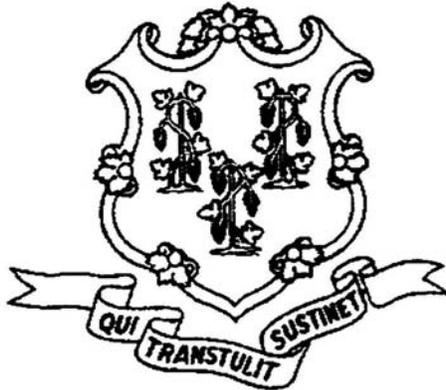


STATE OF CONNECTICUT



THE NUCLEAR ENERGY ADVISORY COUNCIL REPORT

2010

Established Pursuant to Public Act 96-245

**John W. Sheehan, Chairperson
Pearl Rathbun, Vice Chairperson**

December 9, 2010

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CHARGE TO THE COUNCIL

Section 17 of Public Act 96-245 created the Nuclear Energy Advisory Council (NEAC) and requires it to:

1. Hold regular public meetings to discuss issues relating to the safety and operations of nuclear power plants and to advise the governor, legislature, and municipalities within a five-mile radius of the plants on these issues;
2. Work with federal, state, and local agencies and the companies operating such plants to ensure public health and safety;
3. Discuss proposed changes in, or problems arising from, the operation of the plants;
4. Communicate, through reports and presentations, with the plants' operators about safety or operational concerns at the plants, and
5. Review the current status of the plants with the Nuclear Regulatory Commission.

COUNCIL MEMBERS

The Council consisted of twelve (12) members appointed by the Governor, legislative leadership, and the executive bodies in the towns in or near which the state's nuclear power plants are located (Appendix 1).

EXECUTIVE SUMMARY

This is the fifteenth annual report presented by the Nuclear Energy Advisory Council (NEAC). During calendar year (CY) 2010, the NEAC met three times and received reports from representatives of the Nuclear Regulatory Commission (NRC), and Dominion Nuclear Connecticut and visited the nuclear training facilities at Three Rivers Community College. Routine NRC Millstone Power Station inspection and performance assessment reports were also received and reviewed. During the fourth quarter of 2009, Millstone Units 2 and 3 plant performance (Action Matrix) was classified as "GREEN", meaning that all inspection findings for CY 2009 were classified as having no or low safety significance. In the first quarter of 2010 there was one licensee-identified violation of very low safety significance and both Millstone 2 and Millstone 3 remained in the GREEN classification. During the second quarter, there was one Severity Level IV non-cited violation and four licensee identified findings of very low safety significance. In the third quarter there were two NRC identified findings and one licensee revealed findings of very low safety significance. Results for the fourth quarter were not available at the time of this report. Because of the "GREEN" status, only routine baseline inspections plus a follow up inspection for three severity level IV non-cited violations were scheduled by the NRC of Millstone 2 and 3 in CY 2010. Included in those baseline inspections were the NRC Problem Identification and Resolution Inspection, a Radiation Safety Inspection of Millstone Unit 1, NRC Independent Spent Fuel Storage Installation Inspection, NRC "Target Set" Security Inspection, NRC Security Inspection, NRC Triennial Fire Protection Inspection, and Bi-annual NRC evaluated Emergency Preparedness Exercise. There was one GREEN finding identified as a non-cited violation (NCV) in the Problem Identification and Resolution Inspection, no violations in the Safety Inspection of Millstone Unit 1, no violations in the Inspection of the Independent Spent Fuel Storage Installation, or the "Target Set" Inspection, one GREEN finding in the Physical Security Baseline Inspection, two NRC-identified GREEN findings of very low safety significance for the Triennial Fire Protection Inspection, and one greater than GREEN finding during the Security Inspection. The exact finding was not released to the public. There were no findings identified during the Emergency Preparedness Exercise.

Scheduled decommissioning activities of the industrial areas at Connecticut Yankee Atomic Power Company (CYAPC) are complete. The Connecticut Yankee Site with the exception of the Spent Fuel Dry Cask Storage Area was released for unrestricted use on November 26, 2007. Final decommissioning and license termination of the entire site will be completed after removal of spent nuclear fuel and greater than class c radioactive waste that is in dry cast storage.

COUNCIL ACTIVITIES IN 2010

MEETINGS:

As required by PA 96-245, the NEAC held three public meetings as follows: (1) April 22, 2010, (2) September 23, 2010 at Waterford Town Hall , Waterford, CT and (3) December 9, 2010 at Three Rivers Community College, Norwich, Connecticut,. The purpose of these meetings was to provide a venue for discussion of issues relating to the safe operation of the state's nuclear power plants. Meeting minutes are included in Appendix 2. A summary of the meetings follows:

April 22, 2010: This was a joint meeting with the NRC Region I and focused on the Annual Assessment Report of Millstone Power Station Units 2 and 3 for the four quarters of CY2009. It was reported that overall these two units were operated in a manner that preserved public health and safety and fully met NRC cornerstone objectives. Accordingly, the NRC planned to conduct only baseline inspections at the facility through September 30, 2010.

September 23, 2010: This meeting was conducted at Waterford Town Hall in Waterford, Connecticut Dominion Nuclear Connecticut representatives provided a station update. Recent inspection results correspondence received from the NRC was also discussed.

December 9, 2010: This meeting was held at the Three Rivers Community College in Norwich, Connecticut. The CY2009 Annual Report was discussed, reviewed, and approved for promulgation. NRC Correspondence and Inspection Results received since the last meeting were discussed. The meeting schedule for CY2010 was approved and possible topics for the meetings were discussed. Following the meeting members of NEAC toured the Nuclear Training Facilities at the Community College.

Millstone 1 Decommissioning Advisory Committee (M1DAC): Since Millstone 1 remains in Safe Storage (SAFSTORE) and no significant activities were conducted at the Unit during the past calendar year, M1DAC did not meet in CY2010.

REPORT ON ISSUES

MILLSTONE OPERATIONS

As reported by the Nuclear Regulatory Commission (NRC) in regular inspection reports and at a Joint Public Meeting (Appendix 2), Millstone Units 2 and 3 have continued to be operated in a manner that preserves public health and safety. One preliminary greater than GREEN finding was documented on routine baseline inspections conducted through September 30, 2010. Routine inspections conducted between October 1, 2009 and September 30, 2010 resulted in the identification of two Site issues, eight Unit 2 issues, and three Unit 3 issues, all of very low safety significance (GREEN). An additional NRC Inspection was completed on September 22, 2010 that examined activities relating to Fire Protection. Two NRC- identified violations, which were determined to be of very low safety significance, were listed in the November 5, 2010 report of the inspection. In September 2010 the NRC also completed a security baseline inspection. Although the exact findings are not reported due to security concerns, one finding of preliminary determined to be greater than very low security significance (i.e. greater than GREEN)

that was immediately corrected was reported in November 2010 when the cover letter of the inspection report was released. No findings of significance were found during the the Problem Identification and Resolution Inspection conducted in February 2010 or the August 2010 Security Inspection of the Independent Spent Fuel Storage Installation or the “Target Set” Security Inspection conducted in September 2010 or the Emergency Preparedness Exercise held in October 2010. NRC had not released the results of the fourth quarter 2010 inspections at the close out time of this report.

DECOMMISSIONING

MILLSTONE 1

In July of 1998, it was announced that Millstone Unit 1 would undergo decommissioning. A modified Safe Storage (SAFSTOR) decommissioning option was selected and remains in effect. This involved some decontamination and dismantlement early in the process. After these initial activities completed, the unit was then placed in safe storage until the other two units at the Millstone site undergo decommissioning. After reviewing Unit 1 requirements, in conjunction with the operational and outage requirements of Millstone Units 2 and 3, it was strategically decided to place Unit 1 in ‘Cold and Dark’ storage in April 2001. This allowed the safe and efficient separation (from Units 2 and 3) projects as well as the decommissioning projects. All separation projects were completed by April 1, 2001.

A radiation safety Inspection of Millstone Unit 1 was conducted between March 15-16, 2010. No findings or violations were reported in the May 11, 2010 letter reporting the results of this inspection.

CONNECTICUT YANKEE

Normal activities continue at the NRC licensed Independent Spent Fuel Storage Installation (ISFSI) at Connecticut Yankee (CYAPC) in Haddam Neck.

The ISFSI site has had no lost time accidents. Staffing levels at the ISFSI are stable.

CYAPC conducted its biennial Emergency Plan Exercise on October 13, 2010. State and local emergency planning personnel participated. The scenario involved a security based event.

CYAPC was inspected by NRC Region I during the week of November 29. The inspection focused on safety areas. Preliminary results were satisfactory.

The third quarter groundwater sampling was completed during the week of September 16, 2010. We await results from this sampling, but have results from earlier sampling events. Two of the wells could not be sampled that week due to the seasonal dry period;

however, the wells were sampled September 28, 2010 following significant rainfall. Low levels of tritium and strontium-90 have dropped below drinking water standards in the on-site monitoring wells at the former plant area and continue trending down. Low levels of petroleum type contaminants in some wells continue to be detected, but are also trending downward.

The DEP issued a Stewardship Permit in October 2007 certifying that site remediation for soil was complete with all areas meeting the Connecticut Remediation Standard Regulations. The permit will continue in place until the long-term groundwater monitoring program is completed and all monitoring well samples meet the EPA and Connecticut Remediation Standard Regulations criteria for groundwater.

DEP oversight continues with periodic site inspections and briefings on the groundwater monitoring program sample results.

CYAPC continues to retain the contractor Vita Nuova to complete a confidential Expression of Interest process to determine who might be interested in acquiring the site. Expressions of interest were received from several organizations. CY is in dialog with those organizations as well as the Connecticut Yankee Land Conservation Project and there is no timetable for completing the process.

The Connecticut Yankee Fuel Storage Advisory Committee held one meeting this year on May 18, 2010. The committee plans to meet again in the spring of 2011.

HIGH LEVEL NUCLEAR WASTE

- NEAC continued to monitor activity to establish a permanent solution for spent nuclear fuel rods disposal. In view of the fact that there are now two nuclear plants currently decommissioned in Connecticut, failure to establish a permanent repository or otherwise dispose of the high level waste could adversely affect the State's economy and homeland security. It is noted that temporary storage of spent fuel in dry cask storage containers has been implemented at both Millstone and Connecticut Yankee.

The U.S. Department of Energy's latest program schedule for Yucca Mountain from the DOE web site is:

- License Application withdrawn with prejudice on March 3, 2010 and the Office of Civilian Radioactive Waste Management was disestablished and its activities were assumed by the Office of Nuclear Energy

According to the Department of Energy Web Site

"The President has made clear that Yucca Mountain is not an option for waste storage. The Blue Ribbon Commission on America's Nuclear Future, led by Congressman Lee Hamilton and General Brent Scowcroft, will conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle, and will provide recommendations for developing a safe, long-term solution to managing the Nation's used nuclear fuel and nuclear waste."

NEAC will continue to monitor the progress toward a solution to the problem of High Level Nuclear Waste.

RECOMMENDATIONS

STATE

1. Department of Environmental Protection should continue to address any emergency preparedness issues at Connecticut's nuclear sites.
2. Department of Environmental Protection should continue to address any security issues at Connecticut's nuclear sites.
3. The Governor, General Assembly, Department of Environmental Protection, and NEAC should continue to insist that the NRC continue vigilant oversight of Connecticut Yankee and Millstone Power Station sites for as long as high-level nuclear waste remains on site.

NEAC

1. Continue to monitor the stability of the Employee Concern Program and Safety Conscious Work Environment and Corrective Action Program at Millstone Power Station.
2. Continue to monitor operations and activities at Millstone Power Station and Connecticut Yankee Site, including the dry cask storage programs.
3. Continue to encourage the development of a solution to the problem of High Level Waste and Greater Than Class C Low-Level Radioactive Waste and the safe transfer of this nuclear waste from Connecticut.

NUCLEAR ENERGY ADVISORY COUNCIL MEMBERSHIP

John W. (Bill) Sheehan (Chair) Waterford: MBA, Rensselaer Polytechnic. Consultant, former Captain, Nuclear powered submarine.

Pearl Rathbun (Vice Chair) Niantic: BA Economics. Eastern Connecticut State University. Director of Emergency Management, East Lyme.

Gerald D. Hicks Waterford: BS Mechanical Engineering University of Colorado. MS Operations Research/Systems Analysis US Naval Postgraduate School. Retired Navy Captain, former Commanding Officer, Nuclear Powered Submarine, represents Dominion Nuclear Connecticut.

Marjorie W. DeBold Haddam: BA Psychology and Child Development, UC Berkeley. Retired teacher, former First Selectman of Haddam.

Gregg W. Dixon Niantic: PhD Mechanical Engineering (Nuclear) Stanford University. Retired Professor, Mechanical Engineering, US Coast Guard Academy.

Thomas A. Nebel Niantic: BS Industrial Engineering New York Polytechnic University; Retired Monsanto/Solutia - former First Responder & NE HAZMAT Coordinator for company; C.E.R.T. Member Missouri & Connecticut.

Robert J. Klancko Woodbridge: BSE Chemical Engineering, UCONN. PE, CSP, Engineering Consultant, member State Emergency Response Commission.

John Markowicz Waterford: BS Engineering, US Naval Academy. Economic development director, former chief engineer nuclear powered submarine.

Rep. Kevin Ryan Oakdale: OD, Pennsylvania College of Optometry. Legislator, Adjunct Faculty, University of New Haven.

James Sherrard Mystic: PhD Nuc. & Mech Eng. MIT/UCONN. Chairman, Nuclear Engineering Technology Department, TRCTC.

Edward L. Wilds, Jr. Griswold: PhD Physics, UCONN. Director, Radiation Division, Department of Environmental Protection.

NUCLEAR ENERGY ADVISORY COUNCIL
6:00 PM
April 22, 2010
WATERFORD TOWN HALL AUDITORIUM
WATERFORD, CT
REGULAR MEETING
AGENDA

AT 2:00 PM A MEETING BETWEEN THE NUCLEAR REGULATORY COMMISSION AND DOMINION NUCLEAR CONNECTICUT, INC. WILL BE HELD AT THE WATERFORD TOWN HALL. MEMBERS OF THE NUCLEAR ENERGY ADVISORY COUNCIL AND THE PUBLIC ARE INVITED TO ATTEND AND OBSERVE THIS MEETING

1. Call to order of Meeting Co-chaired by NEAC and NRC Region 1.
2. NRC Reactor Oversight Program/Millstone End of Cycle Report:
 - a. NRC presentation. – D. Jackson, Chief Projects Branch 5, Region I
 - b. NEAC question period.
 - c. Closing remarks. - NRC
 - d. Meeting break
 - e. Public question period.- NRC
4. NEAC Business Meeting:
 - a. NRC Correspondence of note received since last meeting
 - b. Future Meeting topics and dates
5. Adjournment

NUCLEAR ENERGY ADVISORY COUNCIL
6:00 PM
April 22, 2010
WATERFORD TOWN HALL AUDITORIUM
WATERFORD, CT
REGULAR MEETING
MINUTES

Members Present

Mr. Bill Sheehan, Chair
Ms. Pearl Rathbun, Vice Chair
Mr. Denny Hicks
Mr. John Markowicz
Rep. Kevin Ryan
Dr. Gregg Dixon
Mr. Robert Klancko
Mr. James Sherrard
Mr. Tom Nebel

Absent:

Ms. Marge DeBold
Dr. Edward Wilds, representing DEP, Commissioner Gina McCarthy

- 1. Call to Order of Meeting Co-Chaired by NEAC and NRC Region 1**
NEAC Chair Sheehan called the meeting to order at 6:00 PM at Waterford Town Hall Auditorium in Waterford, Connecticut.

- 2. Introduction of NEAC Members Present and NRC Staff**
 - a. NEAC Member Present see above
 - b. NRC Staff
 - i. Don Jackson, Chief, Projects Branch 5, Region 1
 - ii. Steve W. Shaffer, Millstone Senior Resident Inspector
 - iii. James A. Krafty, Millstone Resident Inspector
 - iv. Carleen Sanders, Project Manager, NRR, NRC HQ

- 3. NRC Presentation**
 - a. 6:05 PM NRC provided presentation on Millstone Station Performance for 2009 Reactor Oversight Process/Millstone End of Cycle Report. All NRC Staff present participated in presentation.
 - b. NEAC question period. NEAC comments/questions and NRC response given below:

- i. NEAC ask if number of “Green” Inspection findings were trending up or not compared to previous years. NRC indicated that the number of findings were about the same as in past few years.
 - ii. NEAC asked if there were any issues regarding the Corrective Action Program or the Employee Concerns Program/Safety Conscious Work Environment. NRC indicated that there were no issues with either program.
 - iii. NEAC asked if there were any problems with the MPS Exposure Program. NRC indicated that the “As Low As Reasonably Acceptable (ALARA)” program was effective and Dominion monitored the exposure received by employees and worked to keep it to a minimum. For example, the current MP3 outage as a target of 80 Man Rem and the company is on target to be below this goal.
 - iv. NEAC asked if any of the “Green” findings were still outstanding. NRC noted that only one finding had not been completely corrected. There were still some issues with the VR-11 and VR-21 120 volt AC non-vital instrument power supplies but the licensee was working the problem.
 - v. NEAC asked if the NRC representatives had any information on any new plant licenses being reviewed by the NRC. NRC replied that the agency had split into two reviewing departments and the operating reactors staff was kept separate from the new reactors staff. They believe that there are 18 to 20 applications that have been submitted but only four are active. A number of companies have asked that their application be put on hold due to economic conditions.
 - vi. NEAC asked about controlling tritium leakage. NRC responded that there was an issue regarding tritium leakage at Vermont Yankee but the one at Millstone had been resolved. Vermont Yankee is still working on corrective action for their tritium leakage.
- c. No members of the public had any questions for the NRC after the presentation.
 - d. Meeting recessed at 6:40 PM

4. NEAC Business Meeting

At 6:41 PM the Chair called the meeting to order to continue NEAC business.

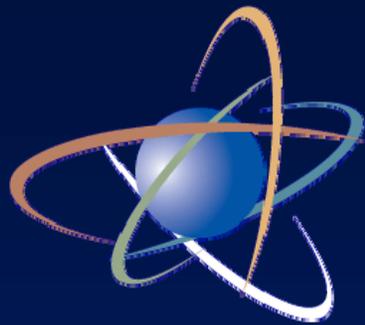
- a. Correspondence received by Chairman Sheehan were reviewed. See attached. Chairman Sheehan asked if the Council still wanted these printed reports since the correspondence is forwarded electronically when received. Council members stated that electronic copies were satisfactory.
- b. Chairman Sheehan noted that the agenda did not have minutes approval on it. Requested a motion to place Approval of Minutes of

December 10, 2009 be placed on the agenda. Moved by Markowicz/Rathbun. Approved unanimously.

- c. Approval of Minutes of December 10, 2009 as presented. Klancko/Nebel. Approved unanimously.
- d. Next meeting is September 23, 2010 – Tour of Millstone Power Station with Dominion Update. Chairman Sheehan will arrange.

5. Adjournment

Motion was made and seconded to adjourn; no objections; unanimous vote in favor; meeting adjourned at 8:40 PM.



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NRC & NEAC Meeting Concerning Millstone Annual Assessment

2008 Reactor Oversight Process

Nuclear Regulatory Commission – Region I



Purpose of Today's Meeting

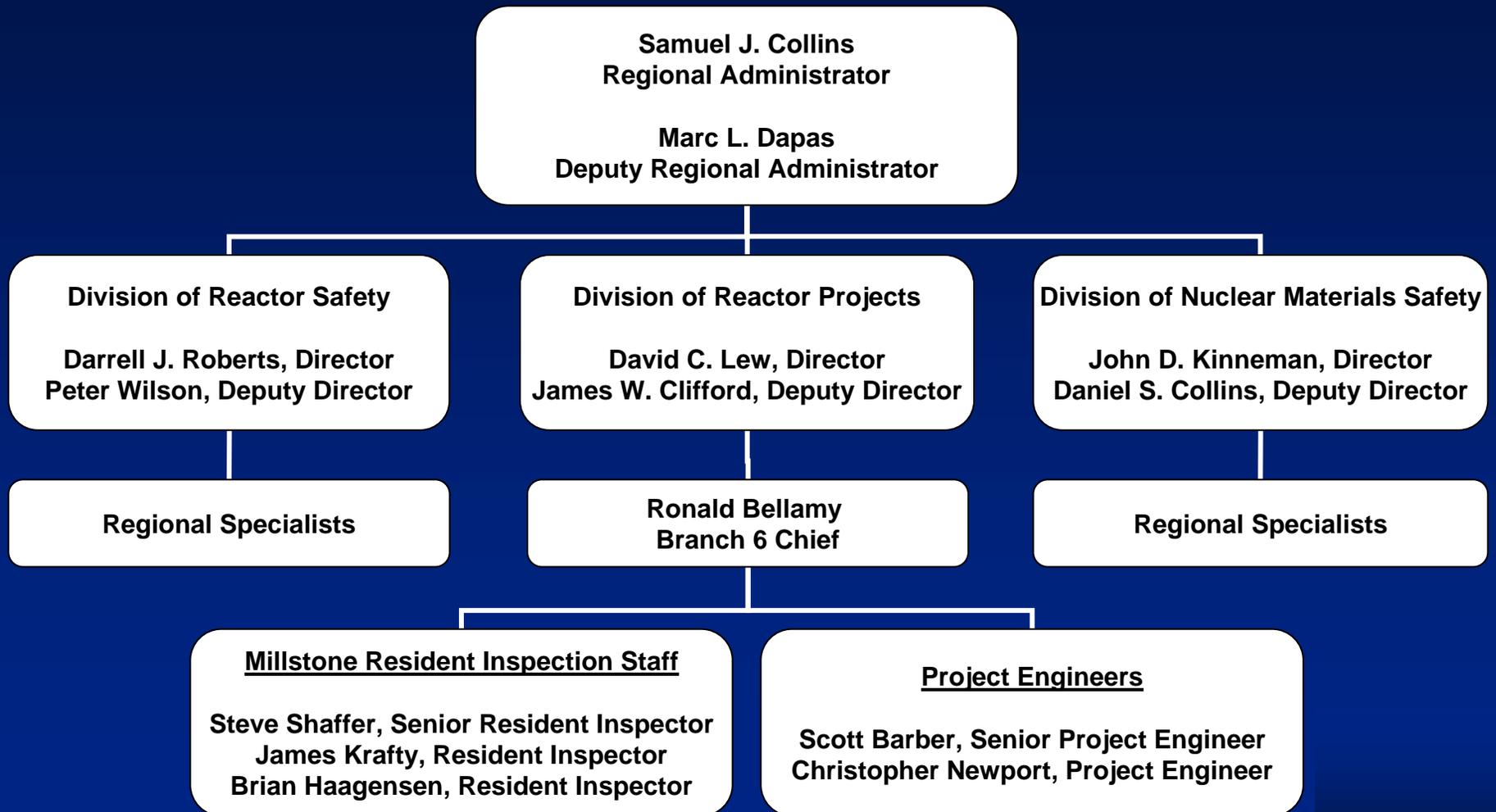
- **Discuss Millstone performance for 2008**
- **NRC will address Millstone's performance as discussed in NRC's Annual Assessment Letter to Dominion Nuclear Connecticut, Inc.**
- **NEAC will be given the opportunity to respond to the information, request clarifications, and ask additional questions, as needed**



Agenda

- Introduction
- NRC Organization and Performance Goals
- Reactor Oversight Process (ROP)
- National Summary of Plant Performance
- Millstone Plant Performance Assessment
- NEAC Response and Remarks
- NRC and NEAC Closing Remarks
- Break
- NRC available to address public questions

Region I Organization





NRC Strategic Plan Goals

- **Safety**: Ensure adequate protection of public health and safety and the environment
- **Security**: Ensure adequate protection in the secure use and management of radioactive materials



NRC Regulatory Functions

What We Regulate

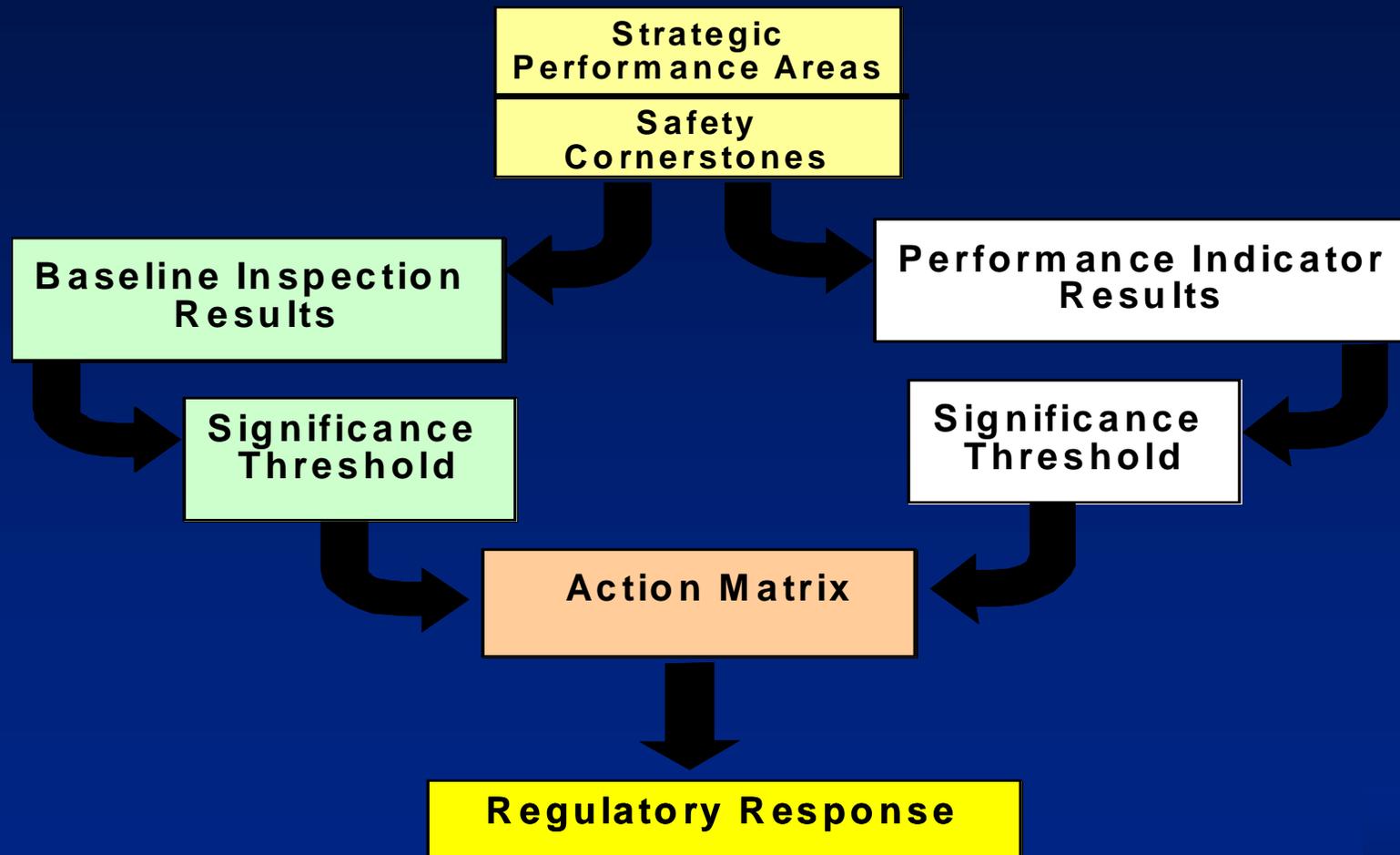
- **Nuclear Reactors**
 - Commercial power, research, test, and new reactor designs
- **Nuclear Material**
 - Reactor fuel, radioactive material for medical, industrial, and academic uses
- **Nuclear Waste**
 - Transportation, storage, disposal, and facility decommissioning
- **Nuclear Security**
 - Facility physical security

Reactor Oversight Process

3 Strategic Areas & 7 Cornerstones



Reactor Oversight Process





Baseline Inspection Areas

- **Maintenance Effectiveness**
- **Operability Evaluations**
- **Post-Maintenance Testing**
- **Refueling & Outage Activities**
- **Surveillance Testing**
- **Emergency Preparedness Assessment**



Baseline Inspection Areas

- **Occupational Radiation Safety**
- **Public Radiation Safety**
- **Performance Indicator Verification**
- **Fire Protection**
- **Identification & Resolution of Problems**
- **Follow-up of Events**



NRC Performance Indicators

- **Initiating Events PIs**
- **Mitigating Systems PIs**
- **Barrier Integrity PIs**
- **Emergency Planning PIs**
- **Radiation Protection PIs**
- **Security PIs are not Publicly Available**

Significance Threshold

Performance Indicators

- **Green** Baseline Inspection
- **White** Requires additional NRC oversight
- **Yellow** Requires more NRC oversight
- **Red** Requires most NRC oversight

Inspection Findings

- **Green** Very low safety issue
- **White** Low to moderate safety issue
- **Yellow** Substantial safety issue
- **Red** High safety issue

Action Matrix Concept



- **Increasing Safety Significance**
- **Increasing NRC Inspection Efforts**
- **Increasing NRC/Licensee Management Involvement**
- **Increasing Regulatory Actions**



National Summary of Plant Performance **(at end of 2008)**

Licensee Response	86
Regulatory Response	14
Degraded Cornerstone	3
Multiple/Repetitive Degraded Cornerstone	1
Unacceptable	0
<hr/>	
Total	104



National Summary of Plant Performance (at end of 2008)

Performance Indicator Results

➤ Green	1762
➤ White	6
➤ Yellow	0
➤ Red	0

Total Inspection Findings

➤ Green	776
➤ White	17
➤ Yellow	0
➤ Red	0



NRC Inspection Activities at Millstone (for 2008)

- **7845 hours of inspection and related activities**
- **3 resident inspectors on-site**
- **19 regional inspections**
- **4 major team inspections:**
 - **Emergency Preparedness Exercise**
 - **U3 Air Void SIT**
 - **Problem Identification & Resolution**
 - **Triennial Fire Protection**



Millstone PIs / Findings **(January 1 – December 31, 2008)**

- **All Green Performance Indicators**
- **14 Green / Severity Level - IV inspection findings**



NRC Inspection Findings Millstone

- Green - Inadequate maintenance procedures result in Unusual Event being declared at Unit 2 because of reactor coolant system leakage exceeding technical specification limits.
- Green – Installation of the incorrect internal valve trim package in valve 2-HD-103A resulted in a Unit 2 reactor trip.
- Green – Failure to correct safety valve lifting following uncomplicated reactor trips from full power at Unit 2.



