07-04, Engineering Evaluation of the Loss of Cooling to MCC B51 and MCC B61 Enclosures
Reportability Determination, A/C B51 and B61 Not Working Results in Entry into TS 3.0.3
Unit 2 Consolidated Data Entry MSPi Derivation Reports
Unit 3 Consolidated Data Entry MSPi Derivation Reports
Unit 2 and Unit 3 2007 Maintenance Logs
Unit 2 and Unit 3 2007 Operations Logs

Section 40A2: Identification and Resolution of Problems

CR-07-00537, Non-Licensed Operator Training is Incorporating Fire Training into Weekly Training Cycles
CR-07-02907, Self-Assessment Report: MP-SA-07-031, March 2007 – MP3 Fire Protection Program
CR-07-06338, Identified Fire Brigade Members did not have SERO C BT Completed
CR-07-06438, SERO Training Paperwork for Newly Qualified Fire Brigade Personnel cannot be Completed as Written
CR-07-06585, Unannounced Backshift Fire Drill not Supported
CR-07-07566, Fire Brigade Responders Experience Lack of Drinking Water
CR-07-08978, Fire Brigade Staffing Deficiency Resulted in Work Hour Exceedance

CR-07-09889, Current Fire Brigade Members do not have Access to All Fire Brigade Equipment Lockers
 CR-07-10363, Postulated Fire in West MCC/Rod Control Area could Disable Credited Charging System Functions
 CR-07-10812, Fire Brigade Drill Failure
 CR-07-11666, Minimum Fire Brigade Staffing not met due to Illness
 WC-7, Revision 005-05, Site Fire Protection
 M2-00-3553, Release in Noble Gas Activity Xenon and Krypton in Reactor Coolant Indicates potential Fuel Cladding Leak
 CR-02-05718, Indications of Failed fuel Cladding in Millstone 2 Cycle 15 Core
 CR-05-00056, RCS Radiochemistry Trending of Xenon Ratios Indicates there may be a Grid/Rod Fretting Failure in MP2
 CR-05-13211, RCS Radiochemsitry Trending of Xenon Ratios Indicates there may be a Fuel Rod failure in MP2
 CR-07-09024, RSC Chemistry Data Indicates a fuel Defect in the MP2 Cycle 18 Core
 CR-2005-5145, Root Cause Analysis of Fuel Rod Fretting Failures in Millstone Unit 2, Cycle 17
 DCR M2-01013, Reload Design for Millstone Unit 2 Cycle 15
 CR 06-10030/06-10747, Condition Report Engineering Disposition form for cycle 17
 CR 07-00704/MP2-002-07, Operability Determination for Cycle 18 Fuel Failures
 57-TR-FS-07-72000, AREVA Millstone 2 EOC 17 Fuel Assembly Cause of failure Examinations, Jan. 2007
 NFE-5, Fuel Performance Program

LIST OF ACRONYMS

AC	alternating current
ADAMS	Agencywide Documents Access and Management System
AOP	abnormal operating procedure
CFR	Code of Federal Regulations
CR	condition report
DNB	Departure from Nucleate Boiling
DNC	Dominion Nuclear Connecticut
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EHC	Electro-Hydraulic Control
ESF	engineered safety featured
ESAS	Engineered Safety-Feature Actuation System
EDG	emergency diesel generator
EP	Emergency Preparedness
ESF	engineered safety features
GDC	General Design Criteria
HPSI	High Pressure Safety Injection
I&C	Instrumentation and Control
IMC	inspection manual chapter
ISFSI	Independent Spent Fuel Storage Installation
JPM	job performance measures

LER	Licensee Event Reports
LOCA	Loss of Coolant Accident
MCC	motor control center
mrem	millirem
MSPI	Mitigating System Performance Indication
MWTH	megawatts thermal
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OA	Other Activities
OD	operability determinations
ODCM	Off-Site Dose Calculation Manual
PARS	Publicly Available Records System
PI	performance indicator
PI&R	Problem Identification and Resolution
PM	preventive maintenance
PMT	post maintenance testing
PORV	power operated relief valve
RBCCW	Reactor Building Closed Cooling Water
RCA	radiologically controlled area
REMP	Radiological Environmental Monitoring Program
RO	Reactor Operator
SAM	small articles monitor
SBO	station blackout
SDP	significance determination process
SIH	high pressure safety injection system
TS	technical specification
UFSAR	updated final safety analysis report
WO	work order