NRC Annual Assessment Summary **Millstone**

- **Dominion operated the plant safely and in a manner that preserved public health and safety and protected the environment**
- **Millstone was in the Licensee Response column of the NRC's Action Matrix for the last quarter of 2008**



NRC Annual Assessment Summary **Millstone**

- **NRC plans baseline inspections at Millstone for the remainder of 2009**



NEAC Response and Remarks

Millstone Nuclear Power Station Units 2 & Unit 3



Contacting the NRC

- Report a safety concern:
 - (800) 695-7403
 - Allegation@nrc.gov
- General information or questions:
 - www.nrc.gov
 - Public Affairs Officers:
 - Diane Screnci 610-337-5330
 - Neil Sheehan 610-337-5331



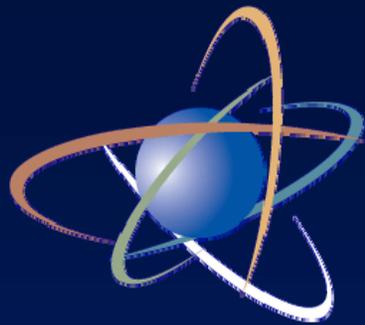
NRC Representatives

- **David C. Lew, Division Director, DRP**
 - 610-337-5229
- **James W. Clifford, Deputy Division Director, DRP**
 - 610-337-5080
- **Ronald Bellamy, Branch Chief**
 - 610-337-5200
- **Steve Shaffer, Senior Resident Inspector**
 - 816-447-3170
- **James Krafty, Resident Inspector**
 - 816-447-3170
- **Brian Haagensen, Resident Inspector**
 - 816-447-3170
- **Scott Barber, Senior Project Engineer**
 - 610-337-5232



Reference Sources

- Reactor Oversight Process
- <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>
- Public Electronic Reading Room
<http://www.nrc.gov/reading-rm.html>
- Public Document Room
1-800-397-4209 (Toll Free)



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

End of the Presentation

Nuclear Regulatory Commission

Region I

King of Prussia, Pennsylvania

April 23, 2009

U.S. NUCLEAR REGULATORY COMMISSION
REGION I
NOTICE OF PUBLIC MEETING

April 15, 2009

Licensee: Dominion Nuclear Connecticut, Inc.
Facility: Millstone Power Station
Docket No. 50-336 and 50-423
Date and Time: April 23, 2009 at 7:00 p.m.
Location: Waterford Town Hall
15 Rope Ferry Road
Waterford, CT 06385
Purpose: To discuss NRC's assessment of the safety performance of the Millstone Power Station for calendar year 2008 with the Nuclear Energy Advisory Council (NEAC).

Attendees:

NRC: R. Bellamy, Chief, Projects Branch 6, Region I
S. Shaffer, Senior Resident Inspector
B. Haagensen, Resident Inspector
J. Krafty, Resident Inspector
C. Sanders, Project Manager, NRR

NEAC : W. Sheehan, Chairman
P. Rathbun, Vice-Chairman
And other members of NEAC

Public Participation*: This is a Category 1 Meeting. The public is invited to observe the Meeting. After the business portion, but before the meeting adjourns, the public will have an opportunity to communicate with the NRC regarding Dominion's performance at Millstone and the role of the agency in ensuring safe plant operations.

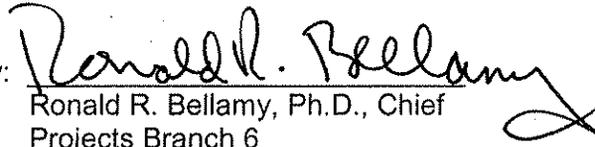
The NRC's Annual Assessment letter for the Millstone Power Station can be located in ADAMS with Accession Number ML090630229. This meeting notice with the enclosed agenda can be located in ADAMS with Accession Number ML091050660. The NRC slides for the meeting can be located in ADAMS with Accession Number ML091050623. ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html>.

Additional information relative to the NRC's Annual Assessment process and the safety performance of the Millstone Power Station can be found on the NRC's web site at: <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>. The NRC's Policy Statement, "Enhancing Public Participation in NRC Meetings," effective May 28, 2002, applies to this meeting. The policy statement may be found on the NRC Web site, <http://www.nrc.gov/reading-rm/doc-collections/commission/policy/67fr36920.html> and contains information regarding visitors and security.

Meeting Contact: Ronald R. Bellamy, Ph.D., Chief, Projects Branch 6
(610) 337-5200
E-mail: Ronald.Bellamy@nrc.gov

Handicapped persons requiring assistance to attend the meeting shall make their requests known to the NRC meeting contact no later than two business days prior to the meeting. Attendance by NRC personnel at this meeting should be made known by April 20, 2009, via telephone to the NRC meeting contact.

Approved by:


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

cc w/encl:

J. Price, Vice President, Engineering, Dominion Fleet
A. Jordan, Site Vice President, Millstone Station
C. Funderburk, Director, Nuclear Licensing and Operations Support
L. Morris, Plant Manager, Millstone Station
W. Barton, Supervisor, Station Licensing
J. Spence, Manager Nuclear Training
L. Cuoco, Senior Counsel
C. Brinkman, Manager, Washington Nuclear Operations
J. Roy, Director of Operations, Massachusetts Municipal Wholesale Electric Company
First Selectmen, Town of Waterford
B. Sheehan, Chair, NEAC
P. Rathbun, Vice-Chair, NEAC
E. Wilds, Jr., Ph.D, Director, State of Connecticut SLO Designee
J. Buckingham, Department of Public Utility Control
C. Meek-Gallagher, Commissioner, Suffolk County, Department of Environment and Energy
V. Minei, P.E., Director, Suffolk County Health Department, Division of Environmental Quality
R. Shadis, New England Coalition Staff
S. Comley, We The People
D. Katz, Citizens Awareness Network (CAN)
R. Bassilakis, Citizens Awareness Network (CAN)
P. Eddy, Electric Division, Department of Public Service, State of New York
F. Murray, President and CEO, New York State Energy Research and Development Authority
A. Peterson, SLO Designee, New York State Energy Research and Development Authority
N. Burton, Esq.
R. Rubinstein, Waterford Library

Agenda

NRC & NEAC Meeting Concerning
Millstone Power Station Performance

Millstone Power Station

April 23, 2009
7:00 – 9:00 p.m.

Introduction	NRC (3 minutes)
Review of Reactor Oversight Process.....	NRC (5 minutes)
National Summary of Plant Performance	NRC (7 minutes)
Discussion of Millstone Station Performance	NRC (15 minutes)
NEAC's Response and Questions	NEAC (20 minutes)
Closing Remarks	NRC (5 minutes)
Short Break.....	(5 minutes)
NRC to address public questions.....	NRC/Members of the Public (as needed)

Possible NEAC Meeting Topics

Joint NRC/NEAC Meeting

Brief by NRC on new reactor plant approval process

Tour of Millstone Power Station followed by Dominion Update Brief

Update on Dominion Operator Training Requirements

Update on Employee Concerns and Safety Conscious Work Environment

Spent Fuel Storage and Recycling Procedures Update

Annual Report Preparation

2009 Meeting Schedule

Thursday April 16, 2009 – NRC 2008 Performance Evaluation

Thursday July 23, 2009 – Tour of Millstone Power Station/Dominion Update

Thursday October 22, 2009 – Briefing of Latest in Spent Fuel Storage and Recycling

Thursday December 10, 2009 – Annual Report Preparation



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 17, 2008

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

SUBJECT: MILLSTONE POWER STATION - SECURITY INSPECTION
05000336/2008201, 05000423/2008201

Dear Mr. Christian:

On March 28, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed a security baseline inspection at the Millstone Power Station. The inspection covered one or more of the key attributes of the security cornerstone of the NRC's Reactor Oversight Process. The enclosed inspection report documents the inspection results, which were discussed on March 27, 2008, with Mr. Jeffery Campbell, Manager Nuclear Protection Services, and other members of your staff.

The inspection examined activities conducted under your license as they relate to security and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. No findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system, ADAMS. ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). However, because of the security-related concerns contained in the enclosure, and in accordance with 10 CFR 2.390, a copy of this letter's enclosure will not be available for public inspection.

Enclosure contains Safeguards Information. Upon removal, this letter is decontrolled.

~~SAFEGUARDS INFORMATION~~



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

January 28, 2009

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
05000336/2008005 AND 05000423/2008005

Dear Mr. Christian:

On December 31, 2008, 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 14, 2009, with Mr. A.J. Jordan, Site Vice President, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified.

In accordance with Title 10 of the Code of Federal Regulations (CFR) Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

Donald E. Jackson, Chief
Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000336/2008005 and 05000423/2008005
w/Attachment: Supplemental Information



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

January 14, 2009

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

SUBJECT: MILLSTONE POWER STATION, UNIT 2 - NRC TRIENNIAL FIRE
PROTECTION INSPECTION REPORT 05000336/2008008

Dear Mr. Christian:

On December 5, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Millstone Power Station, Unit 2. The enclosed inspection report documents the inspection results, which were discussed on December 5, 2008, with Mr. Skip Jordan and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC identified two findings of very low safety significance (Green) that were violations of NRC requirements. However, because of their very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with copies to the Regional Administrator Region I, the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001, and the NRC Resident Inspector at the Millstone Power Station.

In accordance with Title 10 of the Code of Federal Regulations Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's document system (ADAMS).

Mr. David A. Christian

2

ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html>
(the Public Electronic Reading Room).

Sincerely,



John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

Docket No. 50-336
License No. DPR-65

Enclosure: Inspection Report No. 05000336/2008008
w/Attachment: Supplemental Information

SUMMARY OF FINDINGS

IR 05000336/2008008; 11/17/2008 - 12/05/2008; Dominion Nuclear Connecticut, Inc.; Millstone Power Station, Unit 2; Triennial Fire Protection Team Inspection, Fire Protection.

This report covered a two-week triennial fire protection team inspection by specialist inspectors. Two Green NCVs were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Rev. 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The team identified that Dominion failed to administratively control and ensure the availability of all necessary fire safe shutdown equipment to perform manual actions in the 4kV upper switchgear room. This finding was determined to be of very low safety significance (Green) and a NCV of the Millstone Nuclear Power Station, Unit 2 Operating License condition 2.C.(3); Fire Protection.

The team determined that this finding was more than minor because it was associated with the external factors attribute (fire) of the mitigating systems cornerstone objective to ensure 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 that an electrical flash jacket necessary to perform local breaker operations was available in the upper 4kV switchgear room. Actions to restore the A diesel generator would have been delayed for a fire in the lower 4kV switchgear room. The team assessed this finding in accordance with NRC IMC 0609, Appendix F, Fire Protection Significance Determination Process. This finding affected post-fire safe shutdown systems. This finding screened to very low safety significance (Green) in Phase 1 of the SDP because it was assigned a low degradation rating. A low degradation rating was assigned because additional electrical flash jackets were onsite and the local breaker operations would likely have been performed within 3 hours. The safe shutdown analysis most restrictive timeline for a fire in the lower switchgear room required a charging pump restored within 3 hours for reactor coolant system makeup. Local breaker operations in the upper 4kV switchgear room would be needed to support ac power to a charging pump. The team determined that this finding had a cross cutting aspect in the area of human performance because personnel did not return an electrical flash jacket to its proper storage location even though it was clearly labeled for the upper 4kV switchgear room. (H.4(b)) (Section 1R05.01)

Green. The team identified that Dominion failed to ensure that a post-fire manual action to restore auxiliary feedwater (AFW) flow to a steam generator (SG) would be performed within 30 minutes of a plant trip consistent with the Millstone Unit 2 fire safe shutdown analysis. This finding was determined to be of very low safety significance (Green) and a

NCV of the Millstone Nuclear Power Station, Unit 2 Operating License condition 2.C.(3),
Fire Protection.

The team determined that this finding was more than minor because it was associated with the external factors attribute (fire) of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Specifically, a timely manual action to restore AFW to SG 1 within 30 minutes of the plant trip for a fire in Fire Area R-2 was not ensured for all circumstances and was validated by Dominion in 1999 to take at least 40 minutes. This finding was similar to more than minor example 3.i in NRC Inspection Manual Chapter (IMC) 0612, Power Reactor Inspection Reports, Appendix E, Examples of Minor Issues. The team assessed this finding in accordance with NRC IMC 0609, Appendix F, Fire Protection Significance Determination Process. This finding affected post-fire safe shutdown systems. This finding screened to very low safety significance (Green) in Phase 1 of the SDP because it was assigned a low degradation rating. A low degradation rating was assigned because Dominion performed a sensitivity analysis of S-02824-S2, Millstone Unit 2, R-2 Fire, Appendix R Analysis, Rev. 2, and determined that restoring AFW flow to steam generator 1 could be delayed for 50 minutes and result in acceptable plant performance during a safe shutdown event. (Section 1R05.01)

B. Licensee-Identified Violations

None.



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

March 4, 2009

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

SUBJECT: ANNUAL ASSESSMENT LETTER – MILLSTONE POWER STATION
(REPORTS 05000336/2009001 and 05000423/2009001)

Dear Mr. Christian:

On February 11, 2009, the NRC staff completed its performance review of the Millstone Power Station (Millstone). Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2008. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only – Security Related Information" will include the security cornerstone review and resultant inspection plan.

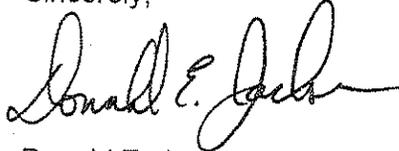
Overall, Millstone Units 2 and 3 operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter, as well as for the first three quarters of the assessment cycle, was within the Licensee Response column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through June 30, 2010. In addition to the baseline inspections, an independent spent fuel storage installation inspection and a power uprate inspection will also be performed. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last nine months of the inspection plan are tentative and may be revised at the mid-cycle review.

In accordance with 10CFR2.390 of the NRC's Rules of Practice, a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact me at 610-337-5306 with any questions you may have regarding this letter or the inspection plan.

Sincerely,



Donald E. Jackson, Chief
Projects Branch 5
Division of Reactor Projects

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

Enclosure: Millstone Inspection/ Activity Plan

cc w/encl.

S. Jordan, Site Vice President, Millstone Station
C. L. Funderburk, Director, Nuclear Licensing and Operations Support
W. Bartron, Supervisor, Station Licensing
J. Spence, Manager Nuclear Training
L. M. Cuoco, Senior Counsel
C. Brinkman, Manager, Washington Nuclear Operations
J. Roy, Director of Operations, Massachusetts Municipal Wholesale Electric Company
First Selectmen, Town of Waterford
B. Sheehan, Co-Chair, NEAC
E. Woollacott, Co-Chair, NEAC
E. Wilds, Jr., Ph.D, Director, State of Connecticut SLO Designee
J. Buckingham, Department of Public Utility Control
C. Meek-Gallagher, Commissioner, Suffolk County, Department of Environment and Energy
V. Minei, P.E., Director, Suffolk County Health Department, Division of Environmental Quality
R. Shadis, New England Coalition Staff
S. Comley, We The People
D. Katz, Citizens Awareness Network (CAN)
R. Bassilakis, CAN
P. Eddy, Electric Division, Department of Public Service, State of New York
P. Tonko, President and CEO, New York State Energy Research and Development Authority
J. Spath, SLO Designee, New York State Energy Research and Development Authority
N. Burton, Esq.
Institute of Nuclear Power Operations (INPO)

Mil. One
 Inspection / Activity Plan
 01/01/2009 - 06/30/2010

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
2	01/26/2009	02/24/2009	1/26EXAM U01634	- U2 INITIAL OPERATOR LICENSING EXAMS FY-09 - U2 MILLSTONE INITIAL OL EXAM	4
3	12/15/2008	02/06/2009	SIT IP 93812	- UNIT 3 SIT - VOID IN ECCS RWST SUCTION Special Inspection	4
2,3	01/12/2009	01/16/2009	7111121 IP 7111121	- CDBI Component Design Bases Inspection	9
2,3	01/26/2009	01/30/2009	IP 7111121	Component Design Bases Inspection	
2,3	02/02/2009	02/06/2009	IP 7111121	Component Design Bases Inspection	
3	01/01/2009	12/31/2009	71004 IP 71004	- POWER UPRATE Power Uprate	2
2,3	02/23/2009	02/27/2009	71121 IP 7112101	- OCC RAD SAFETY Access Control to Radiologically Significant Areas	1
2,3	02/23/2009	02/27/2009	IP 7112102	ALARA Planning and Controls	
2,3	04/13/2009	04/17/2009	ISFSI IP 60855	- ANNUAL SAMPLE - ISFSI INSPECTION Operation Of An ISFSI	2
3	08/10/2009	08/14/2009	9/14EXAM U01758	- U3 INITIAL OPERATOR LICENSING EXAMS FY-09 MILLSTONE UNIT 3 INITIAL OPERATOR LICENSING EXAM	5
3	09/14/2009	09/25/2009	U01758	FY-09 MILLSTONE UNIT 3 INITIAL OPERATOR LICENSING EXAM	
2,3	05/18/2009	05/22/2009	71122.01 IP 2515173	- PUB RAD SAFETY - RETS Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative	1
2,3	05/18/2009	05/22/2009	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems	
2,3	08/31/2009	09/04/2009	7111111B IP 7111111B	- BIENNIAL REQUAL INSP (U3) W/ P/F RESULTS Licensed Operator Requalification Program	3
2,3	08/23/2009	08/29/2009	EP PROGR IP 7111402	- EP PROGRAM INSPECTION Alert and Notification System Testing	2
2,3	08/23/2009	08/29/2009	IP 7111403	Emergency Response Organization Augmentation Testing	
2,3	08/23/2009	08/29/2009	IP 7111404	Emergency Action Level and Emergency Plan Changes	
2,3	08/23/2009	08/29/2009	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
2,3	08/23/2009	08/29/2009	IP 71151-EP01	Drill/Exercise Performance	
2,3	08/23/2009	08/29/2009	IP 71151-EP02	ERO Drill Participation	
2,3	08/23/2009	08/29/2009	IP 71151-EP03	Alert & Notification System	
2,3	08/31/2009	09/04/2009	71122.03 IP 2515173	- PUB RAD SAFETY - REMP Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative	1
2,3	08/31/2009	09/04/2009	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control Program	

This report does not include INPO and OUTAGE activities.
 This report shows only on-site and announced inspection procedures.

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
2	10/01/2009	12/31/2009	ISFSI IP 60855	- ISFSI INSPECTION - ANNUAL SAMPLE Operation Of An ISFSI	1
2	10/13/2009	10/16/2009	7111108P IP 7111108P	- U2 INSERVICE INSPECTION Inservice Inspection Activities - PWR	1
2	10/13/2009	10/23/2009	TI-172 IP 2515/172	- U2 RCS DISSIMILAR METAL BUTT WELDS Reactor Coolant System Dissimilar Metal Butt Welds	1
2	10/19/2009	10/23/2009	7111108P IP 7111108P	- U2 INSERVICE INSPECTION Inservice Inspection Activities - PWR	1
2	11/02/2009	11/06/2009	71121 IP 7112102	- OCC RAD SAFETY ALARA Planning and Controls	1
2,3	02/08/2010	02/12/2010	71152 IP 71152B	- PI&R Identification and Resolution of Problems	4
2,3	02/22/2010	02/26/2010	IP 71152B	Identification and Resolution of Problems	
2,3	02/08/2010	02/12/2010	71121 IP 7112101	- OCC RAD SAFETY Access Control to Radiologically Significant Areas	1
2,3	02/08/2010	02/12/2010	IP 7112102-7112102R	ALARA - Required	
3	04/12/2010	04/23/2010	7111108P IP 7111108P	- U3 INSERVICE INSPECTION Inservice Inspection Activities - PWR	1
3	04/12/2010	04/23/2010	TI-172 IP 7111108P	- U3 RCS DISSIMILAR METAL BUTT WELDS Inservice Inspection Activities - PWR	1
2,3	04/19/2010	04/23/2010	71121 IP 7112102-7112102R	- OCC RAD SAFETY ALARA - Required	1
2,3	06/14/2010	06/18/2010	7111107T IP 7111107T	- TRIENNIAL HEAT SINK Heat Sink Performance	1

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announce section procedures.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

March 23, 2009

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

SUBJECT: MILLSTONE POWER STATION - UNIT 3 - NRC SPECIAL INSPECTION TEAM
REPORT 05000423/2008010

Dear Mr. Christian:

On February 6, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed a special inspection at the Millstone Power Station, Unit 3. The enclosed inspection report documents the inspection results, which were discussed on February 6, 2009, with Mr. A. J. Jordan, Site Vice President, and other members of your staff.

The special inspection was conducted in response to the October 20, 2008, discovery of an air void in the 24-inch diameter pipe connecting the refueling water storage tank to the suction of the emergency core cooling system (ECCS) pumps. The NRC's initial evaluation of this condition satisfied the criteria in NRC Inspection Manual Chapter 0309, "Reactive Inspection Decision Basis for Reactors," for conducting a special inspection. The basis for initiating this special inspection team is further discussed in the team's charter that is included as Attachment B to the enclosed report. 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 team reviewed selected procedures and records, technical evaluations, calculations, and construction documentation, and interviewed site personnel.

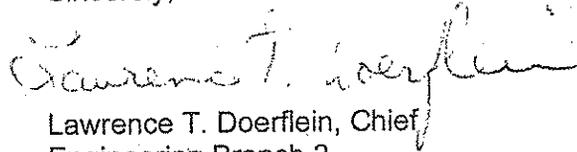
This report documents one self-revealing finding of very low safety significance (Green), which was determined to involve a violation of NRC requirements. However, because of the very low safety significance of the violation and because it was entered into your correction action program, the NRC is treating it as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest the NCV documented in the enclosed report, you should provide a response within 30 days of the date of the 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 Inspectors at Millstone Power Station.

D. Christian

2

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosures, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,



Lawrence T. Doerflein, Chief
Engineering Branch 2
Division of Reactor Safety

Docket No: 50-423
License No: NPF-49

Enclosures: Inspection Report 05000423/2008010
w/Attachment A: Supplemental Information
w/Attachment B: Special Inspection Charter

SUMMARY OF FINDINGS

IR 05000423/2008010; 12/15/2008 – 02/06/2009; Dominion Nuclear Connecticut, Inc. (Dominion); Millstone Power Station, Unit 3 (MP3); Special Inspection Team Report

The report covered three on-site inspection visits by a special inspection team consisting of a Senior Reactor Analyst, Senior Reactor Engineer, a Project Engineer, and a Resident Inspector with support from a Region III Senior Reactor Inspector and staff members of the Office of Nuclear Reactor Regulation. One finding of very low safety significance (Green) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The team identified a noncited violation (NCV) of Technical Specification (TS) 3.5.2.d which requires an operable residual heat removal (RHR) pump for each train of the emergency core cooling system (ECCS). The team found that Dominion did not maintain the 24-inch outside diameter piping connecting the refueling water storage tank (RWST) to the suction of the ECCS pumps sufficiently full of water to ensure operability of the RHR pumps following a large break loss-of-coolant accident (LLOCA). Additionally, the team determined that TS Surveillance 4.5.2.b requires that every 31 days Dominion verify the ECCS piping full of water but this section of piping was not checked. While performing actions to address NRC Generic Letter 2008-001, Dominion identified the air void and determined the piping did not have sufficient slope to allow venting back to the RWST. The team concluded the air void had the potential to air bind and make the RHR pumps inoperable during a LLOCA event. Following identification of the air void during the 2008 refueling outage, Dominion isolated and drained the piping, installed a vent valve, refilled the piping, and confirmed that the piping was full using an ultrasonic testing (UT) measurement.

The performance deficiency was a failure to maintain the common ECCS suction piping sufficiently full of water, as required by TS surveillance 4.5.2.b, to ensure RHR pump operability in the event of a LLOCA, as required by TS 3.5.2.d. The finding is more than minor because it is associated with the design control attribute of the Mitigating Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with NRC IMC 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the Phase 1 screening identified that this issue was a design/qualification deficiency which resulted in the loss of the RHR system low pressure injection (LPI) safety function and required a Phase 2 evaluation.

In accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," a Region I senior reactor analyst determined that the finding was of very low safety significance (Green) using a modified Phase 2 analysis and the MP3 plant-specific Phase 2 Notebook worksheet for a LLOCA. This assessment resulted in an increase in the core damage frequency on the order of low E-8 per year, which was dominated by the LLOCA frequency of E-5 per year and the probability of high pressure injection (HPI) failure, due to some other unrelated cause. The safety injection, charging and recirculation spray systems were still available to prevent core damage following a LLOCA initiating event, by performing the HPI and high pressure recirculation safety functions.

The finding did not have a crosscutting aspect.

B. Licensee-Identified Violations

None.



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

~~OFFICIAL USE ONLY - SECURITY RELATED INFORMATION~~
March 30, 2009

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

SUBJECT MILLSTONE POWER PLANT - NRC SECURITY INSPECTION REPORT NOS.
05000336/2009402 AND 05000423/2009402

Dear Mr. Christian:

On February 27, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed a security baseline inspection at your Millstone Power Station. The inspection covered one or more of the key attributes of the security cornerstone of the NRC's Reactor Oversight Process. The enclosed inspection report documents the inspection results, which were discussed on February 27, 2009, with Mr. A.J. Jordan, Site Vice President, and other members of your staff.

The inspection examined activities conducted under your licenses as they relate to security and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents one NRC identified finding of very low security significance (i.e. Green as determined by the Physical Protection Significance Determination Process). The deficiency was promptly corrected or compensated for, and the plant was in compliance with applicable physical protection and security requirements within the scope of the inspection before the inspectors left the site. The finding had a cross-cutting aspect in the area of Human Performance, because expectations regarding procedural compliance were not effectively communicated.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system, ADAMS. ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). However, because of the security-related information contained in the enclosure, and in accordance with 10 CFR 2.390, a copy of this letter's enclosure will not be available for public inspection.

When separated from its Enclosure, this
document is DECONTROLLED.

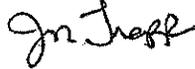
~~OFFICIAL USE ONLY - SECURITY RELATED INFORMATION~~

D. Christian

2

In accordance with 10 CFR 2.390(b)(1)(ii), the NRC is waiving the affidavit requirements for your response, if any. This practice will ensure that your response will not be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system, ADAMS. If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21. Otherwise, mark your entire response "Security-Related Information - Withhold Under 10 CFR 2.390" and follow the instructions for withholding in 10 CFR 2.390(b)(1).

Sincerely,



James M. Trapp, Chief
Plant Support Branch 1
Division of Reactor Safety

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

Enclosure: NRC Inspection Report Nos. 05000336/2009402, 05000423/2009402
w/Attachment: Supplemental Information
CONTAINS OFFICIAL USE ONLY - SECURITY RELATED INFORMATION
(OUO-SRI)



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

March 31, 2009

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 COMPONENT DESIGN BASES
INSPECTION REPORT 05000336/2009006 AND 05000423/2009006

Dear Mr. Christian:

On February 6, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Millstone Power Station. The enclosed inspection report documents the inspection results. The preliminary inspection results were discussed with Mr. A. J. Jordan, Site Vice President, and other members of your staff on February 6, 2009. Following in-office review of additional information, the final results of the inspection were provided via telephone to Mr. W. Bartron, Licensing Supervisor, and other members of your staff on March 6, 2009.

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. In conducting the inspection, the team examined the adequacy of selected components and operator actions to mitigate postulated transients, initiating events, and design basis accidents. The inspection involved field walkdowns, examination of selected procedures, calculations and records, and interviews with station personnel.

This report documents four NRC-identified findings which were 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 of the violations and because they were entered into your corrective action program, the NRC is treating the violations as non-cited violations (NCV) 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 U. S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, Region 1; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at Millstone Power Station. In addition, if you disagree with the characterization of the cross-cutting aspect of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region 1 and the NRC Resident Inspector at the Millstone Power Station.

SUMMARY OF FINDINGS

IR 05000336/2009006, 05000423/2009006; 01/12/2009 – 02/06/2009; Millstone Power Station; Component Design Bases Inspection.

The report covers the Component Design Bases Inspection conducted by a team of five NRC inspectors and two NRC contractors. Four findings of very low risk significance (Green) were identified, which were also considered to be non-cited violations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspects were determined using IMC 0305, "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," in that, Unit 2 and Unit 3 written test procedures for battery performance testing were not adequate and did not ensure that test results were properly documented and evaluated to assure that the test requirements were satisfied. Specifically, the battery performance test procedure did not ensure that the correct discharge rate was used, that the test was terminated correctly, and that the battery capacity and subsequent decrease in capacity were correctly calculated and evaluated. In response, Dominion entered the issue into the corrective action program and determined that there was sufficient battery margin to assure operability of the station batteries.

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Human Performance, Resources Component, because Dominion did not ensure that complete, accurate, and up-to-date procedures were available and adequate to assure nuclear safety. Specifically, the battery performance test procedure did not ensure that the correct discharge rate was used, that the test was terminated correctly, and that the battery capacity and subsequent decrease in capacity were correctly calculated and evaluated. (IMC 0305, Aspect H.2(c)) (1R21.2.1.1.1)

- Green. The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," in that, Dominion did not take corrective actions for a degraded cell in a Unit 2 safety related battery. Specifically, although testing of the 'B' battery between 1996 and 2008 indicated a degraded cell, actions were not taken to initiate a condition report or evaluate the impact of the degraded condition. In response, Dominion entered the issue into the corrective action program and determined that there was sufficient battery margin to assure operability of the battery.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Dominion did not thoroughly evaluate the problem such that the resolution addressed the cause. Specifically, although data indicated cell 10 was degraded, no action was taken to evaluate the reduced cell capacity on the overall battery. (IMC 0305, Aspect P.1(c)) (1R21.2.1.1.2)

- Green. The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," in that, Dominion did not take corrective actions for repeated out-of-calibration test results associated with Unit 2 safety related inverters. Specifically, although testing of the safety related inverters between 2005 and 2008 indicated that the as-found results were frequently out-of-calibration, actions were not always taken to initiate a condition report; and condition reports that were generated, did not evaluate the repetitive failure to remain in calibration. In response, Dominion entered the issue into the corrective action program and determined that the out-of-calibration results did not render the safety related instrument panels inoperable.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, did not represent an actual loss of safety function of a single train, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Dominion did not thoroughly evaluate the problem such that the resolution addressed the cause. Specifically, although testing of the safety related inverters between 2005 and 2008 indicated regular out-of-calibration as-found results, actions were not always taken to initiate a condition report; and condition reports that were generated, did not evaluate the repetitive failure to remain in calibration. (IMC 0305, Aspect P.1(c)) (1R21.2.1.2)

- Green. The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," in that Dominion did not ensure the adequacy of the recirculation spray system heat exchanger design. Specifically, Dominion had not performed analyses or testing to evaluate the potential of air entrapment in the recirculation spray system heat exchangers under post-accident conditions. In response, Dominion entered this issue into their corrective action program and performed analyses to demonstrate that this condition did not render associated equipment inoperable.

This finding is more than minor because it is associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it was a design or qualification deficiency confirmed not to result in a loss of recirculation spray system operability or functionality. This finding did not have a cross-cutting aspect. (1R21.2.1.24)

B. Licensee-Identified Violations

None



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

April 7, 2009

Docket No. 05000245

License No. DPR-21

David A. Christian
President and Chief Nuclear Officer
Dominion Nuclear Connecticut, Inc.
5000 Dominion Boulevard
Glenn Allen, VA 23060-6711

SUBJECT: NRC INSPECTION REPORT NO. 05000245/2009007, DOMINION NUCLEAR
CONNECTICUT, INC., MILLSTONE POWER STATION UNIT 1, WATERFORD,
CT

Dear Mr. Christian:

On March 9-11, 2009, Laurie Kauffman of this office conducted a safety inspection of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with Mr. L. Morris and other members of your organization on March 11, 2009 at the conclusion of the inspection.

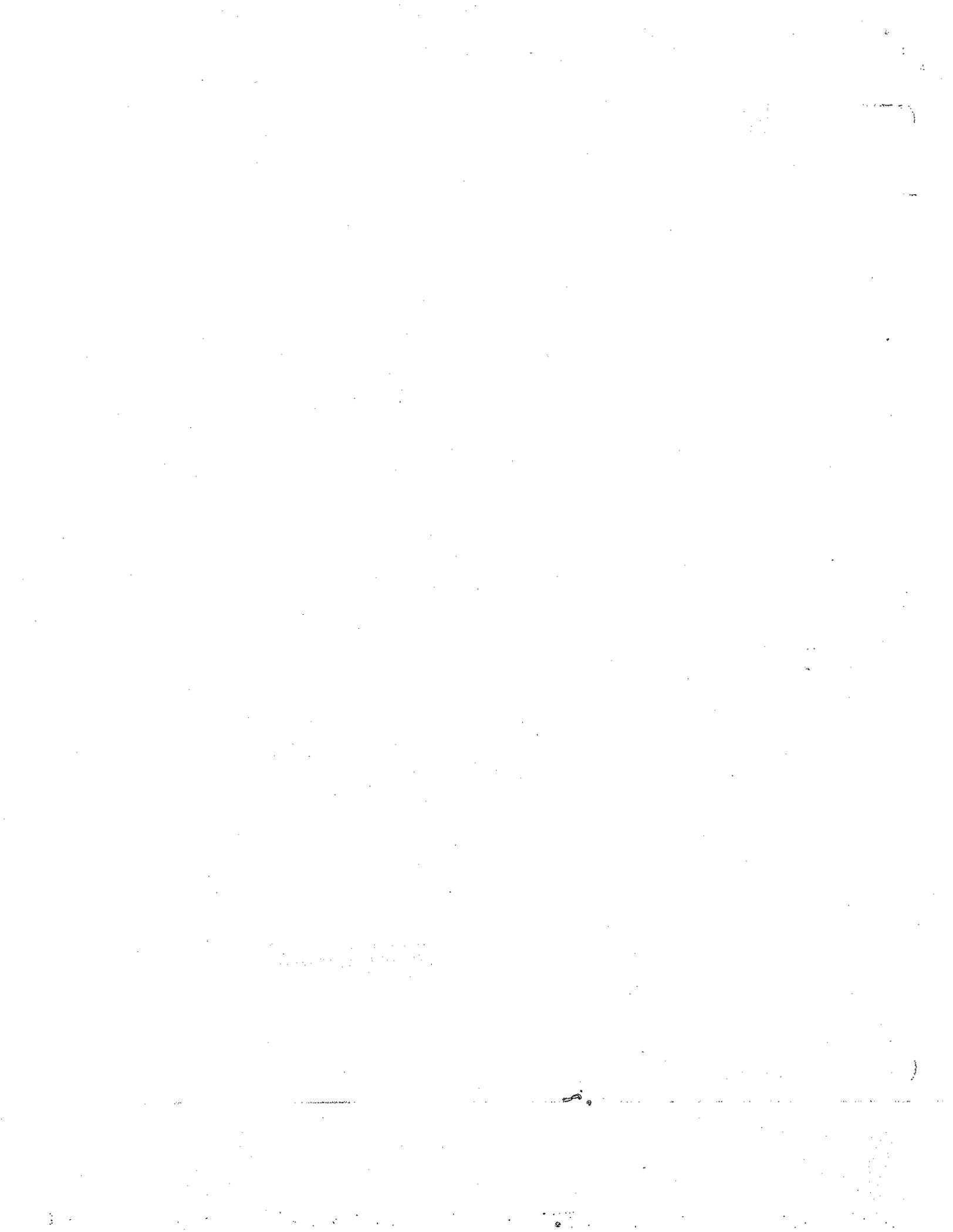
Within the scope of this inspection, no violations were identified.

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 NRC Public Document Room or from the Publicly Available Records component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

Randolph C. Ragland Jr., Chief
Decommissioning Branch
Division of Nuclear Materials Safety

cc w/ encl:
see next page



**NUCLEAR ENERGY ADVISORY COUNCIL
7:00 PM
SEPTEMBER 23, 2010
LOUISE APPLEBY ROOM
WATERFORD TOWN HALL
15 ROPE FERRY ROAD
WATERFORD, CT
REGULAR MEETING**

AGENDA

- 1. Call to Order**
- 2. Approval of Minutes of April 22, 2010 NEAC meeting**
- 3. PROGRAM:**
 - a) Briefing on Current Operations and Plans for Millstone Power Station by Dominion Nuclear Connecticut Representatives**
- 4. Public Comment**
- 5. NRC Correspondence Received since past meeting.**
- 6. Next Meeting Date and Time**
- 7. Adjournment**

NUCLEAR ENERGY ADVISORY COUNCIL
7:00 PM
September 23, 2010
LOUISE APPLEBY ROOM
15 ROPE FERRY ROAD
WATERFORD, CT
REGULAR MEETING
MINUTES

Members Present

Mr. Bill Sheehan, Chair
Ms. Pearl Rathbun, Vice Chair
Ms. Marge DeBold
Mr. Denny Hicks
Mr. John Markowicz
Rep. Kevin Ryan
Mr. Robert Klancko
Mr. James Sherrard
Mr. Tom Nebel
Dr. Edward Wilds representing Commissioner Marrella

- 1. Call to Order of Meeting**
NEAC Chair Sheehan called the meeting to order at 7:00 PM at Waterford Town Louise Appleby Room in Waterford, Connecticut.
- 2. Approval of Minutes of April 22, 2010 NEAC meeting**
Approval of Minutes of April 22, 2010 as presented. Approved unanimously.
- 3. PROGRAM**
 - a. Briefing on Current Operations and Plans for Millstone Power Station by Dominion Nuclear Connecticut Representatives Skip Jordan and Dan Weekley. See attached presentation.
- 4. Public Comment**
No public present
- 5. NRC Correspondence Received since past meeting**
Chair Sheehan passed out copies of NRC correspondence received. See Attached. Ms. Marge DeBold stated she will get report for CY fuel.
- 6. Next Meeting Date and Time**
December 9, 2010 at Three Rivers Community College Room D208. Tour before the meeting will start at 5 PM. Mr. James Sherrard will send directions to members.

7. Adjournment

Motion was made and seconded to adjourn; no objections; unanimous vote in favor; meeting adjourned at 8:27 PM.



Dominion[®]

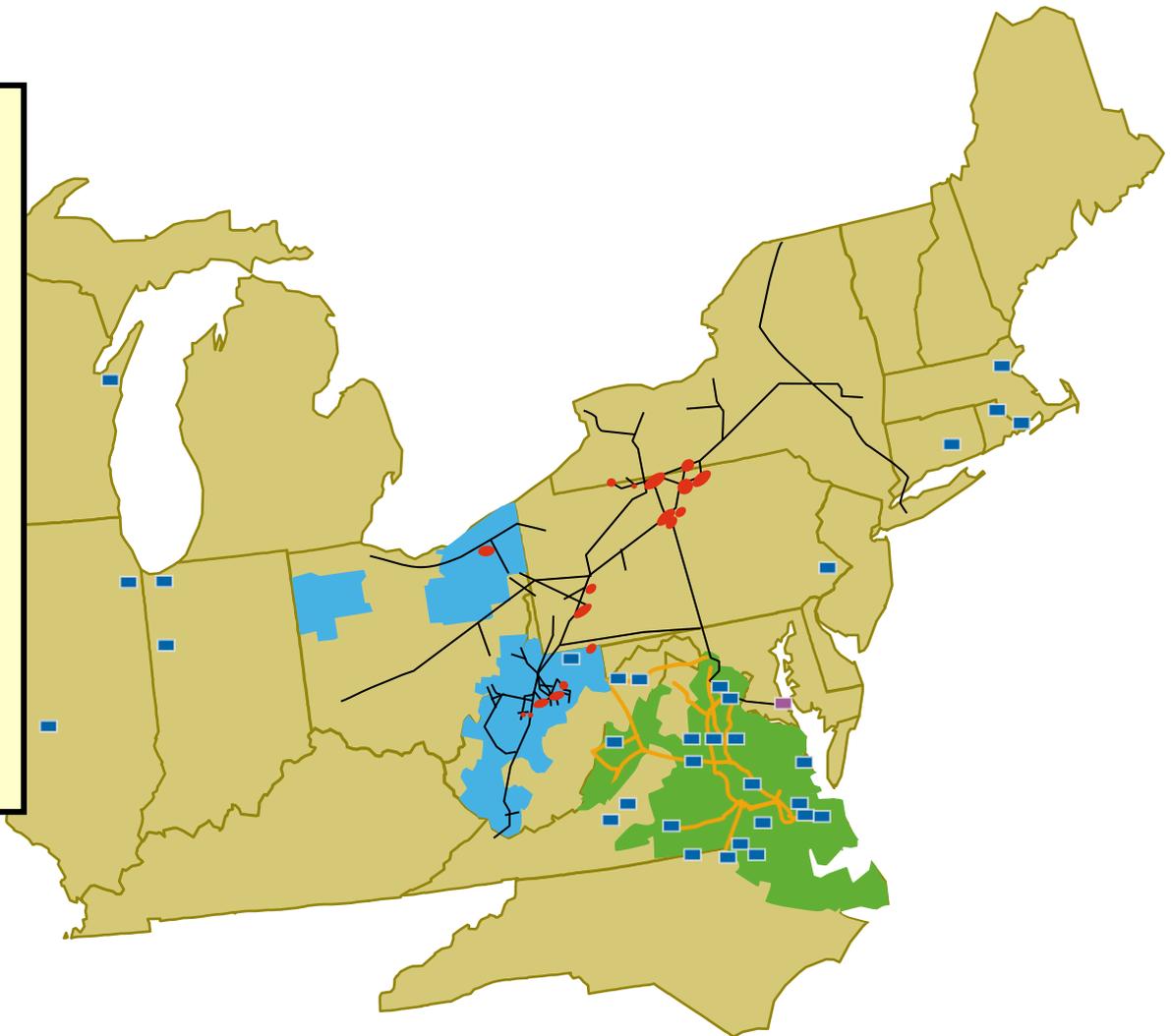
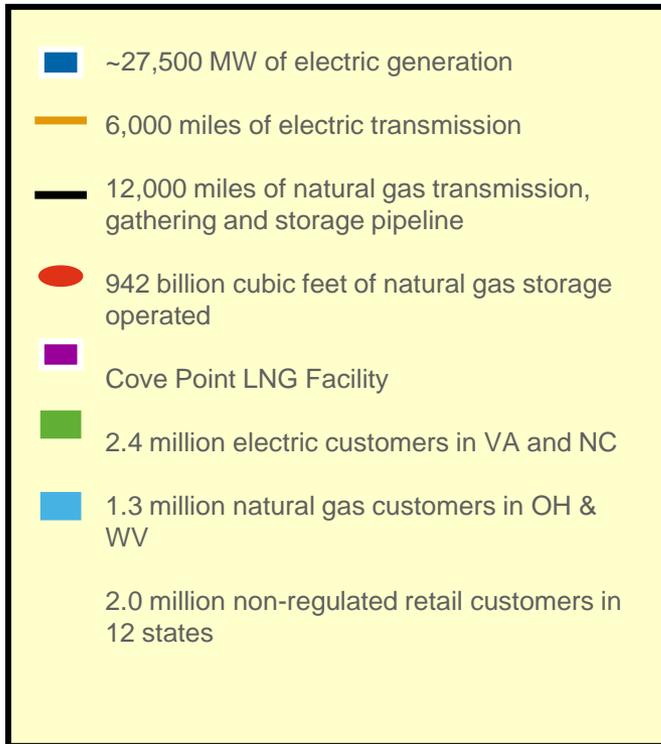


Nuclear Energy Advisory Council Update

September 23, 2010

About Dominion

One of America's Largest Energy Providers



Total Fleet

Balanced, Diverse Fuel Mix



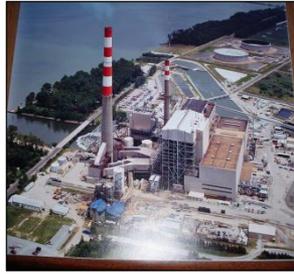
Coal



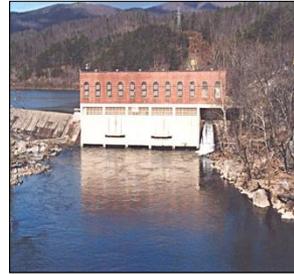
Nuclear



Natural Gas



Oil

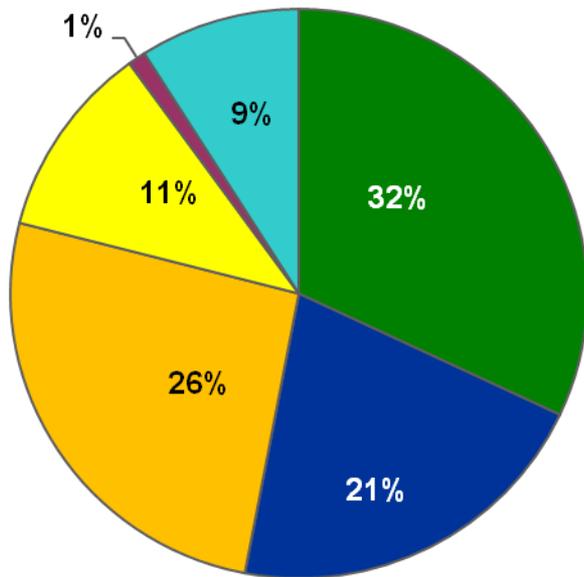


Hydro

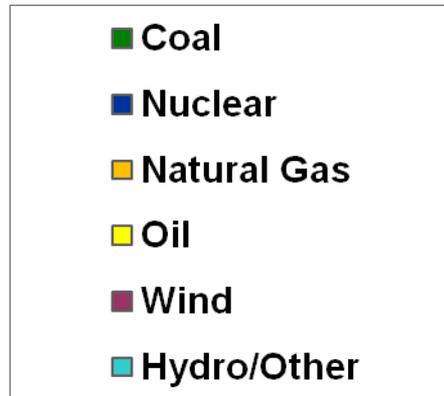
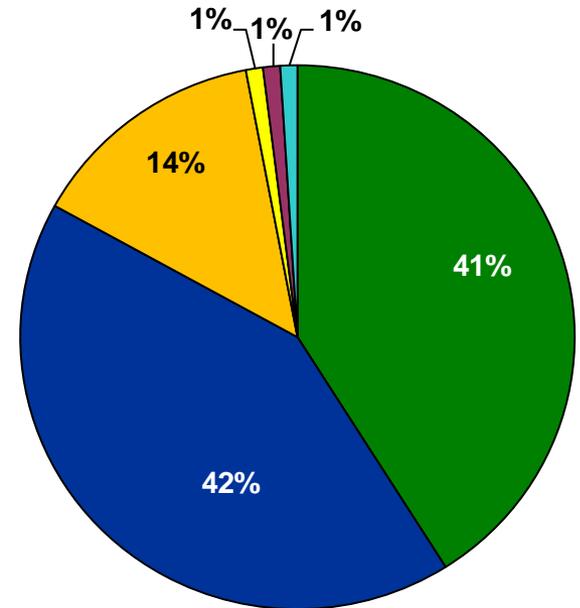


Wind

2009 Electric Capacity by Fuel

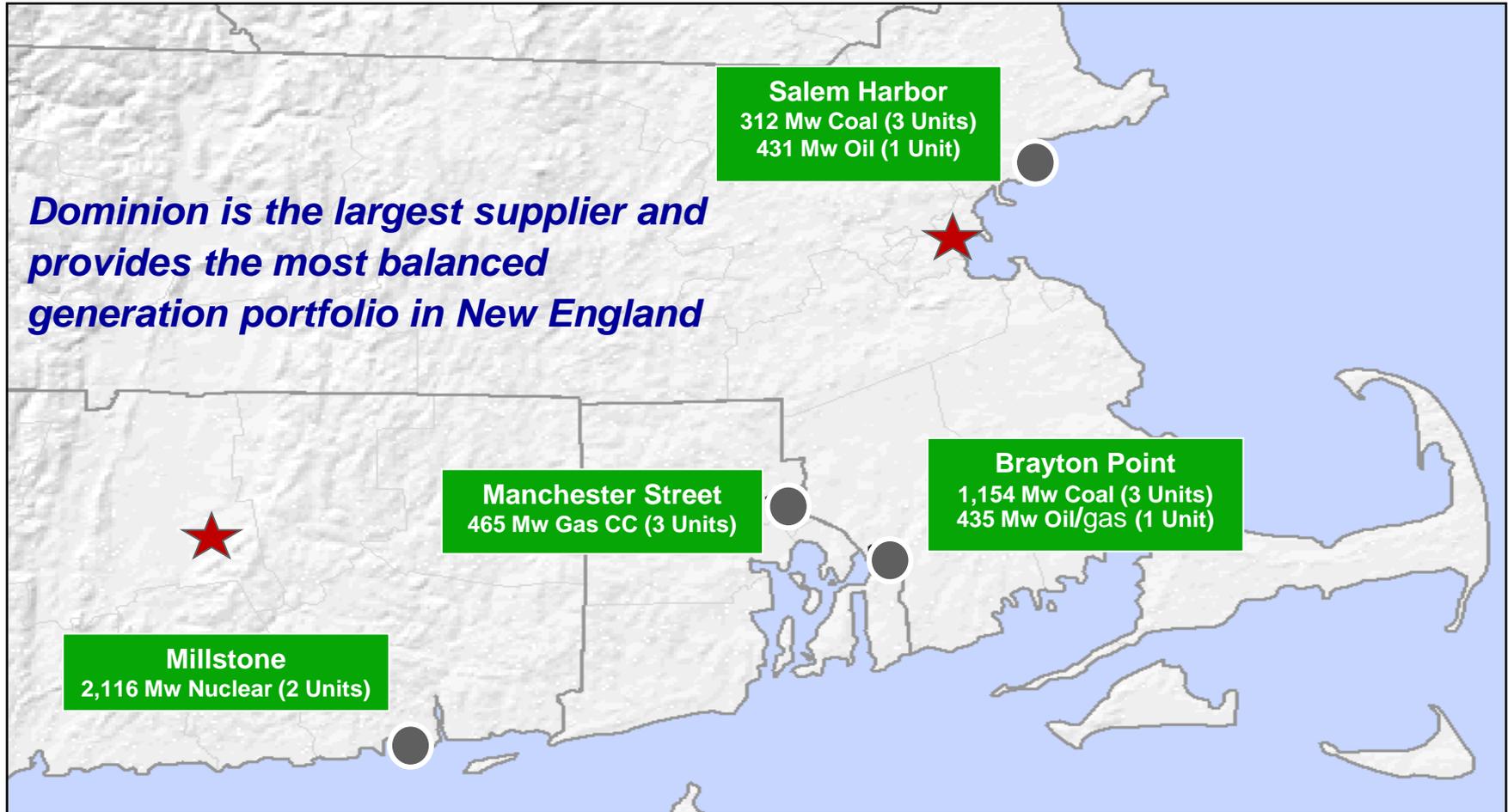


2009 Electric Production by Fuel*



Dominion New England

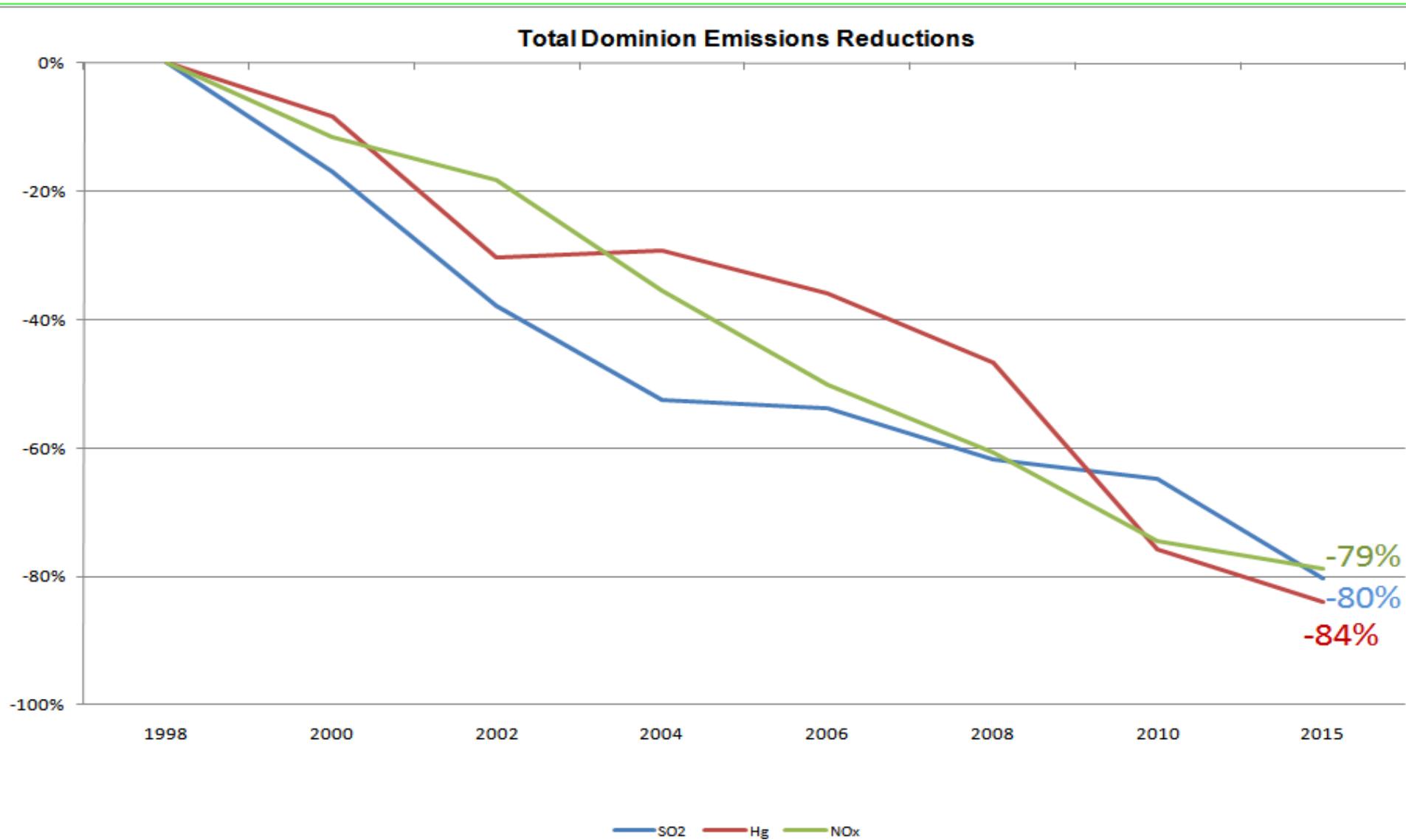
Generation Assets: 4,913 MW



Dominion Emissions Reductions

1998-2008 Actual Emissions

2010, 2015 Projected Emissions

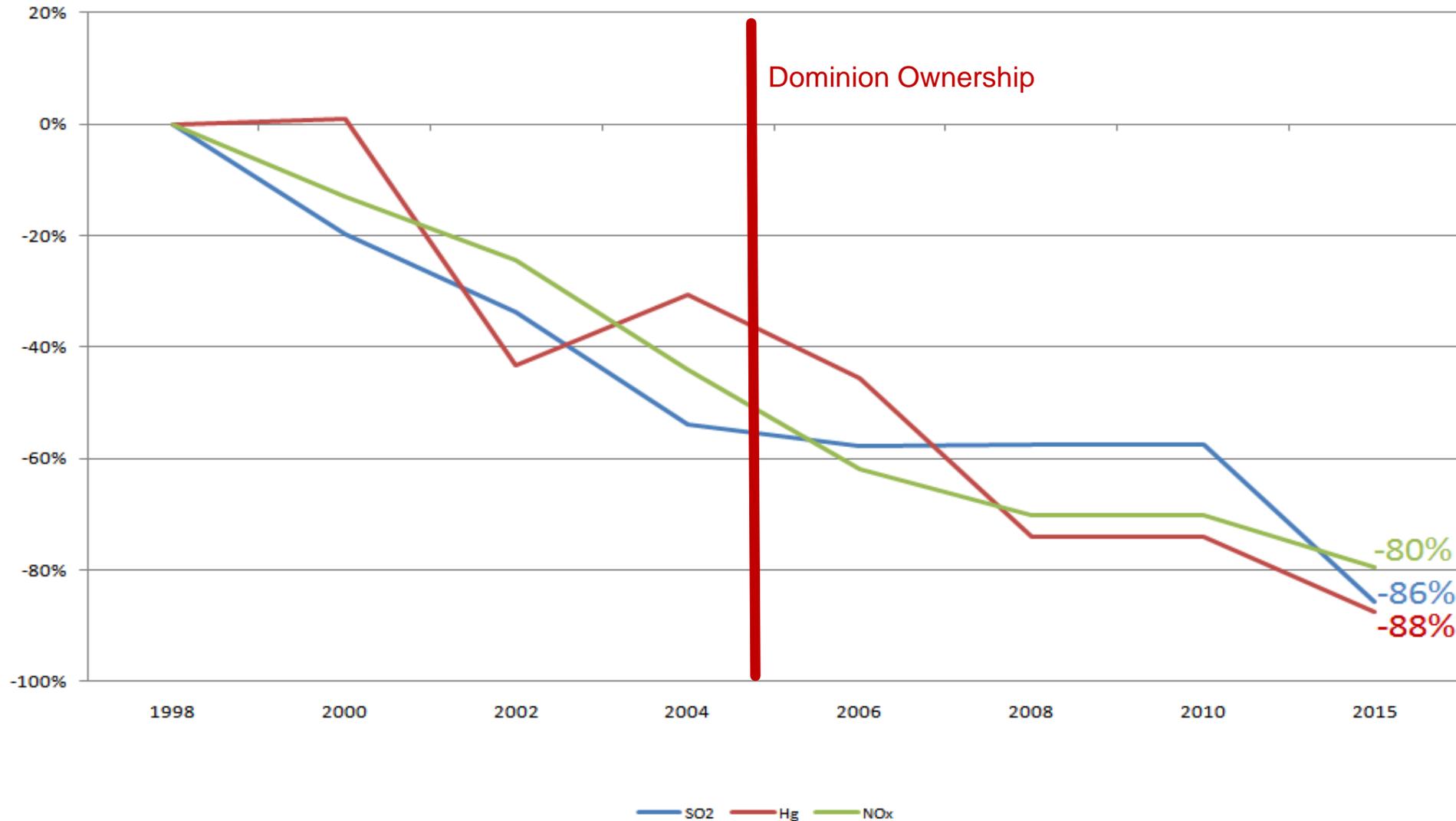


Dominion New England Emissions Reductions

1998-2008 Actual Emissions

2010, 2015 Projected Emissions

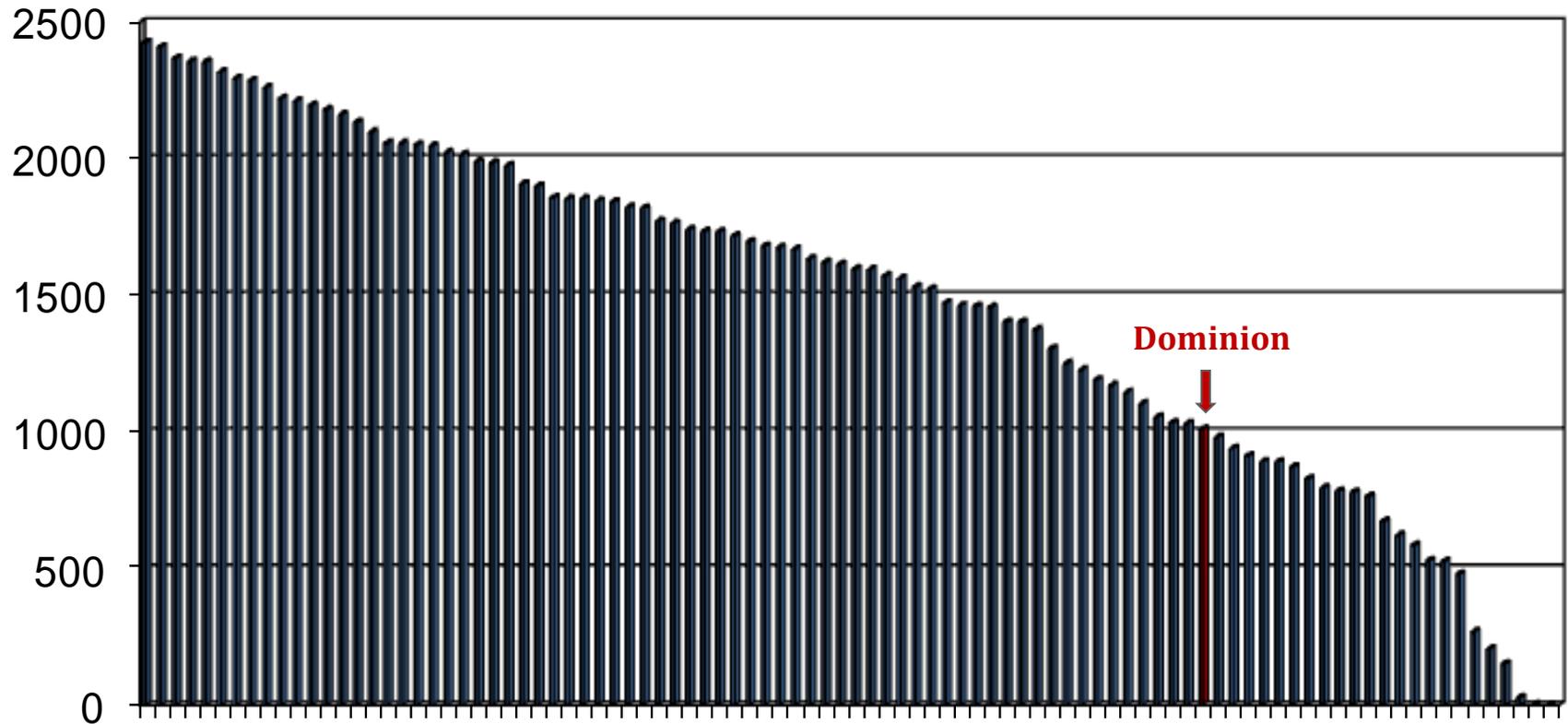
Dominion New England Emissions Reductions



Dominion

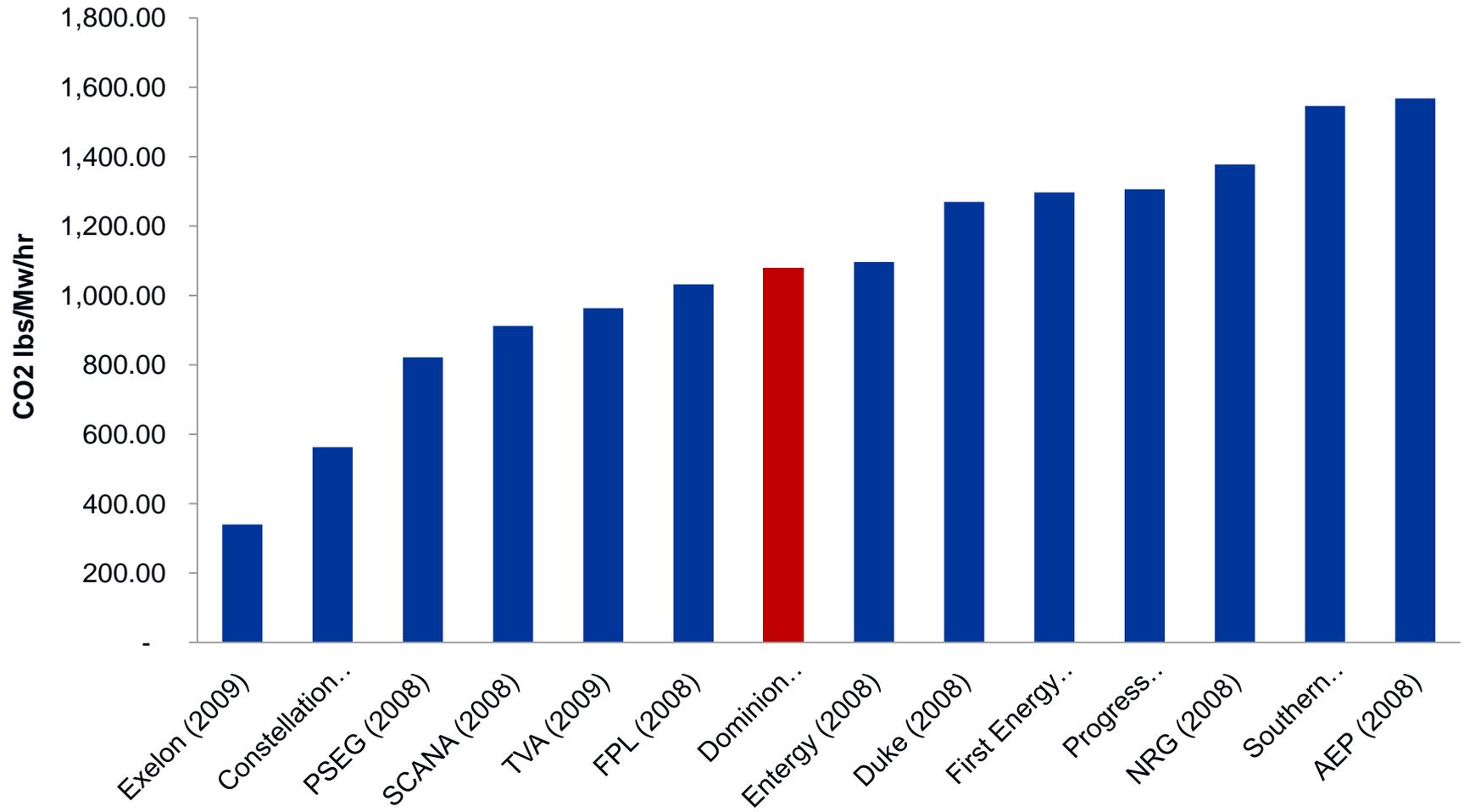
Low Carbon Intensity

100 Largest U.S. Power Producers
(Pounds CO₂ per MWh Output)



Based on NRDC study, Dominion in bottom 1/3 of the largest power producers.

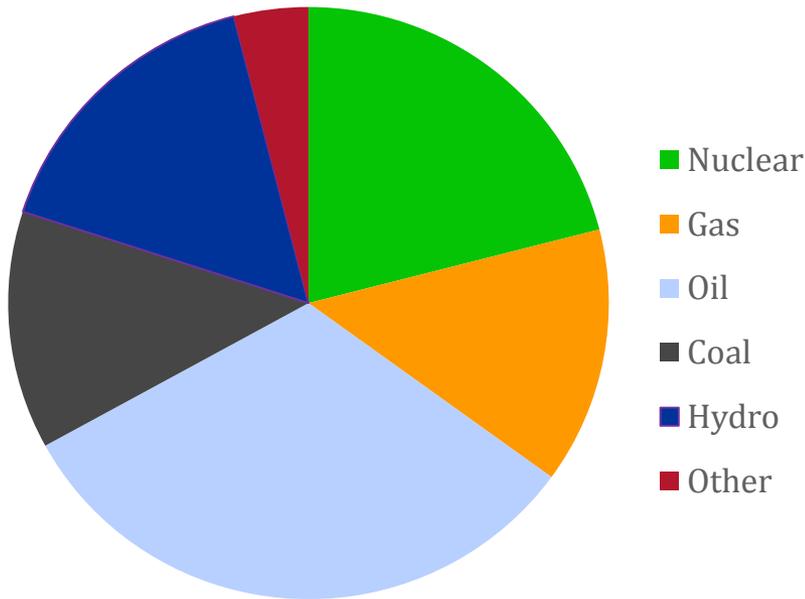
CO2 Emissions in Sector



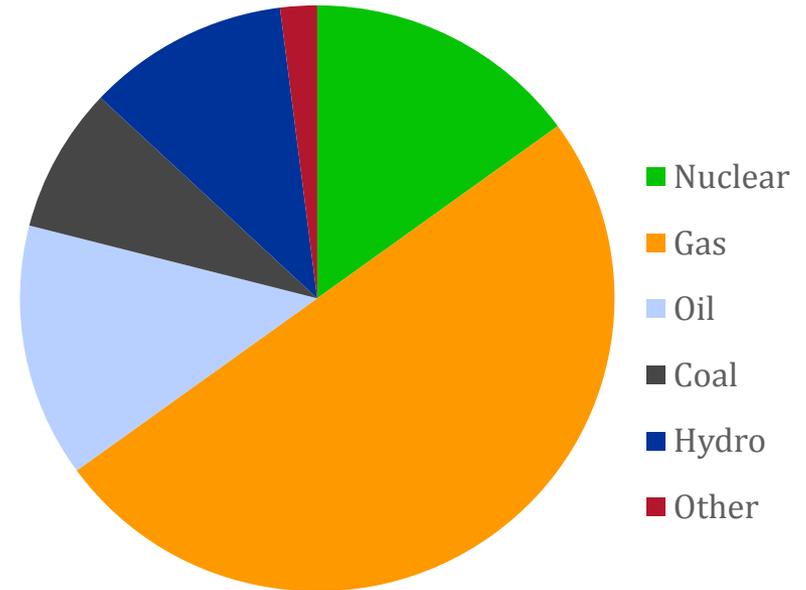
Regional Loss of Fuel Diversity

What's Driving the High Rates?

1998



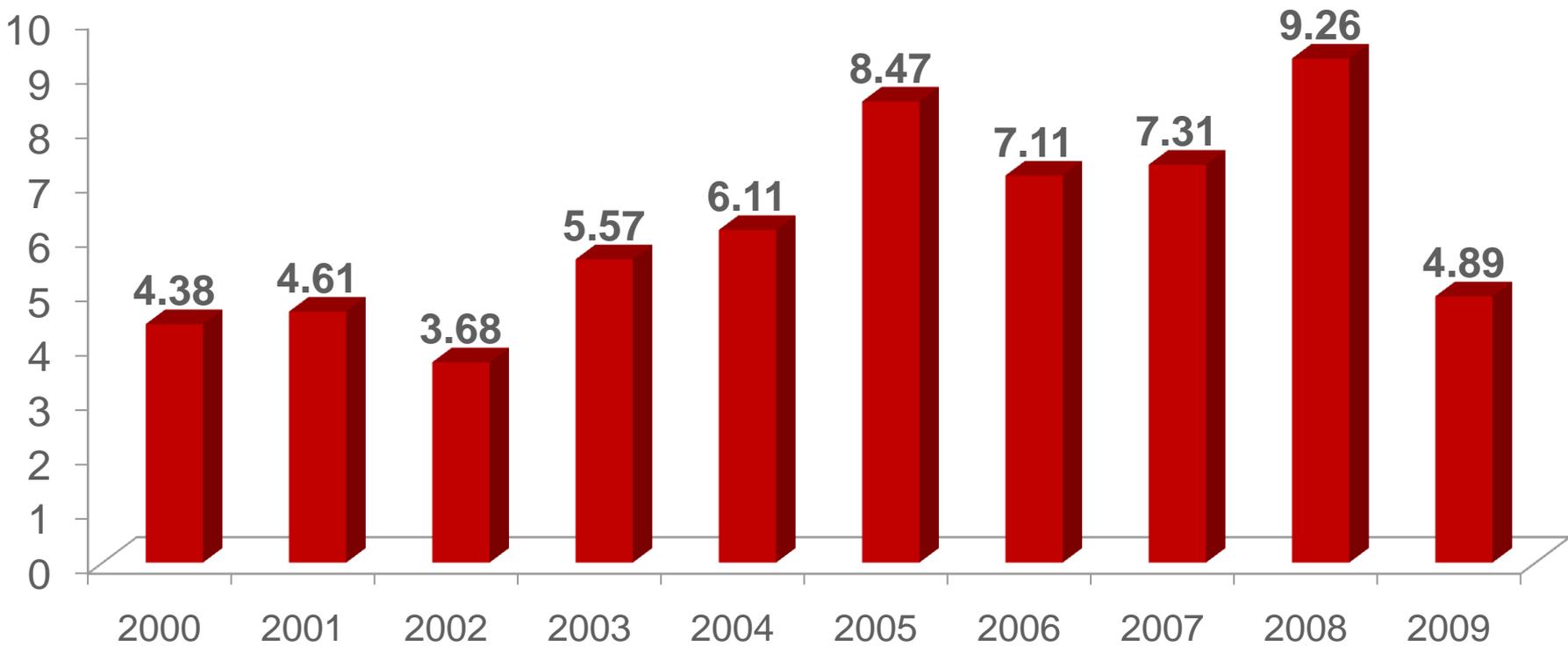
2010



*** No indigenous fuels within the Region**

Natural Gas Price Changes

U.S. Natural Gas Electric Power Price
(Dollars per Thousand Cubic Feet)



Source: Energy Information Administration, *Natural Gas Monthly*, Annual U.S. Natural Gas Electric Power Price.



Costs of New Generation

Renewables vs. Traditional Resources

U.S. Average Levelized Costs (2008 \$/megawatt hour) for Plants Entering Service in 2016

Plant Type	Capacity Factor (%)	Total System Levelized Cost* (2008 \$/MWH)
Conventional Coal	85%	100.4
Advanced Coal	85%	110.5
Advanced Coal with CCS	85%	129.3
Natural Gas-fired		
Conventional Combined Cycle	87%	83.1
Advanced Combined Cycle	87%	79.3
Advanced CC with CCS	87%	113.3
Conventional Combustion Turbine	30%	139.5
Advanced Combustion Turbine	30%	123.5
Advanced Nuclear	90%	119.0
Wind	34.4%	149.3
Wind – Offshore	39.3%	191.1
Solar PV	21.7%	396.1
Solar Thermal	31.2%	256.6
Geothermal	90%	115.7
Biomass	83%	111.0
Hydro	51.4%	119.9

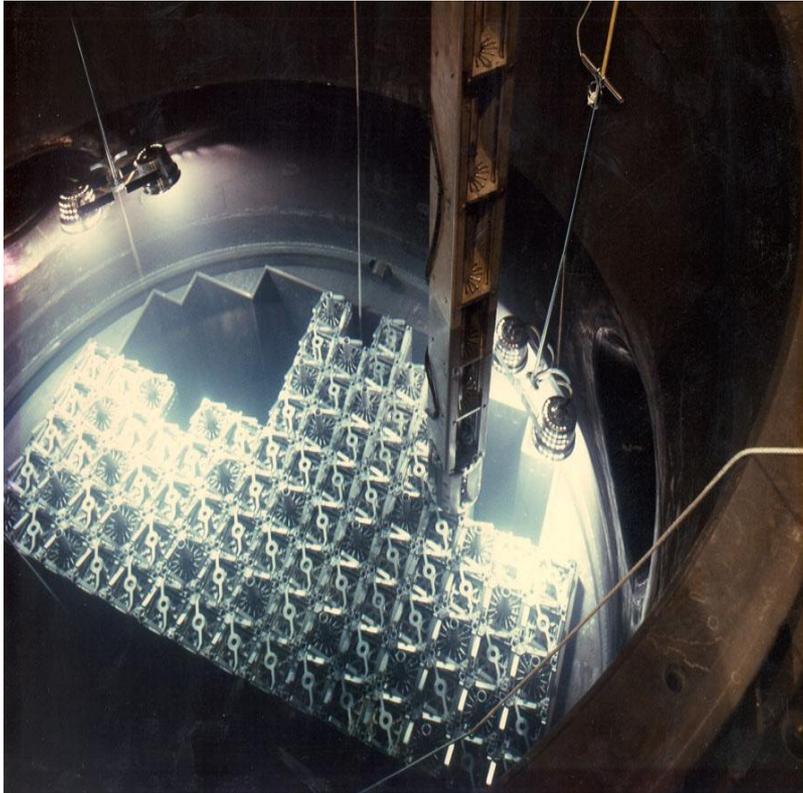
*Includes levelized capital cost, fixed O&M, variable O&M (including fuel) and transmission investment.

Source: Energy Information Administration, *Annual Energy Outlook*, 2010.

Millstone Briefing Agenda

- 2010 Operational Review
 - Challenges
 - Successes
- NPDES Update
- VSP/ISP
- Challenges/Opportunities 2010 & Beyond
- Q & A

Unit 2 Fall 2009 Refueling Outage



- ❖ Major outage work
 - Variable Frequency Drives
 - Alloy 600 weld overlays
 - Service Water

- ❖ Approximately 900 supplemental employees

- ❖ Successes/Challenges

- ❖ Duration - 42 days

Unit 3 Spring Refueling Outage

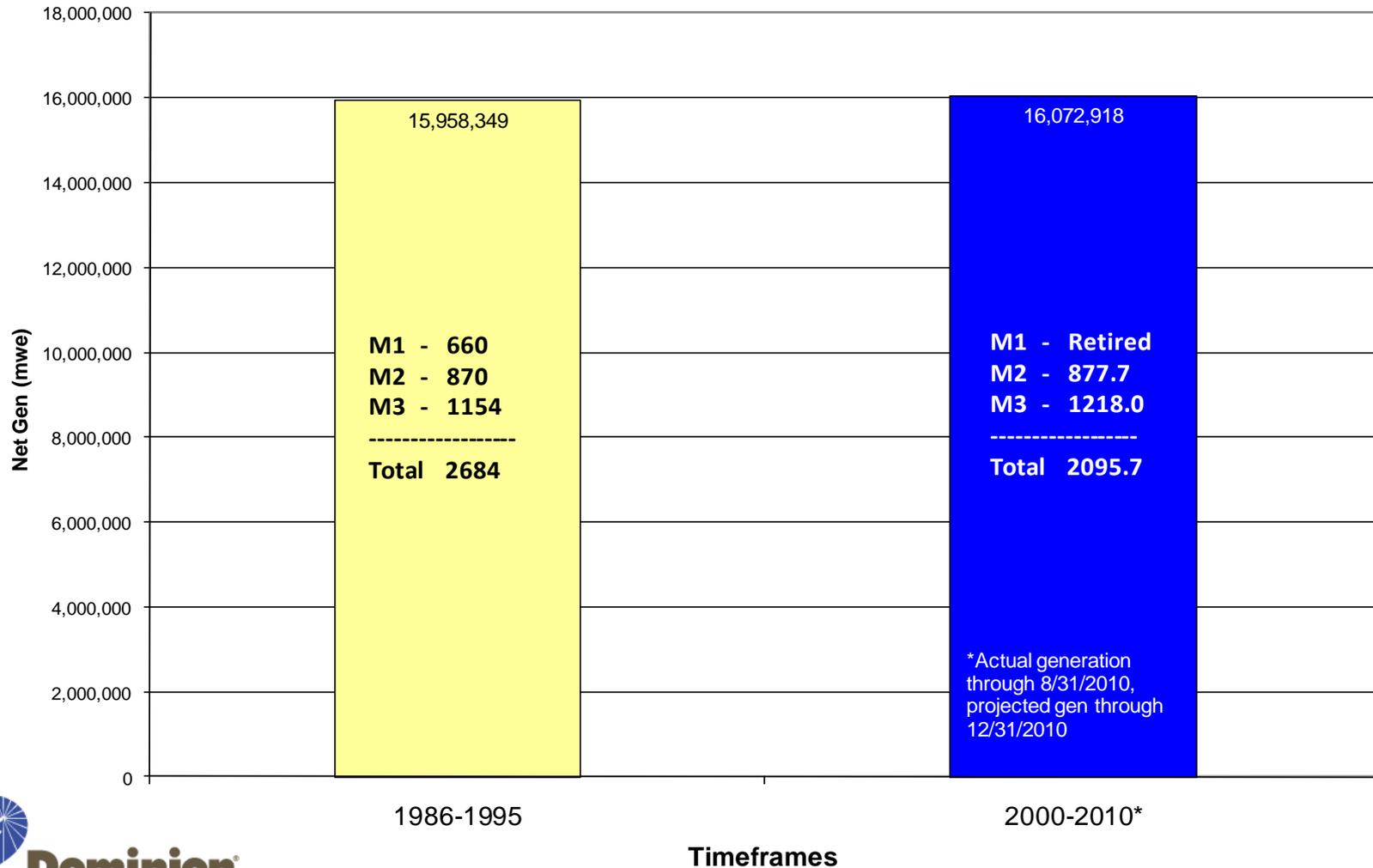


- ❖ Major outage work
 - Variable Frequency Drives
 - Main transformer replacement
- ❖ Approximately 1,000 supplemental employees
- ❖ Successes/Challenges
- ❖ Duration - 37 days

Millstone Average Net Generation

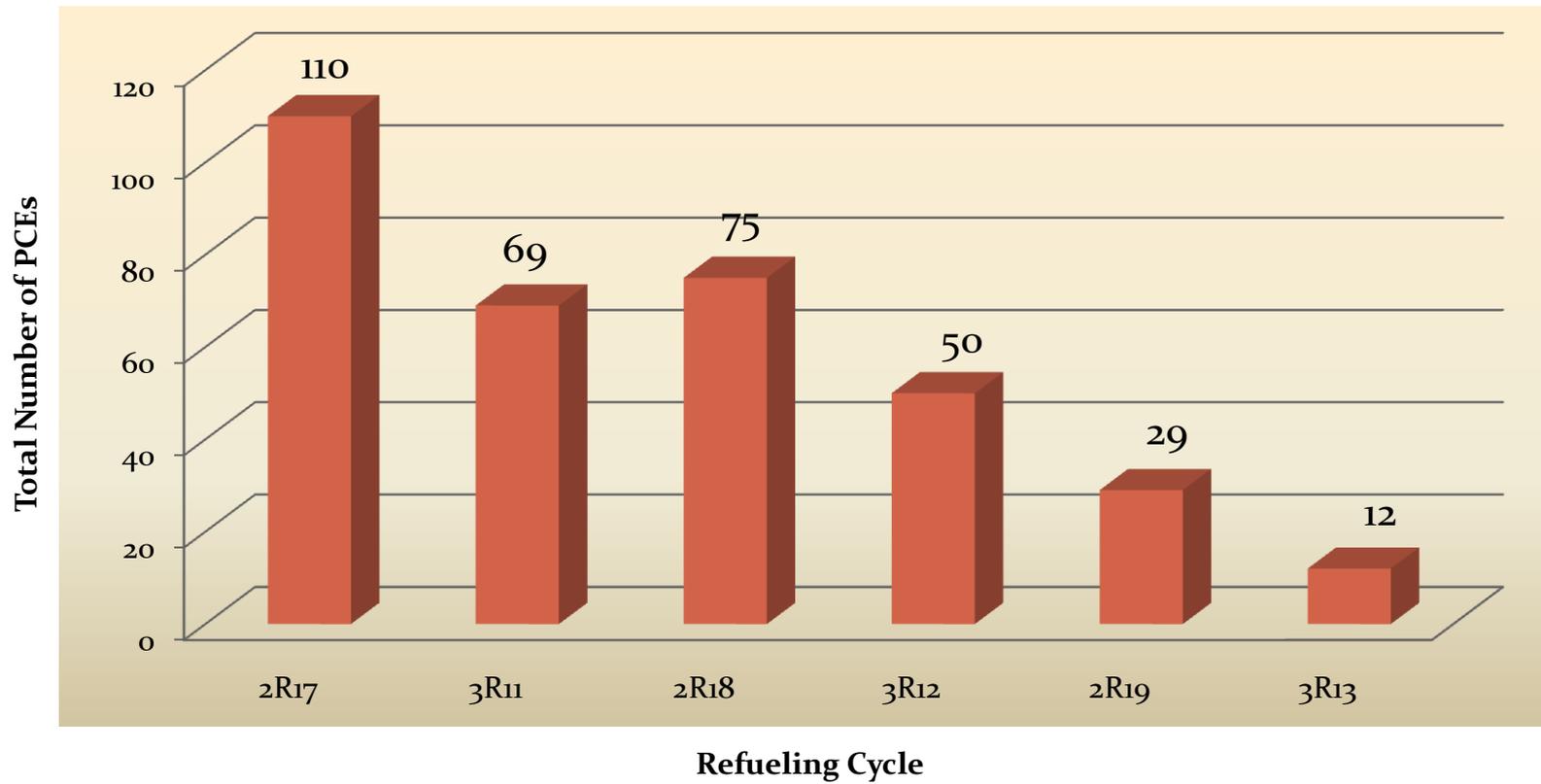
Reliability Investments are Working

Millstone Station Net Generation Comparison - Average Per Year



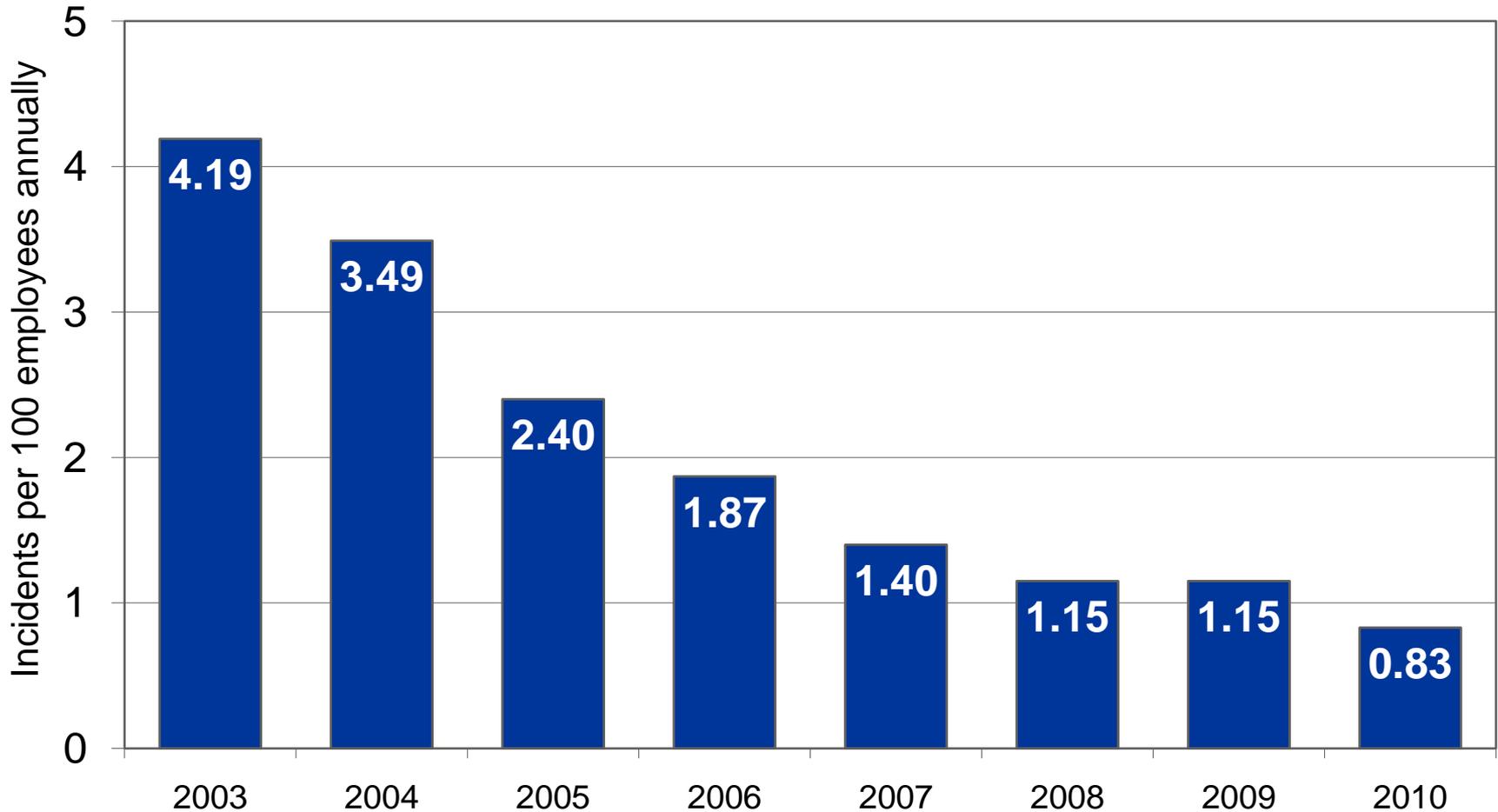
PCE Reduction Excellence

Millstone Power Station
Outage Personnel Contamination Event Trend
(Last 3 refueling cycles per Unit)



Dominion

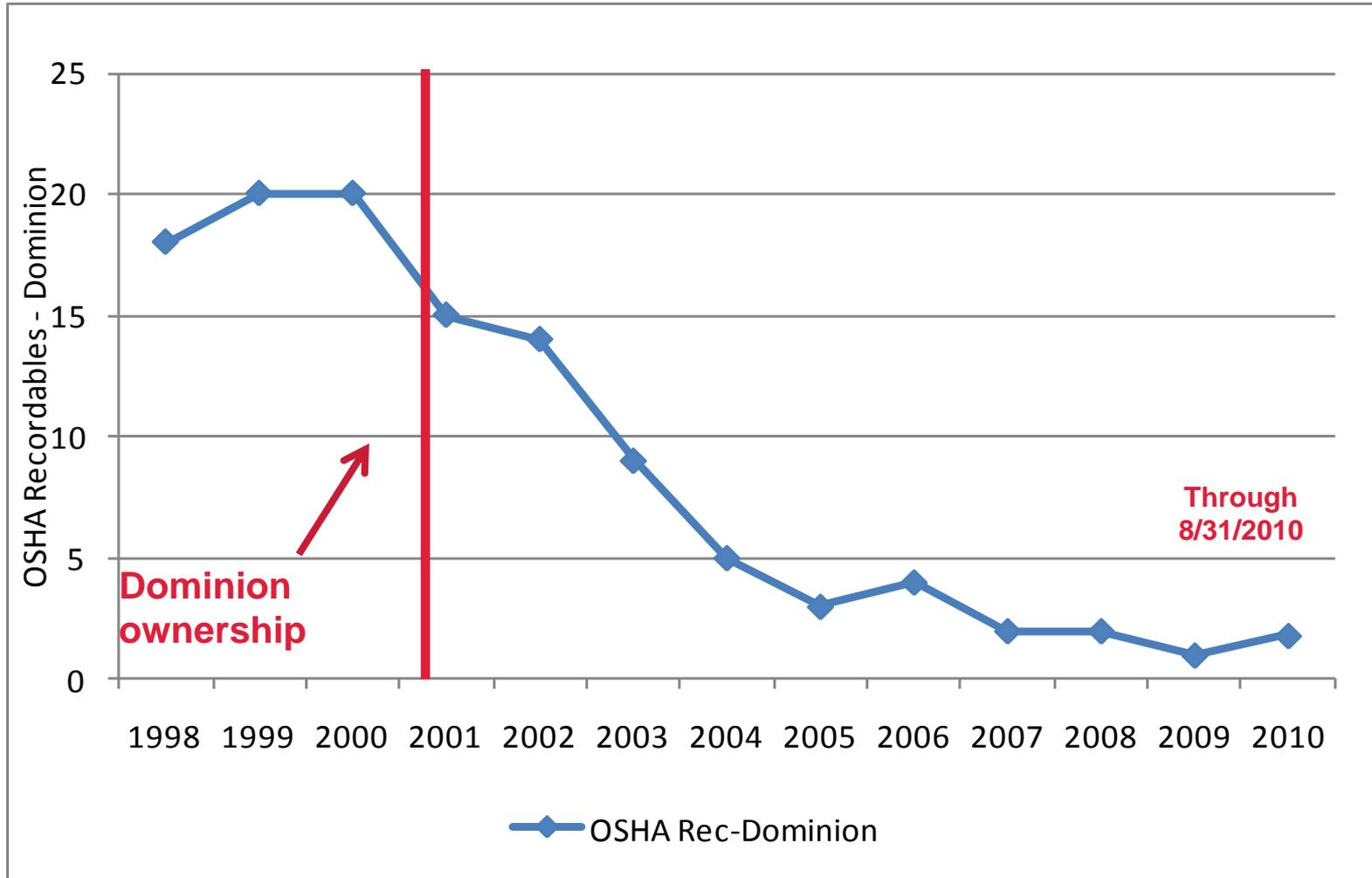
Safety is Always the Priority



Note: 2010 figure represents the incident rate through August 31.

Safety Has to be First

Millstone OSHA Recordables



Challenges in late 2009/2010

- Dec. 19 – Unit 3 shutdown because of electrical fault in the main generator output breaker
- Staffing
 - VSP/ISP
- Feb. 26 – Unit 2 manually shutdown due to excessive debris in cooling water intake boxes
- May 22 – Unit 2 manually shutdown because of steam generator water level control
- August 14 – Unit 3 manually shut for small RCS leak within containment

VSP/ISP

- Communicated to employees in January
- Benchmarking comparison with other operators
- 204 employees participated in the program
- Current station employee population is approx. 1,080
- Workforce reduction was made with nuclear safety as the overriding decision maker

Accomplishments in 2009/2010

- May 13 - Successful Hostile Action Based Drill involving multiple players
- NRC - Problem Identification Resolution
- Health Physics/Rad Protection
 - No findings for 5 consecutive qtrs
- ANI/NEIL
 - Separate comprehensive review – again no findings
- Resolution with DEP staff and 2 of 3 Interveners on NPDES draft permit

NPDES Permit – *Finally Renewed*

- Millstone has been seeking to renew our permit since 1997
- The existing permit was always still in effect
- Deputy Commissioner approved renewal in late August



NPDES Permit

Putting Process into Perspective

- MPS has collected biological data for more than 30 years
- More than 70 submittals to DEP totaling approx. 7,000 pages
- Draft Permit issued December '07
- Renewal process started and stopped 3-times since 1997
- 4 DEP Commissioners over this period
- 3 DEP permit-writers



Significant NPDES Permit Changes

➤ Key provisions of new permit

- 40% reduction of water usage during winter flounder spawning season
- Installation and operation of variable speed intake pumps
- Cooling water alternatives study
- Fine mesh screen study
- Further biological studies
- “Intervenor” access to studies and station

Institute of Nuclear Power Operations

The purpose of INPO is to promote the highest levels of safety and reliability across the US nuclear fleet

- Conducted periodic evaluation of Millstone in August. 20+ industry peers working with INPO representatives.
- Rated against “excellence”
- Focus areas
 - Knowledge and performance of plant personnel
 - Condition of systems and equipment
 - Quality of programs and procedures
 - Effectiveness of plant management
- Evaluation results to be communicated in mid-October

Challenges for 2010 and beyond

- Unit 2 Refueling Machine Upgrades
- Unit 2 Service Water Piping Replacement
- Unit 2 Reserve Station Transformer Replacement
- NRC/FEMA Emergency Preparedness Graded Exercise
- Unit 3 Feedwater System Upgrades

Brayton Point Cooling Towers



Brayton Point Cooling Towers



Q & A

Points of Contact

➤ Skip Jordan

Site Vice President

(860) 444-4292

Skip.J.Jordan@dom.com

➤ Dan Weekley

Managing Director – Northeast

(860) 444-5271

Daniel.A.Weekley@dom.com

➤ Ken Holt

Manager – Nuclear Communications

(860) 440-0132

Kenneth.A.Holt@dom.com



Dominion[®]

For additional information, visit us at
www.dom.com



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

August 5, 2010

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

SUBJECT: MILLSTONE POWER STATION - NRC INTEGRATED INSPECTION REPORT
05000336/2010003 AND 05000423/2010003

Dear Mr. Heacock:

On June 30, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Millstone Power Station Unit 2 and Unit 3. The enclosed inspection report documents the inspection results, which were discussed on July 21, 2010, with Mr. A. J. Jordan and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents one Severity Level IV non-cited violation (NCV). This report also documents four self-revealing findings of very low safety significance (Green). Two of these findings were determined to involve a violation of NRC requirements. However, because of the very low safety significance and because they have been entered into your corrective action program, the NRC is treating these violations as 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 Senior Resident Inspector at Millstone. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Senior Resident Inspector at Millstone.

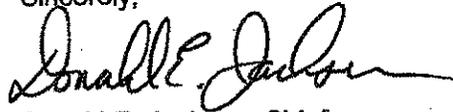
D. Heacock

2

In accordance with Title 10 of the Code of Federal Regulations (CFR) Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS).

ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,



Donald E. Jackson, Chief
Projects Branch 5
Division of Reactor Projects

Docket Nos. 50-336, 50-423

License Nos. DPR-65, NPF-49

Enclosure: Inspection Report No. 05000336/2010003 and 05000423/2010003
w/Attachment: Supplemental Information

cc w/encl: Distribution via Listserv

SUMMARY OF FINDINGS

IR 05000336/2010003, 05000423/2010003; 4/1/2010 - 6/30/2010; Millstone Power Station Unit 2 and Unit 3; Equipment Alignment; Refueling and Other Outage Activities; Identification and Resolution of Problems; Event Follow-up.

The report covered a three-month period of inspection by resident inspector staff and region-based inspectors. One Severity Level IV non-cited violation (NCV) was identified. Additionally, four Green self-revealing findings, two of which were NCVs, were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process." The cross-cutting aspects for the findings were determined using IMC 0310, "Components Within The Cross-Cutting Areas." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Initiating Events

- **Green.** A self-revealing finding of very low safety significance (Green) was identified for Dominion's failure to correct a long-standing stability problem with control of the Unit 3 feedwater regulating bypass valves (FRBVs). Operation at low power conditions has resulted in excessive steam generator (SG) level oscillations while in automatic control and unintended equipment response when attempting to control SG level in manual control. The inadequate design of the SG level control system for low power operations was identified by numerous condition reports dating back to 2002, but had not been corrected. Dominion entered this issue into their corrective action program (CR381435, CR384014).

The finding is more than minor because it was similar to NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," Example 4b, in that the failure to correct a condition adverse to quality resulted in a reactor trip. The inspectors determined that the finding was associated with the Equipment Performance attribute of the Initiating Events cornerstone, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions. Specifically, the long standing condition of the FRBVs' inability to control SG level at low power operations led to an automatic reactor trip. The inspectors performed an initial screening of the finding in accordance with IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings." The inspectors determined the finding was of very low safety significance (Green) because it did not affect both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors determined that the finding had a cross-cutting aspect in the Problem Identification and Resolution cross-cutting area, Corrective Action Program component, because Dominion did not take appropriate corrective action to address the longstanding adverse conditions associated with control of the FRBVs [P.1(d)]. (Section 1R20)

Enclosure

- Green. A self-revealing finding of very low safety significance (Green) was identified for Dominion's failure to properly plan work activities associated with the Unit 2 'D' circulating water (CW) bay outage in accordance with Dominion procedure WM-AA-3000, "Managing Complex Work." The work plan failed to properly sequence work activities to prevent fouling of the 'C' CW screens. The subsequent fouling of the 'C' CW travelling screen resulted in an automatic trip of the 'C' CW pump. Loss of the 'C' CW pump, coupled with the unavailability of the 'D' CW pump, required the operators to manually trip the reactor. Dominion entered this issue into their corrective action program (CR370363).

This finding is more than minor because it was similar to NRC IMC 0612, Appendix E, "Examples of Minor Issues," Example 4b, in that the implementation of the inadequate work plan caused the loss of the 'C' CW pump, and required the operators to manually trip the reactor. The inspectors determined this finding was associated with the Human Performance attribute of the Initiating Events cornerstone, and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, the work plan for the 'D' CW bay outage did not properly sequence the work, which led to the loss of the 'C' CW pump and required the operators to manually trip the reactor. The inspectors determined the significance of the finding using IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The inspectors determined that this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Work Control component, because Dominion did not appropriately plan the bay cleaning and demucking (removal of scraped material) work activity to address the risk of the activity to impact the other CW bays [H.3(a)]. (Section 4OA3)

Cornerstone: Mitigating Systems

- Green. A self-revealing, NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for Dominion's failure to have an adequate procedure for operating the Unit 3 charging pumps. Specifically, Dominion operating procedure (OP) 3304A, "Charging and Letdown," did not require verification of Reactor Plant Closed Cooling Water (RPCCW) flow to the seal water heat exchanger, which resulted in overheating of the 'B' charging pump during a reactor coolant system (RCS) vacuum fill on May 1, 2010. Dominion has created corrective actions to make procedural enhancements to OP-3304A, "Charging and Letdown," and OP-3353.MB1C, "Main Board Annunciator Response."

The inspectors determined this finding was more than minor because it was associated with the Configuration Control attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed an initial screening of the finding in accordance with IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors then evaluated the significance of the finding using Inspection Manual Chapter 0609,

Enclosure

Appendix G, "Shutdown Operations - Significance Determination Process," Checklist 3, "PWR Cold Shutdown and Refueling Operation; RCS Open and Refueling Cavity Level < 23' Or RCS Closed and No Inventory in Pressurizer; Time to Boiling < 2 hours," and determined that the finding was of very low safety significance (Green) because all of the shutdown safety function guidelines were met. The inspectors determined that this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Work Control component, because Dominion relied on the work control process to assure that the RPCCW cooling water was in service to the seal water heat exchanger at the time that the RCS vacuum fill was scheduled. Specifically, the work control process was insufficiently robust to ensure that cooling water was supplied to the seal water heat exchanger during charging pump operations [H.3(b)]. (Section 1R20)

- **Green.** A self-revealing, NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified for Dominion's failure to properly evaluate a condition adverse to quality involving the Unit 2 'A' emergency diesel generator (EDG). Dominion did not properly evaluate a degraded condition of the 'A' EDG, which led to its inoperability from May 12, 2010, to May 17, 2010. Dominion took immediate corrective action to replace the EDG governor.

The inspectors determined this finding was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, Dominion's inadequate evaluation of the degraded condition of the 'A' EDG governor after the March 17, 2010, surveillance test did not result in effective corrective action to address the cause of the rapid load increase. As a result, the 'A' EDG was declared inoperable when it again experienced a rapid load increase during its surveillance on May 12, 2010. The inspectors determined the significance of the finding using IMC 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time. The inspectors determined that this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Decision Making component, because Dominion did not use conservative assumptions in its decision making when they could not conclude that the EDG load fluctuations would not recur [H.1(b)]. (Section 40A2)

Other Findings

- **Severity Level IV.** The inspectors identified a Severity Level IV NCV of 10 CFR 50.72(b)(3)(v); in that, Dominion failed to make a timely 10 CFR 50.72 eight-hour report to the NRC for a condition that, at the time of discovery, could have prevented secondary containment from fulfilling its safety function. On May 27, 2010, operations personnel found both sets of the auxiliary and service building tunnel exhaust dampers open which could have prevented secondary containment from fulfilling its safety function. Operations declared secondary containment inoperable, closed the auxiliary building tunnel exhaust dampers to restore operability, and initiated a 10 CFR 50.72 report.

Enclosure

The inspectors determined that Dominion's failure to make a 10 CFR 50.72 eight-hour report to the NRC regarding the inoperable secondary containment as a condition that could have prevented it from fulfilling its safety function was a performance deficiency. The inspectors determined that traditional enforcement applied, since the failure to make a required report could adversely impact the NRC's ability to perform its regulatory function. In accordance with the NRC Enforcement Policy, "Supplement I - Reactor Operations," Example D.4, a failure to make a required Licensee Event Report (LER) is categorized as a Severity Level IV violation. The inspectors determined that this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Decision Making component, because Dominion did not use conservative assumptions in their decision-making when they could not demonstrate that secondary containment would have fulfilled its safety function [H.1(b)]. (Section 1R04)

Enclosure



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

September 1, 2010

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

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN –
MILLSTONE POWER STATION

Dear Mr. Heacock:

On August 12, 2010, the Nuclear Regulatory Commission (NRC) staff completed its performance review of the Millstone Power Station. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from July 1, 2009, through June 30, 2010. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only – Security Related Information" will include the security cornerstone review and resultant inspection plan.

Plant performance for the most recent quarter at Millstone Units 2 and 3 was within the Licensee Response column of the NRC's Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility.

The enclosed inspection plan details the inspections, less those related to physical protection, scheduled through December 31, 2011. In addition to baseline inspections, we plan to conduct a follow-up inspection for three severity level IV non-cited violations issued within the same traditional enforcement area during the assessment period. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last nine months of the inspection plan are tentative and may be revised at the end-of-cycle review.



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

September 3, 2010

Docket Nos. 05000336
05000423

License No DPR-65
NPF-49

David A. Heacock
President and Chief Nuclear Officer
Dominion Resources
Millstone Power Station, Units 2 and 3
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION - NRC INDEPENDENT SPENT FUEL
STORAGE INSTALLATION INSPECTION REPORT NOS. 05000336/2010403
AND 05000423/2010403

Dear Mr. Heacock:

On August 18, 2010, the U.S. Nuclear Regulatory Commission (NRC) performed an Independent Spent Fuel Storage Installation (ISFSI) security inspection at the Millstone Power Station, Units 2 and 3, in Waterford, Connecticut. The inspection covered the NRC's Additional Security Measures (ASMs) for the Physical Protection of Dry Independent Spent Fuel Storage Installations. The enclosed inspection report documents the inspection results, which were discussed with S. Jordan, Site Vice President for Dominion Nuclear Connecticut Inc, and other members of your organization at the exit meeting of the NRC's Region I Division of Reactor Safety (DRS) security baseline inspection on August 20, 2010.

This inspection was performed in conjunction with the security baseline inspection that was conducted by representatives of DRS during the week of August 16, 2010. The ISFSI security inspection was a separate inspection from the security baseline inspection. The security baseline inspection will be documented separately in NRC Inspection Report Nos. 05000336/2010402 and 05000423/2010402.

The inspection examined activities conducted under your licenses as they relate to security and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the

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NUCLEAR ENERGY ADVISORY COUNCIL
REGULAR MEETING

5:00 PM
December 9, 2010
Room D208
Three Rivers Community College
574 New London Turnpike
Norwich, CT 06360

MEETING AGENDA

1. Call to order of Meeting.
2. Approval of the September 23, 2010 NEAC Meeting Minutes.
3. Public Comment
4. NRC Correspondence Received since Past Meeting
5. CY 2010 Annual Report Discussion
6. CY 2010 Annual Report Approval
7. Approval of Regular Meeting Schedule for CY 2011
8. Programs for CY 2011
9. Next Meeting Date/Location
7. Adjournment

NOTE: There may be a recess after Agenda Item 5 for a Dinner Break depending on the length of the Annual Report discussion.

After meeting adjournment there will be a tour of the nuclear simulator and health physics labs of Three Rivers Community College conducted by NEAC member Jim Sherrard

NUCLEAR ENERGY ADVISORY COUNCIL
5:00 PM
December 9, 2010
ROOM D-208
THREE RIVERS COMMUNITY COLLEGE
574 NEW LONDON TURNPIKE
NORWICH, CT 06360
REGULAR MEETING
MINUTES

Members Present

Mr. Bill Sheehan, Chair
Ms. Pearl Rathbun, Vice Chair
Ms. Marge DeBold
Mr. Denny Hicks
Mr. John Markowicz
Mr. Robert Klancko
Mr. James Sherrard
Dr. Edward Wilds representing Commissioner Marrella

- 1. Call to Order of Meeting**
NEAC Chair Sheehan called the meeting to order at 5:14 PM at Three Rivers Community College in Norwich, Connecticut.
- 2. Approval of Minutes of September 23, 2010 NEAC meeting**
Approval of Minutes of September 23, 2010 as presented. Motion was made and seconded to approve minutes; no objections; unanimous vote in favor
- 3. Public Comment**
No public present
- 4. NRC Correspondence Received since past meeting**
Chair Sheehan passed out the list of NRC correspondence received and forwarded to Council members via email. See Attached.
- 5. CY 2010 Annual Report Discussions**
The Council discussed the 2010 Annual Report. Only minor edits made to remove areas of potential confusion such as multiple meanings of CY, Calendar Year and Connecticut Yankee.
- 6. CY 2010 Annual Report Approval**
Motion made by Mr. Sherrard and seconded by Mr. Klancko to approve the 2010 Annual Report with the minor edits discussed; no objections; unanimous vote in favor.

- 7. Approval of Regular Meeting Scheduled for CY 2011**
Motion was made and seconded to accept 2011 meeting schedule as presented; no objections; unanimous vote in favor.
- 8. Programs for CY 2011**
Council discussed potential topics for 2011. See Attached list of potential topics.
- 9. Next Meeting Date and Time**
April 21, 2011 at Waterford Town Hall. Time to be determined in coordination with the U.S. Nuclear Regulatory Commission.
- 10. Adjournment**
Motion was made by Mr. Klancko and seconded Mr. Sherrard to adjourn; no objections; unanimous vote in favor; meeting adjourned at 5:29 PM.

DRAFT

NRC Correspondence Received Since Last NEAC Meeting

1. Millstone Power Station – NRC Independent Spent Fuel Storage Installation Inspection report dtd 09/03/2010
2. Millstone Power Station-NRC Integrated Inspection Report (3rd Qtr 2010) dtd 11/03/2010
3. Millstone Power Station- NRC Inspection Report on Security Implementation dtd 11/04/2010
4. Millstone Power Station-NRC Triennial Fire Protection Inspection Report and Notice of Violation and temporary Instruction 2515/181 Inspection Report dtd 11/05/2010
5. Millstone Power Station Units 2 & 3 –Target Set Inspection dtd 10/29/2010
6. Millstone Power Station Units 2 & 3 – NRC Security Inspection Report and Preliminary Greater than Green Finding dtd 11/09/2010
7. Millstone Power Station, Units 2 & 3- NRC Evaluated Emergency Preparedness Exercise Inspection Report dtd 11/30/2010



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

September 3, 2010

Docket Nos. 05000336
05000423

License No DPR-65
NPF-49

David A. Heacock
President and Chief Nuclear Officer
Dominion Resources
Millstone Power Station, Units 2 and 3
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION - NRC INDEPENDENT SPENT FUEL
STORAGE INSTALLATION INSPECTION REPORT NOS. 05000336/2010403
AND 05000423/2010403

Dear Mr. Heacock:

On August 18, 2010, the U.S. Nuclear Regulatory Commission (NRC) performed an Independent Spent Fuel Storage Installation (ISFSI) security inspection at the Millstone Power Station, Units 2 and 3, in Waterford, Connecticut. The inspection covered the NRC's Additional Security Measures (ASMs) for the Physical Protection of Dry Independent Spent Fuel Storage Installations. The enclosed inspection report documents the inspection results, which were discussed with S. Jordan, Site Vice President for Dominion Nuclear Connecticut Inc, and other members of your organization at the exit meeting of the NRC's Region I Division of Reactor Safety (DRS) security baseline inspection on August 20, 2010.

This inspection was performed in conjunction with the security baseline inspection that was conducted by representatives of DRS during the week of August 16, 2010. The ISFSI security inspection was a separate inspection from the security baseline inspection. The security baseline inspection will be documented separately in NRC Inspection Report Nos. 05000336/2010402 and 05000423/2010402.

The inspection examined activities conducted under your licenses as they relate to security and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel.

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D. Heacock

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In accordance with 10 CFR 2.390(b)(1)(ii), the NRC is waiving the affidavit requirements for your response, if any. This practice will ensure that your response will not be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system, ADAMS. If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.22. Otherwise, mark your entire response "Security-Related Information-Withhold Under 10 CFR 2.390" and follow the instructions for withholding in 10 CFR 2.390(b)(1).

Thank you for your cooperation during this inspection.

Sincerely,



for Judith A. Joustra, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

Enclosure:

Inspection Report Nos. 05000336/2010403 and 05000423/2010403
w/Attachment: Supplemental Information

(CONTAINS OFFICIAL USE ONLY – SECURITY RELATED INFORMATION) (OUO-SRI)

cc w/encl:

S. Jordan, Site Vice President
E. Wilds, Jr., Ph.D., Director
Radiation Division, Bureau of Air Management
Connecticut Department of Environmental Protection

cc w/o encl w/o OUO-SRI:

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D. Heacock

2

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In accordance with 10 CFR 2.390(b)(1)(ii), the NRC is waiving the affidavit requirements for your response, if any. This practice will ensure that your response will not be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system, ADAMS. If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.22. Otherwise, mark your entire response "Security-Related Information-Withhold Under 10 CFR 2.390" and follow the instructions for withholding in 10 CFR 2.390(b)(1).

Thank you for your cooperation during this inspection.

Sincerely,

Original signed by Mark Roberts For

Judith A. Joustra, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

Enclosure:

Inspection Report Nos. 05000336/2010403 and 05000423/2010403
w/Attachment Supplemental Information

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cc w/encl:

S. Jordan, Site Vice President
E. Wilds, Jr., Ph.D., Director
Radiation Division, Bureau of Air Management
Connecticut Department of Environmental Protection

cc w/o encl w/o OUO-SRI:

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D. Garner, NSIR

D. Bearde, DRS

RidsNRRPM Millstone Resource

RidsNRRDorlLp1-2 Resource



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

November 3, 2010

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

SUBJECT: MILLSTONE POWER STATION - NRC INTEGRATED INSPECTION REPORT
05000336/2010004 AND 05000423/2010004

Dear Mr. Heacock:

On September 30, 2010, 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 October 6, 2010, with Mr. A. J. Jordan and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

The report documents two NRC identified-findings, and one self-revealing finding of very low safety significance (Green). Two of these findings were determined to involve violations of NRC requirements. Additionally, four licensee identified violations, which were determined to be of very low safety significance, are listed in this report. 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 2.3.2.a 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 Senior Resident Inspector at Millstone. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Senior Resident Inspector at Millstone.

D. Heacock

2

In accordance with Title 10 of the Code of Federal Regulations (CFR) Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,



Donald E. Jackson, Chief
Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000336/2010004 and 05000423/2010004
w/Attachment: Supplemental Information

cc w/encl: Distribution via Listserv

In accordance with Title 10 of the Code of Federal Regulations (CFR) Part 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Donald E. Jackson, Chief
Projects Branch 5
Division of Reactor Projects

Distribution w/encl: (via email)

W. Dean, RA (R1ORAMAIL RESOURCE)
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T. Setzer, DRP

D. Dodson, DRP
S. Shaffer, DRP, SRI
B. Haagensen, RI
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DATE	11/03/10		11/03/10		11/03/10				

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-336, 50-423

License No.: DPR-65, NPF-49

Report No.: 05000336/2010004 and 05000423/2010004

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Power Station, Units 2 and 3

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

Dates: July 1, 2010 through September 30, 2010

Inspectors: S. Shaffer, Senior Resident Inspector, Division of Reactor Projects (DRP)
J. Krafty, Resident Inspector, DRP
B. Haagenen, Resident Inspector, DRP
T. Moslak, Health Physicist, Division of Reactor Safety (DRS)
M. Balazik, Reactor Inspector, DRS
T. O'Hara, Reactor Inspector, DRS
L. Kauffman, Health Physicist, DNMS
K. Modes, Senior Health Physicist, DNMS

Approved by: Donald E. Jackson, Chief
Projects Branch 5
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000336/2010004, 05000423/2010004; 7/1/2010 – 9/30/2010; Millstone Power Station Unit 2 and Unit 3; Identification and Resolution of Problems, Event Follow-up.

The report covered a three-month period of inspection by resident and region-based inspectors. Two NRC-identified non-cited violations (NCVs) and one self-revealing finding (FIN) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process." The cross-cutting aspects were determined using IMC 0310, "Components Within the Cross Cutting Areas." Findings for which the significance determination process (SDP) does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Initiating Events

- Green. The inspectors identified a Green, NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," for Dominion's failure to promptly identify and correct the source of a reactor coolant system (RCS) pressure boundary leak from July 3, 2009, through July 13, 2009. Dominion subsequently repaired the leak and returned to 100 percent power.

The inspectors determined that Dominion's failure to promptly identify and correct the cause of pressure boundary leakage is a performance deficiency that was reasonably within Dominion's ability to foresee and correct and should have been prevented. This issue is more than minor because the issue is similar to NRC Inspection Manual Chapter (IMC) 0612, Appendix E, and minor example 2.g. The inspectors determined that the issue affected the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors concluded that this condition, assuming the worst case degradation, would not have affected other mitigating systems resulting in a total loss of their safety function. Accordingly, the finding was determined to be of very low safety significance (Green) using IMC 609, Attachment 0609.004, Phase 1 Screening Worksheet. The inspectors determined that this issue had a cross-cutting aspect in the Problem Identification and Resolution cross-cutting area, Corrective Action Program component, because Dominion did not identify the pressure boundary leakage completely, accurately, and in a timely manner commensurate with its safety significance. [P.1(a)] (Section 4OA2)

- Severity Level IV. The inspectors identified a Severity Level IV, NCV of 10 CFR 50.55a(2)(c)(1) and 10 CFR 50.55a(3), when Dominion did not perform an ASME Code-compliant radiographic examination for a leak in a Class 1 weld on the Unit 2 'A' RCP seal cooler piping before returning the system to service. Dominion was out of compliance with 10 CFR 50.55a(2)(c)(1), 10 CFR 50.55a(3), and Section III of the American Society of Mechanical Engineers (ASME) Code between July 24, 2009, and

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November 10, 2009. The NRC granted verbal relief from the 10 CFR 50.55a(2)(c)(1), 10 CFR 50.55a(3), and the ASME Code requirements on November 10, 2009. Subsequently, the relief request was approved, in writing, by the NRC on April 26, 2010.

In accordance with IMC 0612, Appendix B, Section 1-2, this finding had the potential to impact the NRC's ability to perform its regulatory function because Dominion verbally informed the NRC on July 17, 2009, that they would repair the affected component in accordance with ASME Code requirements. However, due to Dominion's misinterpretation of the ASME Code, Dominion did not subsequently inform the NRC of its inability to meet Code requirements (i.e. perform a Code compliant radiographic examination of the affected weld) before returning the plant to service. As a result, Dominion's actions had impeded the NRC's ability to evaluate and determine the efficacy of the licensee's actions. The issue was characterized as Severity Level IV because it is similar to the example provided in the NRC Enforcement Policy Section 6.1.d.2, in that, it involved a violation of NRC requirements that resulted in a condition evaluated as having very low safety significance (i.e., Green) by the Significance Determination Process (SDP). The inspector determined that this issue had a cross-cutting aspect in the Human Performance cross-cutting area, Decision Making component, because Dominion did not use conservative assumptions in their decision making when they concluded that Code relief from the NRC would not be necessary to accomplish the repair. [H.1(b)] (Section 4OA2)

- Green. A self-revealing finding of very low safety significance (Green) was identified for Dominion's failure to implement timely corrective actions for a degraded Unit 2 feedwater regulating valve (FRV) in accordance with procedure PI-AA-200, "Corrective Action". Specifically, two weeks after the issue was first identified, the #2 FRV further degraded causing Dominion to trip the reactor when the #2 steam generator (SG) level could not be adequately controlled. Dominion subsequently repaired the FRV and returned the plant to 100 percent power.

The inspectors determined that Dominion's failure to implement timely corrective actions for a degraded #2 FRV in accordance with procedure PI-AA-200, "Corrective Action", was a performance deficiency. This finding is more than minor because it was similar to NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 4f, in that the failure to correct a condition adverse to quality led to a reactor trip. The finding was associated with the equipment performance attribute of the Initiating Events cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, Dominion's failure to implement timely corrective actions for the #2 FRV caused the operators to manually trip the reactor when the #2 SG level could not be controlled. The inspectors determined that this finding had a cross-cutting aspect in the Problem Identification and Resolution cross-cutting area, Corrective Action Program component, because Dominion did not take appropriate corrective action to address the degraded #2 FRV in a timely manner, commensurate with its safety significance. [P.1(d)]. (Section 4OA3)

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Other Findings

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

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REPORT DETAILS

Summary of Plant Status

Millstone Units 2 and 3 began the inspection period operating at 100 percent power. On August 13, 2010, Millstone Unit 3 was shutdown to replace flexible metallic hoses in the Reactor Coolant System (RCS) that were determined to be unqualified for system pressure. Unit 3 was returned to 100% power on August 18, 2010, and operated at or near 100 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 - 2 samples)

.1 External Flooding Inspection

a. Inspection Scope

The inspectors evaluated Dominion's readiness to cope with external flooding at Unit 2 and Unit 3. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and identified the areas that could be affected by external flooding and the design flood levels for those areas. The inspectors reviewed applicable procedures to verify that the actions required in the event of flooding could reasonably be completed, and that the appropriate equipment was prestaged. The inspectors performed a walkdown of Unit 2 and Unit 3 intake structures, fire pump houses and inspected the material condition of flood doors in order to determine if the structures and components were being adequately maintained. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings were identified.

.2 Imminent Adverse Weather

a. Inspection Scope

The inspectors evaluated Dominion's preparations for Hurricane Earl at Unit 2 and Unit 3. The inspectors reviewed the UFSAR and identified the areas that could be affected by hurricane force winds and the storm surge up to the design flood levels for those areas. The inspectors reviewed applicable procedures to verify that the actions required in the event of flooding could reasonably be completed, and that the appropriate equipment was prestaged. The inspectors performed a walkdown of Unit 2 and Unit 3 external areas, intake structures and fire pump houses, and inspected the

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material condition of flood doors in order to determine if the structures and components were being adequately maintained. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04 - 5 samples)

a. Inspection Scope

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

Unit 2

- 'A' EDG while performing a slow start of the 'B' EDG on July 22, 2010;
- 'A' High Pressure Safety Injection (HPSI) train while performing 'B' HPSI train surveillances on July 22, 2010;

Unit 3

- Station Blackout (SBO) EDG while the Unit 2 'B' EDG was out for maintenance on September 14, 2010;
- 'B' Charging during replacement of the 'C' Charging pump and motor on September 14, 2010, and September 15, 2010; and
- 'A' EDG while performing a slow start of the 'B' EDG on September 23, 2010.

b. Findings

No findings were identified.

.2 Complete System Walkdowns (71111.04S – 1 sample)

a. Inspection Scope

The inspectors performed a detailed review of the alignment and condition of the Unit 2 Service Water System. The inspectors reviewed the documents listed in the Attachment to determine the correct system alignment. The inspectors performed a walkdown of the system to verify whether critical portions of the system were correctly aligned in accordance with the procedures, and to identify any discrepancies that may have had an effect on operability. The inspectors reviewed system health reports, condition reports, and maintenance rule evaluations to determine whether equipment problems were being identified and appropriately resolved.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05Q – 7 samples)

.1 Fire Protection – Quarterly

a. Inspection Scope

The inspectors performed walkdowns of seven 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 that were reviewed included:

Unit 2

- Reactor Building Closed Cooling Water (RBCCW) & Heat Exchanger Area, Fire Zone A-1;
- Charging Pump Room, Fire Zone A-6;
- Turbine Building West Cable Vault, Fire Zone T-8;
- Turbine Building East Cable Vault, Fire Zone T-9;
- Auxiliary Building General Area, Fire Zone A-1G;
- Auxiliary Building Cable Vault, Fire Zone A-24; and
- Auxiliary Building East Piping Penetration Area, Fire Zone A-10.

b. Findings

No findings were identified.

.2 Annual Fire Drill Observation (71111.05A – 1 sample)

a. Inspection Scope

The inspectors observed Dominion personnel during a fire brigade drill on July 14, 2010, to evaluate the readiness of station personnel to fight fires. The drill simulated a fire of the Unit 2 Hydrogen Seal Oil unit in the turbine building. The inspectors observed the fire brigade members using protective clothing, turnout gear, self-contained breathing apparatus, and entering the fire area. The inspectors also observed the fire fighting equipment brought to the fire scene to evaluate whether sufficient equipment was available to effectively control and extinguish the simulated fire. The inspectors evaluated whether the permanent plant fire hose lines were capable of reaching the fire area, and whether hose usage was adequately simulated. The inspectors observed the fire fighting directions and communications between fire brigade members. The inspectors also evaluated whether the pre-planned drill scenario was followed, and observed the post drill critique to evaluate if the drill objectives were satisfied and that any drill weaknesses were discussed.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 1 sample)

a. Inspection Scope

The inspectors inspected 3EMH*3A (contains cables for Unit 3 ECCS pumps) and M2-manhole 1A and 1B (contains cables for Unit 2 service water pumps) in order to determine if the cables were submerged in water. The inspectors verified that the cables were not submerged in water and that the cables and splices were intact. The inspectors observed the condition of the cable support structures and concrete vault, and discussed the results of the inspection with Dominion engineers. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07A – 1 sample)

a. Inspection Scope

The inspectors observed the as-found condition of the Unit 2 'B' EDG 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 were 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 were identified.

1R11 Licensed Operator Regualification Program (71111.11 - 2 samples)

Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

The inspectors observed simulator-based licensed operator regualification training for Unit 2 on August 31, 2010, and for Unit 3 on September 7, 2010. 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 contained 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 were identified.

1R12 Maintenance Effectiveness (71111.12Q – 3 samples)

a. Inspection Scope

The inspectors reviewed three samples of Dominion's evaluation of degraded conditions, involving safety-related structures, systems and/or components for

maintenance effectiveness during this inspection period. The inspectors reviewed Dominion's implementation of the "Maintenance Rule," 10 CFR 50.65. The inspectors reviewed Dominion's ability to identify and address common cause failures; the applicable maintenance rule scoping document for each system; the current classification of these systems in accordance with 10 CFR 50.65 paragraph (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, condition reports (CRs), apparent cause determinations, functional failure determinations, operating logs, and discussed system performance with the responsible system engineer. Documents reviewed during the inspection are listed in the Attachment.

The specific systems/components reviewed were:

Unit 2

- Station Electrical Service 4.16 KV;
- Emergency Safeguards Actuation System (ESAS); and

Unit 3

- Containment Isolation.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors evaluated online risk management for six 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 (OOS) components. The inspectors evaluated whether Dominion took the necessary steps to control work activities, minimize the probability of initiating events, and maintain the functional capability of mitigating systems. The inspectors assessed Dominion's risk management actions during plant walkdowns. Documents reviewed during the inspection are listed in the Attachment. The inspectors reviewed the conduct and adequacy of risk assessments for the following maintenance and testing activities:

Unit 2

- Yellow Risk for 'B' HPSI Train Surveillances on July 22, 2010;
- Medium risk for implementing part of the temporary modification for bypassing the static switch on VR-11 on September 2, 2010;
- Troubleshooting letdown flow oscillations on August 31, 2010;
- Two-year maintenance on 'B' EDG with auto auxiliary feedwater (AFW) initiation and ESAS UV surveillances on September 13, 2010;

Unit 3

- Emergent work to repair relief valve 3FWA*RV45, Turbine Driven Auxiliary Feedwater (TDAFW) pump discharge relief valve; and
- Yellow Risk for south bus outage and Reserve Station Support Transformer (RSST) Capacitive Coupled Voltage Transmitter (CCVT) protective relay replacement.

b. Findings

No findings were identified.

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

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

Unit 2

- CR388014, 'A' RCS Temperature Instrument Erratic Voltages;
- CR390441, 'A' RBCCW HX (X-18) Structural Degradation;
- CR394968, Degraded Channel Head on 'B' EDG Heat Exchanger;

Unit 3

- ODM000116, "Elevating Unit 3 Unidentified RCS leakage," Revision 3;
- CR387565, "SW pump 3SWP*P3A Differential Pressure Degrading Trend"; and
- OD000381, "ASME Section XI Requires VT-2 Examination of Class III Piping," Revision 0.

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b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – 2 samples)a. Inspection Scope

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. The inspectors also verified that procedures, calculations, and the UFSAR were properly updated with revised design information. In addition, the inspectors verified that the as-built configuration was accurately reflected in the design documentation, and that post-modification testing was adequate to ensure the structures, systems, and components would function properly. Documents reviewed during the inspection are listed in the Attachment.

Unit 2

- DCN DM2-00-0108-10, Temporary design change to repower the backup control rod scanner; and

Unit 3

- DCN DM3-00-0145-10, Flex hoses installed within the equalizing lines for 3RHS*MV8701A, *MV8701C, *MV8702B and MV8702C.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 7 samples)a. Inspection Scope

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

- SP 2402A, Reactor Program System (RPS) Channel 'A' Temperature Instrument Calibration," Revision 000-10 following replacement of Spec 200 Card;
- OP 2304E21-001, "C' Charging Pump Post Maintenance Testing," Revision 000-02 Following Reduction Gear Inspection;
- OP 2309X21-001, "B' Containment Spray (CS) Pump Operability, In-Service Testing (IST) and Check Valve Testing," Revision 000-01 following corrective maintenance on the 'B' CS pump;

Unit 3

- SP 3630A.6, Reactor Plant Component Cooling Water (RPCCW) Pump 3CCP*P1C Comprehensive Test;
- SP 3626.10, MCC and Rod Control SW Booster Pump 3SWP*P3A Operational Readiness Tests;
- SP 3622.3, TDAFW Pump Operational Readiness Test; and
- AWO 53102366804, Post maintenance test following replacement of low pressure hosing installed on the RCS system with proper high pressure hosing.

b. Findings

No findings were identified.

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1R20 Refueling and Other Outage Activities (71111.20 – 1 sample)

Millstone Unit 3 Forced Outage

a. Inspection Scope

On August 13, 2010, Dominion conducted a plant shutdown and entered a forced outage to repair a leaking compression fitting and to replace seven ASME Class 2 flex hoses that had been determined to be of insufficient pressure rating. On August 11, 2010, Dominion discovered that flex hoses that were installed in 1995 as a part of a modification to vent the between-the-disk area of RHR system gate valves to prevent pressure locking and thermal binding were only rated for 1200 psi when they were required to be rated for full RCS pressure (2235 psi). The inspectors evaluated the outage plan and outage activities to confirm that Dominion had appropriately considered risk, had developed risk reduction and plant configuration control methods, had adhered to licensee and TS requirements, and had taken appropriate corrective action prior to the start-up. The inspectors observed the shutdown and portions of the reactor start-up processes and power ascension activities. The inspectors verified that conditions adverse to quality during the outage were entered into the corrective action program for resolution. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

A licensee identified NCV is discussed in Section 4OA7.

1R22 Surveillance Testing (71111.22 – 7 samples)

a. Inspection Scope

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 2401F, "RPS High Power Trip Test," Revision 004-05;
- SP 2401G, "RPS Bistable Trip Test Data Sheet," Revision 002-08;

- SP 2613K-001, "Periodic Diesel Generator (DG) Slow Start Operability Test, Facility 1 (Loaded Run)," Revision 003-08;
- SP 2613N-001, "Periodic DG Operability Test, Facility 2 (SIAS Start)," Revision 000-05;
- SP 2407A2, "ICCMS Cabinet C1111 (Facility 2) Calibration and Functional Test," Revision 001-01;

Unit 3

- SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02," June 30, 2010 (IST); and
- SP 3646A.2, "EDG 'B' Operability Tests", Revision 020.

b. Findings

A licensee identified NCV is discussed in Section 4OA7.

2. **RADIATION SAFETY**

Cornerstone: Public and Occupational Radiation Safety

2RS06 Radioactive Gaseous and Liquid Effluent Treatment (71124.06 – 1 sample)

a. Inspection Scope

During the period August 30, 2010, through September 2, 2010, the inspectors evaluated Dominion's response to identifying that contaminated water was found in an underground electrical vault.

The inspectors reviewed relevant documents including the sample results for water found in the Unit 3 underground electrical vault (3EHM-3A); the troubleshooting plan used to determine the source of the contaminated water; the associated condition report (CR389065); and relevant site maps and system drawings. The inspectors discussed the status of the investigation with the Chemistry Manager and site Environmental Scientist. The inspectors walked down the Unit 3 plant areas associated with this issue including yard drains, ground water monitoring wells, electrical vaults, tanks, and sumps. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings were identified.

2RS08 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage and Transportation (71124.08 – 1 sample)

a. Inspection Scope

During the period August 30, 2010, through September 2, 2010, the inspectors performed the following activities to verify that Dominion's radioactive material processing and transportation programs complied with the requirements of 10 CFR 20, 61, 71; and Department of Transportation (DOT) regulations 49 CFR 170-189.

Radioactive Waste Systems Walkdown

The inspectors walked down accessible portions of the Unit 2 and Unit 3 radioactive liquid and solid radwaste processing systems with the respective radwaste operators. During the tour, the inspectors evaluated if the systems and facilities were consistent with the descriptions contained in the UFSAR and the Process Control Program (PCP); evaluated the general material conditions of the systems and facilities; and identified any changes to the systems. The inspectors reviewed the current processes for transferring radioactive resin/sludge to shipping containers, and the subsequent de-watering process.

Also during this tour, the inspectors walked down portions of radwaste systems that are no longer in service or abandoned in place, and discussed with the radwaste operators, the status of administrative and physical controls for these systems including components of the site liquid radwaste evaporators, and the Unit 2 SG blowdown treatment system and boric acid evaporator.

The inspectors visually inspected various radioactive material storage locations with the Supervisor, Radioactive Material Control including areas of the Millstone Radwaste Reduction Facility (MRRF), Warehouse 9, and outside yard locations within the Owner Controlled Area, to evaluate inventories, material conditions and radiological controls.

Waste Characterization and Classification

The inspection included a selective review of the waste characterization and classification program for regulatory compliance, including:

- The radio-chemical sample analytical results for various radioactive waste streams;
- The development of scaling factors for hard-to-detect radio-nuclides from radio-chemical data;
- The methods and practices used to detect changes in waste streams; and

- The characterization and classification of waste relative to 10 CFR 61.55 and the determination of DOT shipment subtype per 49 CFR 173.

Shipment Preparation

The inspection included a review of radioactive waste program records, shipment preparation procedures, and training records, including:

- Reviewing radwaste and radioactive material shipping logs for calendar years 2009 and 2010;
- Verifying that training was provided to appropriate personnel responsible for classifying handling, and shipping radioactive materials, in accordance with Bulletin 79-19 and 49 CFR 172 Subpart H;
- Verifying that appropriate NRC (or agreement state) license authorization was current for shipment recipients for recent shipments; and
- Verifying compliance with the relevant Certificates-of-Compliance and related procedures for shipping casks and high integrity containers.

Shipment Records

The inspectors selected and reviewed records associated with five shipments of radioactive material made since the last inspection of this area. The shipments were Numbers 09-039, 09-055, 09-061, 10-019, and 10-020. The following aspects of the radioactive waste packaging and shipping activities were reviewed:

- Implementation of applicable shipping requirements including proper completion of manifests;
- Implementation of specifications in applicable certificates-of-compliance, for the approved shipping casks/high integrity containers, including limits on package contents;
- Verification that dewatering criteria was met;
- Classification of radioactive materials relative to 10 CFR 61.55 and 49 CFR 173;
- Labeling of containers relative to package dose rates;
- Radiation and contamination surveys of the packages;
- Placarding of transport vehicles;
- Conduct of vehicle checks;
- Providing of emergency instructions to the driver;
- Completion of shipping papers; and
- Notification by the recipient that the radioactive materials have been received.

Identification and Resolution of Problems

The inspectors reviewed the 2009 Annual Radioactive Effluent Release Report, relevant CRs, Nuclear Oversight Audits/field observation reports, radwaste system health reports, and recent Yard Area Radiological Material Container Inspection reports. Through this review, the inspectors assessed Dominion's threshold for identifying

problems, and the promptness and effectiveness of the resulting corrective actions. This review was conducted against the criteria contained in 10 CFR 20.1101(c) and with Dominion's procedures.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES [OA]**

4OA1 Performance Indicator (PI) Verification (71151 – 10 samples)

Cornerstone: Mitigating Systems

a. Inspection Scope

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 maintenance rule functional failure evaluations and discussed the methods for compiling and reporting the PIs with cognizant licensing and engineering personnel. Documents reviewed during the inspection are listed in the Attachment.

Unit 2

- Mitigating System Performance Indication (MSPI) High Pressure Safety Injection System;
- MSPI Auxiliary Feedwater System;
- MSPI Emergency AC Power System;
- MSPI Residual Heat Removal System;
- MSPI Support Cooling Water System;

Unit 3

- MSPI High Pressure Safety Injection System;
- MSPI Auxiliary Feedwater System;
- MSPI Emergency AC Power System;
- MSPI Residual Heat Removal System; and
- MSPI Support Cooling Water System.

b. Findings

No findings were identified.

40A2 Identification and Resolution of Problems (71152)

.1 Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into Dominion's corrective action program. This was accomplished by reviewing the description of each new CR and attending daily management review committee meetings. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings were identified.

.2 Annual Sample: Station Blackout (SBO) Diesel Maintenance Outage

a. Inspection Scope (1 sample)

The inspectors performed an in-depth review of the post-maintenance testing and corrective actions associated with the SBO Diesel maintenance outage that occurred from July 19, 2010, through July 25, 2010. The inspectors reviewed work orders, post-maintenance tests and CRs generated as a result of the maintenance. The inspectors also interviewed the system engineer, operations, maintenance, engineering, and corrective action personnel. Documents reviewed during the inspection are listed in the Attachment.

b. Findings and Observations

No findings were identified. The inspectors determined that procedure MP 3721AB, "SBO Diesel 24 and 48 Month Required Preventive Maintenance (PM)," was not adequately completed. Specifically, section 4.1, "Overspeed Trip Test," directs the personnel to adjust the overspeed trip if the engine does not trip in the required speed range. During the maintenance run, the SBO diesel engine tripped below the speed acceptance criteria, yet the overspeed trip was not adjusted. Instead, a handwritten note was written below the step to indicate that a CR would be written to adjust the overspeed trip at the next two-year trip test PM. CR389032 was written to document the overspeed trip results and to request a work order to adjust the overspeed setting at the next two-year PM. The CR was reviewed by both the Corrective Action Review Team and the Corrective Action Assignment Review Team and was closed to a work order. The inspectors also determined that Procedure AA-AD-102, "Procedure Use and Adherence," which allows a procedure to be exited permanently without completing the procedure, was not followed. Procedure AA-DD-102 requires that the reason the procedure was not completed be documented in the work order or procedure. The inspectors determined that this was not completed. Approval from the first line

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supervisor was obtained before exiting the procedure; however, it is not clear who authorized, or, who should authorize, exiting the procedure permanently.

The inspectors screened the procedure compliance issues in accordance with NRC Inspection Manual Chapter (IMC) 0612B, "Issue Screening," and determined that they constitute issues of minor significance that are not subject to enforcement action in accordance with the NRC's Enforcement Policy.

.3 Unit 2 Operator Workarounds

a. Inspection Scope (1 sample)

The inspectors performed an in-depth review of Unit 2 operator workarounds. The inspectors reviewed the operations aggregate impact report and procedure, and interviewed operations personnel in order to determine if deficiencies affecting operators were being appropriately characterized and prioritized. Documents reviewed during the inspection are listed in the Attachment.

b. Findings and Observations

No findings were identified. The inspectors determined that conditions that had a negative impact on shift operations that were evaluated using the Operational Decision Making process were not being considered in the operations aggregate impact calculations as is required by OP-AA-1700, "Operations Aggregate Impact." The inspectors screened this issue in accordance with IMC 0612B, "Issue Screening," and determined that it is an issue of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

.4 Unit 3 Operator Workarounds

a. Inspection Scope (1 sample)

The inspectors performed an in-depth review of Unit 3 operator workarounds. The inspectors reviewed the operations aggregate impact report and procedure, and interviewed operations personnel in order to determine if deficiencies affecting operators were being appropriately characterized and prioritized. Documents reviewed during the inspection are listed in the Attachment.

b. Findings and Observations

No findings were identified. The inspectors determined that conditions that had a negative impact on shift operations that were evaluated using the Operational Decision Making process were not being considered in the operations aggregate impact calculations as is required by OP-AA-1700, "Operations Aggregate Impact." The inspectors screened this issue in accordance with IMC 0612B, "Issue Screening," and determined that it is an issue of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

.5 Annual Sample: Diagnostic Testing Associated with 'A' Train Cold Leg Safety Injection Motor Operated Valve (3SIH-MV8821A)

a. Inspection Scope (1 sample)

This inspection was conducted to assess Dominion's identification, evaluation, and resolution of the issue documented in CR114517. Specifically, during motor operated valve (MOV) diagnostic testing of 3SIH-MV8821A following a packing replacement, Dominion determined that MOV program limits associated with maximum pull-out force along with minimum seating force could not be achieved simultaneously. With the current torque switch setting, the maximum pull-out force was achieved, but the closing force was below the design force as documented in calculation 89-094-00997ES Revision 8, "Millstone Unit 3 Target/Torque Calculation for 3SIH-MV8821A and 3SIH-MV8821B." In addition, Dominion determined that the operating force in both the open and close directions exceeded the maximum operating force as documented in CR116172.

The inspection focused on Dominion's problem identification, evaluation, and corrective actions associated with the above issue. The inspectors interviewed plant personnel, and reviewed performance data, design calculations, surveillance test procedures, and test results to evaluate the performance of the MOV and the effectiveness of Dominion's corrective actions. The inspectors reviewed Design Change Notice, DM3-00-03-16-08, which modified the MOV's close circuitry from torque switch control to limit switch control to ensure the design function of the MOV was maintained. The inspectors conducted a walkdown with plant personnel to assess the material condition of the MOV. Documents reviewed during the inspection are listed in Attachment.

b. Findings and Observations

No findings were identified.

The inspectors determined that Dominion had performed a complete and accurate identification of the problem in a timely manner commensurate with the issue's significance and ease of discovery. Dominion revised the MOV design calculation to increase the operating force in both open and close directions due to the packing replacement, and modified the closure control scheme from torque switch to limit switch controlled. Dominion concluded that the valve thrust capability was maintained with the modification. During the review of MOV diagnostic test data, the inspectors noted that Dominion did not document the evaluation of a potential over thrust condition that occurred during the as-found diagnostic testing of the MOV. Dominion entered this issue into the corrective action program as CR392640 and verified that the maximum open design thrust limit as defined by the weak link analysis was not exceeded. The inspectors determined that Dominion had identified and implemented appropriate corrective actions to address the issue and that those corrective actions had been completed.

.6 Annual Sample: Review of Actions to Address Several Main Steam Safety Valve (MSSV) Test Failures (Unit 2 & Unit 3)

a. Inspection Scope (1 sample)

This inspection was conducted to assess whether Dominion's evaluations and corrective actions associated with issues concerning initial surveillance test failure of several MSSVs were reasonable to correct the identified causes and prevent recurrence of the problems. In particular, the inspectors reviewed Dominion's evaluation and corrective actions associated with CR113238 (Unit 3) regarding micro-bonding of the MSSV disk and seat, thereby causing the lift pressure to exceed the surveillance test acceptance criteria. In addition, the CR addressed issues associated with the testing procedure for the MSSVs.

The inspectors reviewed Dominion's associated CRs and corrective actions, evaluations, surveillance testing, and plant procedures to determine the completeness of the evaluation and the adequacy of the corrective actions. The inspectors interviewed the component engineer along with additional staff to understand past issues and the effectiveness of the corrective actions. Documents reviewed during the inspection are listed in Attachment.

b. Findings and Observations

No findings were identified.

The inspectors determined that Dominion's actions associated with the surveillance test failure of several MSSVs were reasonable to correct the identified causes. For the CRs reviewed, the associated evaluations were appropriately detailed to identify apparent causes and to develop suitable corrective actions. One action involved the use of upgraded valve disk material that was not susceptible to micro-bonding. Currently, Dominion has five upgraded spare MSSVs for Unit 3. For Unit 2, two installed valves and two spares contain the upgraded valve disk material. The inspectors reviewed the results of the most recent surveillance test of the Unit 3 MSSVs performed in April, 2010. The inspectors noted that all testing met the acceptance criteria, and that the data indicated there was no evidence of micro-bonding. Additionally, on-site surveillance testing is planned for all Unit 2 MSSVs in the next refueling outage, scheduled for Spring 2011. In addition, the inspectors noted Dominion made several enhancements to the MSSV testing procedure.

.7 Annual Sample: Reactor Coolant System (RCS) Pressure Boundary Leak Repair of the Unit 2, 'A' Reactor Coolant Pump (RCP) Seal Cooler – Follow-up Inspection of Unresolved Item (URI) 05000336/2009004-03, "Unit 2 "A" Reactor Coolant Pump Seal Cooler Weld."

a. Inspection Scope (1 sample)

The inspectors performed a follow-up inspection to a URI associated with the repair of a reactor coolant system (RCS) pressure boundary leak in the piping of the Millstone Unit 2, 'A' Reactor Coolant Pump (RCP) seal cooler. The URI was originally documented in NRC inspection report 05000336,423/2009004 as URI 05000336/2009004-03, "Unit 2 "A" Reactor Coolant Pump Seal Cooler Weld." The inspectors interviewed several Dominion employees and reviewed documents. The inspectors also reviewed video records of inspections performed by Dominion between December 2008 and February 2009. This inspection was conducted in accordance with NRC Inspection Procedure 71152, "Problem Identification and Resolution," and the related sections of the American Society of Mechanical Engineers (ASME) Code. The inspectors identified two NCVs in the review and closure of this URI.

b. Findings

- .1 Introduction: The inspectors identified a Green, NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," for Dominion's failure to promptly identify and correct the source of an RCS pressure boundary leak from July 3, 2009, through July 13, 2009. Dominion subsequently repaired the leak and returned to 100 percent power.

Description: In December 2008, Millstone Unit 2 experienced an increase in unidentified RCS leakage from approximately 0.05 gallons per minute (gpm) to approximately 0.111 gpm. Unidentified RCS leakage remained at approximately 0.111 gpm until after the 'A' RCP seal was replaced, and a leaking weld on the 'A' RCP seal cooler piping was repaired between July 3, 2009, and July 17, 2009.

Dominion began investigating the cause of the increased, unidentified leakage in December 2008. Dominion opted to use remote video equipment to inspect and assess the potential leakage evident from the 'A' RCP seal and seal cooler area. These inspections were conducted with the plant at full power. The ASME Code specifies a level 2 visual test (VT-2) for detection of RCS pressure boundary leakage. However, Dominion's inspection procedure did not meet ASME technical parameters for VT-2 inspections; did not contain written, specific guidance on inspection reporting criteria and components to be inspected; was not performed by VT-2 qualified personnel; and the results of the inspection were not adequately documented, reported, and reviewed by a qualified non-destructive examination (NDE) level III individual. The inspectors noted that Dominion did not perform an inspection meeting ASME VT-2 requirements on the 'A' RCP seal assembly and the 'A' RCP seal cooler between December 2008, and July 2, 2009.

NRC inspectors reviewed three videos of the 'A' RCP seal/seal cooler area taken between December 2008 and February 2009. The videos indicated that it was not conclusive that the RCP seal was the only source of leakage occurring in the 'A' RCP cubicle. Dominion concluded that the increased, unidentified leakage was coming from the 'A' RCP seal, and that it was mechanical leakage vice pressure boundary leakage, at least partially, based upon these videos. Dominion decided to replace the 'A' RCP seal at the first opportunity, suspecting the 'A' RCP seal to be the only source of the increased, unidentified leakage.

After a plant trip on July 3, 2009, Dominion conducted a VT-2 inspection for pressure boundary leakage to determine the source(s) of the increased, unidentified leakage. The inspectors questioned the Dominion VT-2 inspector about the results of the VT-2 inspection completed, and the Dominion inspector reported that (a) the 'A' RCP seal was not leaking above the vapor seal area; and, (b) other RCS leakage may have been occurring due to the existence of a large amount of dried boric acid in the vicinity of the 'A' RCP seal cooler when he conducted his inspection on July 3, 2009. The Dominion inspector verbally debriefed plant management on these inspection results on July 3, 2009. However, the inspector did not document these details in a VT-2 inspection report; and, as a result, Dominion did not report these non-conforming inspection results in the corrective action program for review and evaluation. After the undocumented VT-2 inspection on July 3, 2009, Dominion proceeded to Mode 5 and replaced the 'A' RCP seal assembly.

Upon replacement of the 'A' RCP seal assembly, Dominion began a plant startup and entered Mode 4 (from Mode 5) at 6:09 a.m. on July 12, 2009. Millstone Unit 2 reached Mode 3 on July 13, 2009, and began an operational leak check and VT-2 inspection of the RCS pressure boundary. During this VT-2 inspection at normal operating temperature and pressure, Dominion inspectors identified an RCS pressure boundary leak coming from a weld on the 'A' RCP seal cooler piping. Because this was RCS pressure boundary leakage, Dominion then commenced a plant cooldown and returned to Mode 5, in accordance with Millstone Unit 2 Technical Specification 3.4.6.2, action b. The plant returned to Mode 5 at 4:01 p.m. on July 13, 2009. The inspectors concluded that Dominion had operated with RCS pressure boundary leakage from July 12, 2009, to July 13, 2009, a period of approximately 36 hours. Due to Dominion's failure to document and evaluate the July 3, 2009, VT-2 inspection results and the failure to enter the non-conforming inspection results in the corrective action program for review and evaluation, Dominion did not take prompt action to investigate and evaluate potential sources of RCS leakage when indications of RCS leakage were identified on July 3, 2009.

Analysis: Dominion's failure to promptly identify and correct the cause of pressure boundary leakage is a performance deficiency that was reasonably within Dominion's ability to foresee and correct and should have been prevented. Traditional enforcement does not apply since there were no actual safety consequences, impacts on the NRC's ability to perform its regulatory function, or willful aspects to the finding.

This issue is more than minor because the issue is similar to IMC 0612, Appendix E, minor example 2.g. The inspectors determined that the issue affected the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspector concluded that this condition, assuming the worst case degradation, would not have affected other mitigating systems resulting in a total loss of their safety function. Accordingly, the finding was determined to be of very low safety significance (Green) using IMC 609, Attachment 0609.004, Phase 1 Screening Worksheet.

The inspectors determined that this issue had a cross-cutting aspect in the Problem Identification and Resolution cross-cutting area, Corrective Action Program component, because Dominion did not identify the pressure boundary leakage completely, accurately, and in a timely manner commensurate with its safety significance. [P.1(a)].

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, that, "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition."

Contrary to the above, Dominion did not promptly identify and correct the pressure boundary leakage from July 3, 2009, to July 13, 2009. Dominion had operated the plant above Mode 5 with pressure boundary leakage for approximately 36 hours. Dominion subsequently repaired the leak and returned to 100 percent power. Because this issue is of very low safety significance (Green), and has been entered into the corrective action program (CR 397769), this finding is being treated as an NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 055000336/2010004-01, Failure to Promptly Identify and Correct the Source of a Unit 2 RCS Pressure Boundary Leak).**

- .2 Introduction: The inspectors identified a Severity Level IV, NCV of 10 CFR 50.55a(2)(c)(1) and 10 CFR 50.55a(3), when Dominion did not perform an ASME Code-compliant radiographic examination for a leak in a Class 1 weld on the Unit 2 'A' RCP seal cooler piping before returning the system to service. Dominion was out of compliance with 10 CFR 50.55a(2)(c)(1), 10 CFR 50.55a(3), and Section III of the ASME Code between July 24, 2009, and November 10, 2009. The NRC granted verbal relief from the 10 CFR 50.55a(2)(c)(1), 10 CFR 50.55a(3), and the ASME Code requirements on November 10, 2009. Subsequently, the relief request was approved, in writing, by the NRC on April 26, 2010.

Description: Dominion repaired a leak in a Class 1 weld on the Unit 2, 'A' RCP seal cooler piping on July 17, 2009. The affected piping is 1.5" inside diameter (ID) piping and is part of the RCS pressure boundary. During repair of the leaking weld, Dominion started the repair as an ASME Section XI repair and was directed to Section III of the ASME code for weld defect removal and for post repair non-destructive examination. Dominion discovered on July 14, 2009, that a radiograph of Code acceptable quality

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could not be completed as required by Section III. Dominion notified the NRC verbally on July 14, 2009, that a Code repair would not be possible due to the inability to complete a Code compliant radiograph to complete the repair. Dominion informed the NRC that a Code relief request would be needed to return the plant to service when the repair was completed. Subsequently, on July 17, 2009, Dominion informed the NRC, during a recorded teleconference, that they had changed their evaluation and would be performing a Code repair in accordance with ASME code requirements; and that Code relief from the NRC would not be necessary to accomplish the repair. Dominion stated that code relief was not needed because the repair would be an ASME Code repair because the repair had not affected the base metal of the affected weld joint.

Dominion completed the repair on July 17, 2009, and returned the affected system and the plant to service on July 24, 2009. On July 30, 2009, Dominion sought interpretation from the ASME Code, Section XI Subcommittee on Dominion's interpretation that base metal was not affected, and that a radiograph was not required to complete the repair. On August 17, 2009, Dominion received an interpretation from the Section XI Subcommittee stating that for the condition described in Dominion's request, the examination of the repair shall satisfy the Construction Code examination requirements for both base metal and weld repair. Therefore, a Code compliant radiograph was required to meet ASME Code requirements. Thus, Dominion was out of compliance with the ASME Code and 10 CFR 50.55a(2)(c)(1) and 10 CFR 50.55a(3) beginning on July 24, 2009, when the plant returned to service.

Dominion subsequently submitted a request to the NRC for relief from the 10 CFR 50.55a(2)(c)(1) and the ASME Code, Section III requirement to perform a radiograph, and proposed an alternative NDE process for the repair. This relief request was submitted on September 22, 2009. The NRC granted verbal relief from the 10 CFR 50.55a(2)(c)(1), 10 CFR 50.55a(3), and the ASME Code requirements on November 10, 2009. Subsequently, the relief request was approved, in writing, by the NRC on April 26, 2010.

Analysis: In accordance with IMC 0612, Appendix B, Section 1-2, this finding had the potential to impact the NRC's ability to perform its regulatory function because Dominion verbally informed the NRC on July 17, 2009, that they would repair the affected component in accordance with ASME Code requirements. However, due to Dominion's misinterpretation of the ASME Code, Dominion did not subsequently inform the NRC of its inability to meet Code requirements (i.e. perform a Code compliant radiographic examination of the affected weld) before returning the plant to service. As a result, Dominion's actions had impeded the NRC's ability to evaluate and determine the efficacy of the licensee's actions.

The inspectors determined that this issue was a performance deficiency because it was within Dominion's ability to determine that a radiograph should have been completed to comply with the ASME Code. The inspectors determined that IMC 0612, Appendix E, examples 5.b. and 5.c. are similar to this performance deficiency because the system was not repaired in accordance with 10 CFR 50.55a(2)(c)(1) and 10 CFR 50.55a(3) requirements before the RCS system was returned to service. Thus, the inspectors

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determined that the performance deficiency was more than minor. Specifically, Dominion did not comply with the requirements of 10 CFR 50.55a(2)(c)(1), 10 CFR 50.55a(3), and ASME Code, Section III, in that, a post weld repair radiographic examination was not successfully completed on the affected weld joint repair in the reactor coolant system pressure boundary, nor did Dominion request Code relief to accomplish an alternative repair inspection prior to returning the component to service.

In accordance with the NRC Enforcement Policy, the violation was characterized as Severity Level IV because it is similar to the example provided in the NRC Enforcement Policy Section 6.1.d.2, in that, it involved a violation of NRC requirements that resulted in a condition evaluated as having very low safety significance (i.e., Green) by the significance determination process (SDP).

The inspectors determined that this issue had a cross cutting aspect in the Human Performance cross-cutting area, Decision Making component, because Dominion did not use conservative assumptions in their decision making when they concluded that Code relief from the NRC would not be necessary to accomplish the repair. [H.1(b)]

Enforcement: 10 CFR 50.55a(2)(c)(1) states, in part, "...that components which are part of the reactor coolant pressure boundary must meet the requirements for Class 1 components in Section III of the ASME Code." A requirement of ASME Section III for weld repairs is to complete a valid radiograph to complete a weld repair when the repair affects weld metal and base metal. Contrary to the above, between July 17, 2009, and November 10, 2009, Dominion failed to ensure that a component that is part of the reactor coolant system pressure boundary at the Millstone Unit 2 Nuclear Power Station met the requirements for a Class 1 component in Section III of the ASME Code. Specifically, Dominion did not perform a Code compliant radiographic examination for a weld repair which affected weld metal and base metal on a Class 1 weld on the 'A' RCP seal cooler piping.

Additionally, 10 CFR 50.55a(3) states, in part, "Proposed alternatives to the requirements of paragraph (c) of this section ... may be used when authorized by the Director, Office of Nuclear Reactor Regulation." Contrary to this requirement, Dominion did not obtain authorization for an alternative NDE method to examine the weld repair prior to returning the component to service. Dominion failed to request Code relief for an alternative method of evaluating the effectiveness of the repair before returning the component to service on July 24, 2009.

The inspectors determined that this finding represented a Severity Level IV NCV per the NRC Enforcement Policy because the violation was neither willful nor repetitive, and because Dominion restored compliance within a reasonable time after the violation was identified. Because this finding is of very low safety significance and has been entered into the corrective action program (CR345114), this issue is being treated as a Severity Level IV NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 05000336/2010004-02, Failure to Perform an ASME Code-compliant Radiographic Examination on a Class 1 Weld on the Unit 2 'A' RCP Seal Cooler Piping.**

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4OA3 Event Follow-up (71153 – 5 samples).1 (Closed) LER 05000423/2008-005-01, Containment Penetration Not Fully Closed During Fuel Movement

On November 5, 2008, with the plant in Mode 6, operators discovered that 3FWS*V861, 'C' SG drain line isolation valve, which was relied upon to meet TS containment penetration requirements during fuel movement in containment, was not fully closed. LER 05000423/2008-005 reported this as a condition prohibited by TS. The details of this LER were previously documented in IR 05000423/2009002. Revision 1 to the LER reports that the condition could have also prevented the fulfillment of the safety functions of structures or systems that are needed to control the release of radioactive material. The inspectors reviewed the LER. No findings were identified. This LER is closed.

.2 (Closed) LER 05000336/2009-003 and LER 05000336/2009-003-01, Two Independent Diesel Generators Rendered Inoperable Due to Common Cause

On October 7, 2009, while Millstone Unit 2 was in Mode 5, operators conducted a control board walkdown at turnover and noted that the inhibit keys for undervoltage protection were in place, and the sensor channels for both vital buses were bypassed. It was determined that the channels were bypassed earlier in the day when the plant was in Mode 4. This condition existed for approximately seven hours and rendered both EDGs inoperable. The EDGs were available to be remotely started. Dominion had no documented procedure for bypassing the undervoltage protection. The details of a licensee identified NCV regarding this issue are discussed in section 4OA7 of this report. The inspectors reviewed the LER, CRs, and apparent cause evaluation. This LER is closed.

.3 (Closed) LER 05000423/2010-003 Secondary Containment Rendered Inoperable Due to Misaligned Dampers

On May 27, 2010, while Millstone Unit 3 was at 100 percent power, operators discovered two sets of auxiliary building tunnel exhaust dampers open at the same time. Millstone technical specifications allowed only one set of dampers open. This configuration rendered secondary containment inoperable. The condition was immediately corrected by closing one set of dampers. The correct damper position should have been established prior to entering Mode 4 on May 13, 2010. The details of a licensee identified NCV regarding this issue are discussed in section 4OA7 of this report. The inspectors reviewed the CR and LER. This LER is closed.

.4 (Closed) LER 05000336/2010-002 Manual Reactor Trip on High Steam Generator Water Level

a. Inspection Scope

On May 22, 2010, with Unit 2 at 100 percent power, the reactor was manually tripped by operators due to a high water level condition in the #2 steam generator. All control rods inserted into the reactor following the trip. Safety systems functioned as expected based on signals received. The unit was brought to a stable condition in hot standby. The investigation determined that SG level rose due to a degraded positioner for the #2 feedwater regulating valve, 2-FW-51B. The degraded positioner for the feedwater regulating valve (FRV) was replaced.

The inspectors responded to the control room and evaluated the adequacy of operator actions in accordance with approved procedures. The inspectors performed walkdowns and interviewed personnel to verify that the plant was stable. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

Introduction: A self-revealing finding of very low safety significance (Green) was identified for Dominion's failure to implement timely corrective actions for a degraded Unit 2 FRV in accordance with procedure PI-AA-200, "Corrective Action". Specifically, two weeks after the issue was first identified, the #2 FRV further degraded causing Dominion to trip the reactor when the #2 SG level could not be adequately controlled. Dominion subsequently repaired the FRV and returned the plant to 100 percent power.

Description: On July 8, 2010, operators wrote a CR identifying that a degraded #2 FRV was causing 30 megawatt thermal oscillations in the 15 second calorimetric. A follow-up CR was written on July 10, 2010. Troubleshooting was not commenced until July 22, 2010 when the #2 FRV further degraded causing larger calorimetric oscillations. Dominion operations personnel placed the #2 FRV in master manual control and were in the process of taking local control when control room operators manually tripped the plant on high level in #2 SG.

Dominion's root cause determined that the cause of #2 FRV's failure to control #2 SG level was due to wear in the threads of the brass beam screw on the FRV positioner. For several years, Dominion has been replacing the FRV positioners every refueling outage to prevent failure due to high vibration wear. The FRV positioners were replaced during 2R19 in October 2009.

The root cause also identified that two years earlier on July 20, 2008, CR-08-08259 documented #2 FRV causing 24 megawatt oscillations in the 15 second calorimetric. Unlike the 2010 response, operators took local control of the FRV and stabilized the plant and then followed up by replacing the positioner on-line two days later on July 22, 2008.

Analysis: The inspectors determined that Dominion's failure to implement timely corrective actions for a degraded #2 FRV in accordance with procedure PI-AA-200, "Corrective Action", was a performance deficiency. The cause was reasonably within Dominion's ability to foresee and correct, and should have been prevented. Traditional enforcement does not apply since there were no actual safety consequences, impacts on the NRC's ability to perform its regulatory function, or willful aspects to the finding. This finding is more than minor because it was similar to NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 4f, in that the failure to correct a condition adverse to quality led to a reactor trip. The finding was associated with the equipment performance attribute of the Initiating Events cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, Dominion's failure to implement timely corrective actions for the #2 FRV caused the operators to manually trip the reactor when the #2 SG level could not be adequately controlled. The inspectors conducted a Phase 1 screening, in accordance with NRC IMC Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available.

The inspectors determined that this finding had a cross-cutting aspect in the Problem Identification and Resolution cross-cutting area, Corrective Action Program component, because Dominion did not take appropriate corrective action to address the degraded #2 FRV in a timely manner, commensurate with its safety significance. [P.1(d)].

Enforcement: Enforcement action does not apply because the performance deficiency did not involve a violation of a regulatory requirement. Dominion entered this issue into their corrective action program (CR 382055). Dominion subsequently repaired the FRV and returned the plant to 100 percent power. Because this finding does not involve a violation of regulatory requirements and has very low safety significance, it is identified as a finding. **(FIN 05000336/2010004-03, Failure to Implement Timely Corrective Actions for a Degraded Unit 2 FRV Results in Manual Reactor Trip)**

.5 Unit 3 TDAFW Pump Approaching Technical Specification Required Shutdown

a. Inspection Scope

On August 23, 2010, Unit 3 approached the expiration deadline of the allowed outage time (AOT) for Technical Specification 3.7.1.2, Limiting Condition for Operation (LCO) Action Statement 'C'. The TDAFW pump had failed its quarterly surveillance test on August 19, 2010, because of a leaking discharge relief valve 3FWA*RV45. Complications arising from a freeze seal installation delayed completion of the work order and repair efforts. Dominion provided an advanced copy of a request for enforcement discretion when it appeared likely that they would not be able to complete retesting the pump before the expiration of the AOT.

The inspectors prepared for a timely submittal for a request for enforcement discretion with NRC regional and headquarters personnel. Prior to receiving the official request for enforcement discretion, Dominion completed a satisfactory surveillance test on the TDAFW pump prior to expiration of the AOT and exited the TS LCO.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 TI-2515/179 Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in the National Source Tracking System

a. Inspection Scope

During the period August 30, 2010, through September 2, 2010, the inspectors performed the following activities to confirm the inventories of materials possessed at Millstone were appropriately reported and documented in the National Source Tracking System (NSTS) in accordance with 10 CFR 20.2207.

Inspection Planning

- The inspectors retrieved a copy of the inventory from Dominion's NSTS account via Regional staff with NSTS access.

Inventory Verification

- The inspectors performed a physical inventory of the sources listed on Millstone's inventory and visually identified each source listed on the inventory.
- The inspectors verified the presence of the nationally tracked sources by having a radiation protection supervisor perform a survey with a radiation survey instrument.
- The inspectors examined the physical condition of the source containers; evaluated the effectiveness of the procedures for secure storage and handling; discussed Millstone's maintenance of the device including source leak tests; and verified that the posting and labeling of the source was appropriate.
- The inspectors reviewed Millstone's records for the source and compared the records with the data from the NSTS inventory. The inspectors evaluated the effectiveness of Millstone's procedures for updating the inventory records.

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Determine the Location of Unaccounted-for Nationally tracked source(s)

The inspectors verified that Dominion has no unaccounted-for source(s).

Review of Other Administrative Information

The inspectors reviewed the administrative information contained in the NSTS inventory printout with Millstone personnel. All administrative information, mailing address, docket number, and license number, was verified to be correct.

b. Findings

No findings were identified.

.2 Independent Spent Fuel Storage Installation (ISFSI) Monitoring Controls (60855)a. Inspection Scope

The inspectors reviewed routine operations and monitoring of the ISFSI. The inspectors walked down the ISFSI with a Senior Radiation Protection Technician. The inspectors performed independent dose rate measurements of the storage modules, and confirmed module temperatures were within the required limits. The inspectors also reviewed plant equipment operator logs for ISFSI surveillances and environmental ISFSI dosimetry records. Radiological control activities for the ISFSI were evaluated against 10 CFR 20, ISFSI Technical Specifications, and with Dominion's procedures.

b. Findings

No findings were identified.

4OA6 Meetings, including ExitExit Meeting Summary

On October 6, 2010, the resident inspectors presented the overall inspection results to Mr. A. J. Jordan and members of his staff. The inspectors confirmed that no proprietary information was provided or examined during the inspection.

On September 30, 2010, the in-service inspection inspector discussed the inspection results with Mr. A. J. Jordan, Site Vice President, and other members of his staff. The inspectors confirmed that no proprietary information was provided or examined during the inspection.

40A7 Licensee Identified Violations

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

Unit-2

- 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Contrary to this, Dominion had no documented procedure for bypassing undervoltage protection for the vital buses. As a result, on October 7, 2009, Dominion bypassed the undervoltage protection for the vital buses and rendered both EDGs inoperable for approximately seven hours. Upon discovery, Dominion restored the undervoltage protection and entered the issue into their corrective action program (CR351389). The finding is of very low safety significance because of the short duration of the inoperability, and because both EDGs could be manually started from the Control Room.

Unit-3

- TS 3.6.6.2 requires that if secondary containment is inoperable, it must be restored to operable status within 24 hours or the plant must be shutdown. Contrary to this, from May 13, 2010, until May 27, 2010, two sets of auxiliary building tunnel exhaust dampers were open, which rendered secondary containment inoperable. Upon discovery, Dominion immediately restored operability by closing one set of dampers and placed the issue into their corrective action program (CR382686). The finding is of very low safety significance because it only represented a degradation of the radiological barrier function for the auxiliary building.
- 10 CFR 50 Appendix B, Criterion III, Design Control requires, in part, that measures shall be established to assure that the applicable design basis for structures, systems, and components, are correctly translated into specifications, drawings, procedures, and instructions. Contrary to this, from approximately 1995 until August 13, 2010, Dominion failed to ensure that the design basis for the reactor coolant system was maintained when it specified and installed flex hoses with an insufficient pressure rating. Upon discovery, Dominion entered the issue into their corrective action program (CR 390963), shutdown the plant, and replaced the hoses with flex hoses of the proper pressure rating. The finding is of very low safety significance because a failure of the hose would have resulted in a leak that was within the capability of the charging pumps.

Enclosure

- TS 3.7.1.2 LCO (c) requires the TDAFW pump to be operable in Mode 1. If the pump is not operable, Action Statement (c) directs restoration within 72 hours after which a plant shutdown to Mode 3 in six hours is required. Contrary to this requirement, on August 23, 2010, the TDAFW pump failed its quarterly surveillance test and a review of prior surveillance tests indicated that the pump had been inoperable since June 30, 2010 (a period of 54 days). Dominion had not properly evaluated the results of the previous surveillance test. During both of these tests, the TDAFW pump failed to produce an acceptable discharge flow rate because the charging pump discharge relief valve, 3FWA*RV45, leaked by its seat. Upon discovery, Dominion declared the TDAFW pump inoperable and promptly repaired the relief valve. Dominion entered the issue into their corrective action program (CR392003), and restored the TDAFW pump to an operable condition. The finding is of very low safety significance because the TDAFW pump was later determined to be available to support core heat removal during the period when the relief valve was degraded.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION**KEY POINTS OF CONTACT**Licensee personnel

E. Annino	Licensing
L. Armstrong	Manager, Training
G. Auria	Nuclear Chemistry Supervisor
J. Barile	System Engineer
B. Barron	Manager, Nuclear Oversight
B. Bartron	Supervisor, Licensing
P. Baumann	Manager, Security
H. Beeman	Supervisor, Nuclear Engineering
T. Berger	Shift Manager
D. Butkovich	Nuclear Maintenance Supervisor
C. Chapin	Assistant Operations Manager
C. Chatman	Unit Supervisor
A. Chyra	Nuclear Engineer, PRA
T. Cleary	Licensing Engineer
G. Closius	Licensing Engineer
L. Crone	Supervisor, Nuclear Chemistry
J. Dorosky	Health Physicist III
K. Edwards	Technician, Mechanical
A. Elms	Manager, Nuclear Engineering
B. Ferguson	QA Auditor
M. Finnegan	Supervisor, Health Physics, ISFSI
G. Gardner	Engineering
A. Gharakhanian	Nuclear Engineer III
W. Gorman	Supervisor, Instrumentation & Control
J. Grogan	Supervisor, Nuclear Training
K. Grover	Manager, Operations
M. Hall	Engineer, Welding
C. Houska	I&C Technician
T. Ickes	Nuclear Engineer III
C. Janus	Nuclear Engineer III
A. Jordan	Site Vice President
R. Kasuga	Design Engineer
J. Kelly	Balance of Plant Operator
J. Kunze	Supervisor, Nuclear Operations Support
J. Laine	Manager, Radiation Protection/Chemistry
M. Lalikos	ISI/NDE Engineering
R. MacManus	Director, Nuclear Station Safety & Licensing
J. Majewski	In-service Inspection

A-2

G .Marshall	Outage and Planning Manager
A. McNeil	Engineer, Dominion Consulting
M. O'Connor	Manager, Operations
L. Perry Jr.	In-service Inspection
J.A. Price	Vice President, Nuclear Engineering
T. Quinley	Engineer, Mechanical Rapid Response
R. Riley	Supervisor, Nuclear Shift Operations Unit 3
M. Roche	Senior Nuclear Chemistry Technician
D. Rowe	Shift Manager, Unit 3
M. Sartain	Director, Engineering
J. Semancik	Plant Manager
A. Smith	Asset Management
S. Smith	Manager, Engineering
L. Spain	In-service Inspection, Corporate
S. Turowski	Supervisor, Health Physics Technical Services
M. VanHalter	Engineering
M. Vezzina	In-service Inspection
C. Vournazos	IT Specialist, Meteorological Data
L. Wagnecz	System Engineer
J. Williams	In-service Inspection
R. West	Engineering
E. York	ANII

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSEDOpened and Closed

05000336/2010004-01	NCV	Failure to Promptly Identify and Correct the Source of a Unit 2 RCS Pressure Boundary Leak.
05000336/2010004-02	NCV	Failure to Perform an ASME Code-compliant Radiographic Examination on a Class 1 Weld on the Unit 2 'A' RCP Seal Cooler Piping.
05000336/2010004-03	FIN	Failure to Implement Timely Corrective Actions for a Degraded Unit 2 FRV Results in Manual Reactor Trip.

Closed

05000423/2008-005-01	LER	Containment Penetration Not Fully Closed During Fuel Movement
05000336/2009-003 & 05000336/2009-003-01	LER	Two Independent Diesel Generators Rendered Inoperable Due to Common Cause
05000423/2010-003	LER	Secondary Containment Rendered Inoperable Due to Misaligned Dampers
05000336/2010-002	LER	Manual Reactor Trip on High Steam Generator Water Level
05000336/2009004-03	URI	Unit 2 "A" Reactor Coolant Pump Seal Cooler Weld

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

AOP 2560, "Storms, High Winds and High Tides," Revision 010-04
AOP 3569, "Severe Weather Conditions," Revision 016-00
COP 200.6, "Storms and Other Hazardous Phenomena (Preparation and Recovery)," Revision 002-03
SP 2665, "Building Flood Gate Inspections," Revision 005-02
CR 381901
CR 389138

Section 1R04: Equipment Alignment

OP 2308-001, "HPSI System Valve Alignment, Facility 1," Revision 000-03
OP 2326A-001, "Service Water Alignment Verification, Facility 1," Revision 000-04
OP 2326A-002, "Service Water Alignment Verification, Facility 2," Revision 000-03
OP 2346A-002, "'A' DG Pre-Start Checklist," Revision 020-06
OP 2346A-011, "'A' DG Service Water Valve Alignment," Revision 000-03
OP 2346A-012, "'A' DG Starting Air Valve Alignment," Revision 000-00
OP 2346A-013, "'A' DG Jacket Water Valve Alignment," Revision 000-02
OP 2346A-014, "'A' DG Lube Oil Valve Alignment," Revision 000-02
OP 3346A, "EDG," Revision 024-04
OP 3346A-001, "EDG – Cooling Water Valve Lineup," Revision 007
OP 3346A-003, "EDG 'A' – Lube Oil Valve Lineup," Revision 006
OP 3346A-005, "EDG 'A' – Starting Air Valve Lineup," Revision 007
OP 3346A-011, "EDG 'A' – Electrical Lineup," Revision 009
OP 3346D-001, "SBO Diesel Fuel Oil," Revision 003-01
OP 3346D-002, "SBO Diesel Air Start," Revision 003-01
OP 3346D-003, "SBO Diesel Lube Oil," Revision 003
OP 3346D-004, "SBO Diesel Cooling Water," Revision 003
OP 3346D-005, "SBO Diesel Instrument Alignment," Revision 001-01
OP 3346D-006, "SBO Diesel MCC Electrical Alignment," Revision 005
Service Water System Health Report, 1st Quarter 2010
CR-08-05435
CR335122
CR329996
MRE 010876
MRE010910
MRE010915
MRE012239
OP 3304A, "Charging and Letdown Lineup," Revision 013-03

Section 1R05: Fire Protection

Millstone Unit 2 Fire Hazards Analysis, Revision 11
Millstone Unit 2 Firefighting Strategies, April 2002
CR394110

Section 1R06: Flood Protection Measures

CR389134

CR389423

Section 1R07: Heat Sink Performance

ER-AA-HTX-1002, "Heat Exchanger Program Visual and Leak Testing," Revision 1

MP 2701J-096, "Service Water Cooled Heat Exchanger Subject to GL 89-13," Revision 007-01

Section 1R11: Licensed Operator Regualification Program

Millstone Unit 2 ES10501A, "Evaluated Simulator Exam (ES10501A)," Revision 0

EOP 35 ES-0.1, "Reactor trip Response," Revision 024

EOP 3506, "Loss of All Charging Pumps," Revision 009-01

AOP 3577, "Loss of Normal and Offsite Power to a 4.16kV Emergency Bus," Revision 001-01

OP 3272, "EOP Users Guide," Revision 008-11

OP-AP-104, "Emergency and Abnormal Operating Procedures," Revision 2

CR393073

CR395584, "Title Change needed for non-ERG based EOP 3506 from EOP designation to AOP"

CR395591, "Revision to OP 3272 EOP Users Guide Needed"

Section 1R12: Maintenance Effectiveness

AOP 2579A, "Fire Procedure for Hot Standby Appendix R Fire Area A-1," Revision 010

Emergency Safeguards Actuation System Health Report 2nd Quarter 2009 and 2010

Maintenance Rule Scoping Table for Containment Isolation

Maintenance Rule Scoping Table for Emergency Safeguards Actuation

Maintenance Rule Scoping Table for Station Electrical Service 4.16 KV

MP 3763EB, "Target Rock ¼ to 1 inch, Energize to Open, Solenoid Valve Maintenance," Revision 006-01

OP 2343, "4160 Volt Electrical Service," Revision 021-03

OP 2348A, "6900 and 4160 Volt Breaker Operation," Revision 003-01

ILRT, LLRT, and Electrical Penetrations System Health Report, 1st Quarter 2009 and 2010

Station Electrical Service 4.16 KV System Health Report, 2nd Quarter 2009 and 2010

ACE014039	MRE007283	MRE011264
ACE018138	MRE007286	MRE011299
MRE007134	MRE007324	MRE011302
MRE007135	MRE007330	MRE011750
MRE007136	MRE010154	MRE011934
MRE007138	MRE010163	MRE011960
MRE007143	MRE010164	MRE011981
MRE007144	MRE010202	MRE011983
MRE007145	MRE010236	MRE011984
MRE007210	MRE010360	MRE011990
MRE007263	MRE010631	MRE011996
MRE007272	MRE010682	MRE012004
MRE007273	MRE010717	MRE012078
MRE007280	MRE011203	MRE012097
MRE007282	MRE011250	MRE012513

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Memorandum 15G07-A & B RSST Outage for WW1039/1040
Project Readiness Challenge Board: "FEG 2300X15 MP3 RSST and 345 KV South Bus Outage Presentation," dated September 20, 2010
Drawing 960000049 ESI-TP-3 345 KV System
WM-AA-301-Attachment 11, "Medium/High Risk Contingency Plan Actions for South Bus Outage" dated September 23, 2010
WM-AA-100, "Work Management," Revision 8
WO 53102374532, "Remove, Repair, Test and Reinstall Relief Valve MSSFWA*RV45
WO 53102374533, Install/Remove Freeze Seal for 3FWA*RV45"
WO 53102375925
MP 3762 WA, "Lonergan, D, DB and DO Series Relief Valve Maintenance", Revision 006-02
Millstone Power Station, Unit 3 Request for Enforcement Discretion from TS 3.7.1.2(c),
Auxiliary Feedwater System Discussion of the Need for Enforcement Discretion
P&ID 25212-26930 Sheet 2, "Auxiliary Feedwater"
SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02
CR392070, "Freeze seal for M33FWA*RV45 delayed due to liquid nitrogen flow issues" dated August 21, 2010
CR392155, "Obtain and store replacement valve for 3FWA*RV45" dated August 23, 2010
CR392702
CR393729
CR395972, "Found Leaking Capacitors on new relays purchased for MP3 RSST outage"
CR396220, "No FEG exits to evaluate PRA risk for South Bus Outage"
CR396317, "Follow up to CR396220"

Section 1R15: Operability Evaluations

SP 2402TA, "RPS Channel 'A' Temperature Instrument Calibration," Revision 000-10
OD-000381, "Millstone Unit 3 classification of piping as inaccessible for examination – OD Required"
IOD-000165, "Millstone Unit 3 classification of piping as inaccessible for examination – IOD Required"
M2-EV-10-0007, Technical Evaluation for 'A' RBCCW HX (X18) Channel Head Corrosion Problem 118, "Service Water discharge to HX and Diesel Coolers," Revision 9
Reasonable Assurance of Safety Determination for CR 390441
Relief Request IR-2-41, "Millstone Unit 3 – Issuance of Relief Requests IR-3-06 and IR-3-07 Regarding ASME Section XI, 2004 edition (TAC ME1258 and ME 1259)" dated February 4, 2010
Drawing No. EP-19A-14, "Service Water Lines CW Pump House to Turbine Building, Sheet 14"
Drawing No. 12179-CI-SW-3, "Fabrication Installation Control Drawing"
79-176-250GP, "Service Water Discharge Header Problem 112," Revision 6
53M20808971
CR386265, "Millstone Unit 3 classification of piping as inaccessible for examination" dated June 29, 2010
CR387189
CR394968
CR394972

Section 1R18: Plant Modifications

DCN DM2-00-0108-10

AWO 53102367016

DCN DM3-00-0145-10, "Flex hoses installed within the equalizing lines for 3RHS*MV8701A, *MV8701C, *MV8702B and MV8702C" dated August, 13, 2010

DCN DM3-00-0145-10, "Pressure Locking Equalizing Line Modification for 3RHS*MV8701A, *MV8701C, *MV8702B and MV8702C" dated August, 13, 2010

Drawing 25212-12179-00, "½" Low pressure Instrument Hose" dated March 30, 1984

CR390214, "Containment Entry for 3RCS*V2002 Leakage Verification" dated August 4, 2010

CR390963, "Flex Hoses installed in RCS System did not meet Design Requirements" dated August 11, 2010

CR393102, "AWOs needed for Restoration of temporary DCN"

Section 1R19: Post Maintenance Testing

ETE-MP-2010-0008, "Safety Significance of 3FWA*RV45 failure on Aux Feedwater Flow during a Loss of Normal Feedwater Accident," Revision 0 dated September 16, 2010

OP 2304E21-001, "'C' Charging Pump Post Maintenance Testing," Revision 000-02

SP 2402TA, "RPS Channel 'A' Temperature Instrument Calibration," Revision 000-10

SP 2606B-002, "Containment Spray Pump and Minimum Recirculation Check Valve In-service Testing, Facility 2," Revision 002-02

SP3626.10, "MCC and Rod Control Area Booster Pump 3SWP*P3A Operations Readiness Tests," Revision 008-01

SP3630A.6, "Reactor Plant Component Cooling Water Pump 3CCP*P1C Comprehensive Test," Revision 000-02

P&ID 25212-26930 Sheet 2, "Auxiliary Feedwater"

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

SPROC OPS09-3-004, "MCC and Rod Control Area Booster Pump 3SWP*P3A Preservice Test," Revision 000-01

MRE012402, 'C' CCP comprehensive Test results not in acceptance criteria"

WO 53102374532, "Remove, Repair, Test and Reinstall Relief Valve MSSFWA*RV45

53102247461

53102275504

53102295718

53102302988

53102309441

53102328269

53102366173

53102366248

53M20801148

CR388927, "'C' CCP comprehensive Test results not in acceptance criteria"

CR389276, "M33SWP*P3A buildup found inside suction piping"

CR389424

CR389708, "Procedure Enhancement Needed to 3626.10 following SWP*P3A SPROC"

CR3911927, "3MSS*V887 handwheel spins in the closed direction with valve closed"

CR392155, "Obtain and store replacement valve for 3FWA*RV45" dated August 23, 2010

CR392932, "During initial review of work order 53102375899 it was noted that some job steps to be performed were from a vendor's tech sheet (not approved for use on site)"

Section 1R20: Refueling and Other Outages

OP 3202, "Reactor Startup (ICCE)," Revision 021-01
OP 3203, "Plant Startup," Revision 019-11
OP 3204, "At Power Operation," Revision 017-12
OP 3206, "Plant Shutdown," Revision 011-07
OP 3207, "Reactor Shutdown," Revision 013-07

Section 1R22: Surveillance Testing

OP 2346A-004, "A' DG Data Sheet," Revision 023-08
P&ID 25212-26930 Sheet 2, "Auxiliary Feedwater"
SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02 dated June 30, 2010
SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02 dated March 10, 2010
SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02 dated April 29, 2008
SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02 dated December 12, 2006
SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02 dated July 25, 2005
SP 3622.3, "TDAFW Pump Operational Readiness Test," Revision 014-02 dated March 9, 2004
SP 3646 A.2, "EDG 'B' Operability Tests", Revision 020
SP 3646A.2-001, "Test Data Sheet"
CR392045, "June 2010 TDAFW pump had high out of spec recirculation flow"
CR392059, "Three individuals required a fatigue assessment for work activities in progress"
CR387226
CR387395
CR387412
CR395689
CR395744
CR395933
CR396020

Section 2RS06/2RS08: Access to Radiologically Significant Areas/ Radioactive Gaseous and Liquid Effluent Treatment

Procedures

OP 2338B, Revision 8, Solid Radwaste System-Resin Transfer to SRT
OP 2338C, Revision 1, SRT Resin Transfer and Dewatering
OP 3338A, Revision 11, Radioactive Solid Waste
RW 46054, Revision 3, VECTRA Resin Drying System
MP-27-RW-PRG, Revision 1, Radioactive Waste Process Control Program
MP-24-RWQA-PRG, Revision 1, Radioactive Waste Quality Assurance Program
RPM 2.5.9, Revision 1, Dry Shielded Canister (DSC) Surveys (ISFSI)
NF-AA-NSF-101, Revision 0, ISFSI Design and Licensing Basis
SP 2669A, Revision 22, Millstone Unit 2 Outside Rounds (ISFSI Monitoring)

Nuclear Oversight Department Field Observation Reports (NODFOB)/Audit
NODFOB-10-001, 10-025, 10-007, 10-030. 10-024, 09-010

Audit 10-07, Radiological Protection and Process Control Program
Audit 09-08, Radiation Protection and Process Control Program/Chemistry
Audit 08-06, Radiological Protection and Process Control Program

Shipping Manifests

Shipment No. 09-039, LSA II
Shipment No. 09-055, LSA II
Shipment No. 09-061, LSA II
Shipment No. 10-019, LSA II
Shipment No. 10-020, LSA II

Condition Reports

393204, 393221, 393227, 385288, 384144, 381251, 167671, 373270, 350044, 125713,
136796, 120217, 120743, 339949, 342598, 368917

Miscellaneous Documents

RadWaste and Radioactive Material Shipping Logs for 2009 and 2010
2009 Millstone Annual Radioactive Effluent Release Report
Radwaste/Transportation Training Records for selected personnel
10 CFR 61 Reports for 2009, and 2010
Waste Container Inventory and Inspection Forms
Waste Storage Facility Inventory
Integrated Charging/Radwaste System Capital Improvement Strategic Plan
System Health Report 2336A, Station Sumps and Drains, 4th Quarter 2009
System Health Report 3335B, Reactor Plant Aerated Drains (Contaminated), 4th Quarter 2009
1st and 2nd Quarter 2010 Area Monitoring TLD Report
Millstone Unit 2 Interim Retire In Place/Abandoned Equipment List
Millstone Unit 3 Interim Retire In Place/Abandoned Equipment List
Radioactive Source Leak Test Survey Results
Tritium Trouble Shooting Plan 3EHM-3A-Sump 3

Section 40A1: Performance Indicator (PI) Verification

Mitigating System Performance Index Millstone Unit 2, Revision 2
Millstone Unit 2 RBCCW Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009
through 2nd Quarter 2010
Millstone Unit 2 AFW Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009
through 2nd Quarter 2010
Millstone Unit 2 HPSI Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009
through 2nd Quarter 2010
Millstone Unit 2 Containment Spray Maintenance Rule Functional Failure Evaluations 3rd
Quarter 2009 through 2nd Quarter 2010
Millstone Unit 2 Service Water Maintenance Rule Functional Failure Evaluations 3rd Quarter
2009 through 2nd Quarter 2010
Millstone Unit 2 EDG Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009
through 2nd Quarter 2010
Containment Spray System Health Report 1st Quarter 2010
High Pressure Safety Injection System Health Report 1st Quarter 2010
Auxiliary Feedwater System Health Report 1st Quarter 2010

Reactor Building Closed Cooling Water System Health Report 1st Quarter 2010
EDG and Fuel Oil System Health Report 4th Quarter 2009, and 1st and 2nd Quarter 2010
Mitigating System Performance Index Millstone Unit 3, Revision 2
Millstone Unit 3 CVCS Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009 through 3rd Quarter 2010
Millstone Unit 3 AFW Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009 through 3rd Quarter 2010
Millstone Unit 3 RSS Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009 through 2nd Quarter 2010
Millstone Unit 3 High Pressure Safety Injection Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009 through 2nd Quarter 2010
Millstone Unit 3 Service Water Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009 through 2nd Quarter 2010
Millstone Unit 3 EDG Maintenance Rule Functional Failure Evaluations 3rd Quarter 2009 through 2nd Quarter 2010
High Pressure Injection System Health Report 1st Quarter 2010
Auxiliary Feedwater System Health Report 1st Quarter 2010
EDG and Fuel Oil System Health Report 4th Quarter 2009, and 1st and 2nd Quarter 2010

Section 40A2: Identification and Resolution of Problems

Drawings

4CP-2403, Main Steam Safety Valves, Revision 2, Sheet 1
25212-29153, 1500lb 4-N-6226-EMO-SP Gate Valve, Revision 4, Sheet 74

Calculations

94103-C-032, T-Head Evaluation for 3SIH-MV8821A/B, Revision 0
89-094-00997ES, Millstone Unit 3 Target Thrust/Torque Calculation for 3SIH-MV8821A/B, Revision 8 and Revision 10

Work Orders

53M30406677
53102192479

Condition Reports

CR114517	CR348678*	CR-02-05515
CR116172	CR345114	CR-397769*
CR392640	CA143733	CR389032
CR114118	CA140976	CR389050
CR113238	CR317496	CR389855
CR341193	CR354962	53102369020
CR340803	CR348678*	53M30806289
CR340840	CR-02-01537	
CR348595*	CR-02-01750	

* Generated as a result of NRC inspection.

Condition Report Engineering Disposition Form
Form DE2-DT-0473-09 dated 7/16/09

Root Cause Evaluation Reports

RCE000983, 'A' RCP RBCCW Cooling Leak, Millstone Unit 2, 7/28/09

RCE000981, 'A' Reactor Coolant Pump Seal Leakage, Millstone Unit 2

Procedures

Radiographic Examination Procedure for ASME Boiler and Pressure Vessel Code RT010, Revision 001-01, 9/8/09

Procedure PI-AA-200, Revision 8, "Corrective Action Process"

Dominion Administrative Procedure, RM-AA-101, Record Creation, Transmittal, and Retrieval," Revision 3. (Applicable to North Anna Power Station Only)

Dominion Administrative Procedure, ER-AA-RRM-100, "ASME Section XI Repair/Replacement Program Fleet Implementation Requirements," Revision 1.

Millstone Power Station Common Operating Procedure, "RCS Leakage Trending and Investigation," C OP 200.15, Revision 001, 5/13/09

Millstone Power Station Common Operating Procedure, "Reactor Coolant System Leak," AOP 2568, Revision 007-06, 4/15/09

Millstone Station Functional Administrative Procedure, Condition Report Screening and Review, MP-16-CAP-FAP01.1, Revision 003, 8/16/01

MOV 1220, MOV Testing, Revision 007-01

SP3712G, Main Steam Safety Surveillance Testing, Revision 010-02

AD-AA102, "Procedure Use and Adherence," Revision 2

MP 3721AB, "SBO Diesel 24 Month and 48 Month Required PMs," Revision 002-04

ODM "2-CH-199, RCP Bleed-off Flow Relief Valve Leakage," Revision 0

ODM "Millstone Unit 2 'B' RCP Electrical Penetration M2SWX-A2-T1 Failed LLRT Admin Limit," Revision 0

ODM "Millstone Unit 2 Transformer Oil Pump Failure continued Operation/Repair Decision Options," Revision 000

ODM000153 "Millstone Unit 2 VR11/21 Management Plan," Revision 1

OP-AA-1700, "Operations Aggregate Impact," Revision 2

Millstone Operations Aggregate Impact Report dated September 27, 2010

QA Audit Report 10-04, "Operations"

RAS0000117, "Multiple Spurious Operations," Revision 0

NDE Examination Reports (Data Sheets)

Liquid Penetrant Data Sheet, ECW 1, 2, 3, 4 Seal Cooler, dated 7/15/09 (acceptable)

Liquid Penetrant Data Sheet, ECW 2 Seal Cooler, dated 7/15/09 (unacceptable)

Liquid Penetrant Data Sheet, ECW 2 Seal Cooler partial exam, dated 7/15/09 (acceptable)

Liquid Penetrant Data Sheet, ECW 1, 3, 4 Seal Cooler, dated 7/15/09 (acceptable)

Liquid Penetrant Data Sheet, ECW 3 Seal Cooler, dated 7/15/09 (unacceptable)

Liquid Penetrant Data Sheet, ECW 3 re-exam Seal Cooler, dated 7/15/09 (acceptable)

Liquid Penetrant Data Sheet, ECW 1, 2, 4 Seal Cooler, dated 7/15/09 (acceptable)

Radiographic Report M2-2453, A RCP seal cooler leak repair, 7/17/09 (info report only)

Radiographic Report M2-2452, A RCP seal cooler leak repair, 7/16/09 (info report only)

Weld Data and Inspection Map – WO 53102266944, 9/16/09

M2 02 02270, M2 01 04504, M2-02-02270, M2-01-04540

Miscellaneous Documents

Dominion Letter (no number) to ASME, Section XI, dated 7/30/09; "Examination Requirements Following Defect Removal and Weld Repair, IWA-4422.2.2 (e) and IWA-4520 (1998 Edition with the 2000 Addenda)"

Dominion Letter 09-ZZZ to ASME, Section XI, dated 8/11/09; "Examination Requirements Following Defect Removal and Weld Repair, IWA-4422.2.2 (e) and IWA-4520 (1998 Edition)"

ASME, Section XI Letter 09-1315 dated 8/17/09; "ASME BPVC Section XI, IWA-4422.2.2(e) and

IWA-4520, 1998 Edition with the 2009 Addenda"

ASME Section XI, Division 1, Article IWA-2000, Examination and Inspection

Dominion Letter 09-474 dated 9/22/09; Dominion Nuclear Connecticut, Inc.

Millstone Power Station Unit 2 Alternate Request RR-89-67 for the P40A RCP Seal Cooler Return Tubing

Millstone Power Station Unit 2 and Unit 3 – NRC Inspection Reports
50-336/02-06 and 50-423/02-06

Operational Decision Making (ODM), dated 12/22/08; "A" Reactor Coolant Pump seal leakage Form NIS-2A, Repair/Replacements Certification Record, Repair Plan Number 53102266944, 5/12/10

SP 2730B, Main Steam Safety Valve Testing Unit 2 Bench Test, performed October 13, 2009, October 18, 2009, and October 21, 2009

SP 3712G, Main Steam Code Safety Valve Surveillance Testing Unit 3, performed April 8, 2010

SP 2730B, Main Steam Safety Valve Testing Unit 2, performed April 3, 2008

MA-NC1011, Vendor Manual for Main Steam Safety Valves, Revision 1

ACE014015, Apparent Cause Evaluation MSSV Test Failures, dated May 21, 2009

Pump and Valve Bases Document for 3MSS-RV24A, Revision 4

Pump and Valve Bases Document for 3SIH-MV8821A, Revision 4

DM3-00-0316-08, Conversion of Close Control Scheme of MOV 3SIH-MV8821A from Torque Switch to Limit Switch Control, dated October 20, 2008

SP 3608.6, Safety Injection Valve Stroke Testing, performed July 14, 2010

JOG FN-03, Results and Observations from Gate Valve Tests Following Valve Disassembly and Reassembly, dated February 25, 2000

TR-A716-A-1, Accuracy of Teledyne Brown Engineering Quick Stem Sensor, dated June 24, 1994

Section 4OA3: Event Follow-up

WO 53102374532, "Remove, Repair, Test and Reinstall Relief Valve MSSFWA*RV45

Millstone Unit 3 Request for Enforcement Discretion from TS 3.7.1.2(c), Auxiliary Feedwater System Discussion of the Need for Enforcement Discretion

P&ID 25212-26930 Sheet 2, "Auxiliary Feedwater"

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

CR351389

CR392155, "Obtain and store replacement valve for 3FWA*RV45" dated August 23, 2010

LIST OF ACRONYMS

AC	Alternating Current
ADAMS	Agencywide Documents Access and Management System
AFW	Auxiliary Feedwater
ALARA	As Low As Reasonably Achievable
AOP	Abnormal Operating Procedure
AOT	Allowed Outage Time
ASME	American Society of Mechanical Engineers
ASMEBPVC	American Society of Mechanical Engineers Boiler and Pressure Vessel Code
CFR	Code of Federal Regulations
CR	Condition Report
CS	Containment Spray
DG	Diesel Generator
DNB	Departure from Nucleate Boiling
DNC	Dominion Nuclear Connecticut
DOT	Department of Transportation
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
ESAS	Engineered Safety-Feature Actuation System
ESF	Engineered Safety Feature
FIN	Finding
FRV	Feedwater Regulating Valve
FSAR	Final Safety Analysis Report
HPSI	High Pressure Safety Injection
I&C	Instrumentation and Control
ID	Inside Diameter
IMC	Inspection Manual Chapter
ISI	In-service Inspection
ISFSI	Independent Spent Fuel Storage Installation
IST	In-service Testing
LER	Licensee Event Reports
MCC	Motor Control Center
MOV	Motor Operated Valve
mrem	millirem
MRRF	Millstone Radwaste Reduction Facility
MSPI	Mitigating System Performance Indication
MSSV	Main Steam Safety Valve
MWTH	Megawatts Thermal
NCV	Non-Cited Violation
NDE	Non-Destructive Examination
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission

NSTS	National Source Tracking System
OD	Operability Determinations
OOS	Out Of Service
PARS	Publicly Available Records System
PCP	Process Control Program
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PM	Preventive Maintenance
PMT	Post Maintenance Testing
PT	Liquid Penetrant Testing
RBCCW	Reactor Building Closed Cooling Water
RPCCW	Reactor Plant Closed Cooling Water
RCA	Radiologically Controlled Area
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
REMP	Radiological Environmental Monitoring Program
RHR	Residual Heat Removal
RPS	Reactor Program System
RT	Radiographic Testing
RWP	Radiological Work Permit
SBO	Station Blackout
SDP	Significance Determination Process
SG	Steam Generator
SIH	Safety Injection High
SW	Service Water
TDAFW	Turbine Driven Auxiliary Feedwater
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
VT	Visual Test

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November 4, 2010

EA 2010-227

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

SUBJECT: MILLSTONE POWER STATION - NRC INSPECTION REPORT 05000336 & 423/2010011 AND NOTICE OF VIOLATION

Dear Mr. Heacock:

On September 22, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed a team inspection of your Millstone Power Station Units 2 and 3. The initial results of these inspections were discussed on August 5, 2010, with Mr. A. J. Jordan and other members of your staff. Following additional in-office and on-site inspection and reviews, an exit meeting was conducted by telephone with Mr. A. J. Jordan and other members of your staff on September 22, 2010.

The inspection examined activities conducted under 10 CFR 50.54 (hh) and your License Condition 2.C.10 relative to the implementation of B.5.b mitigating strategies. The inspection involved examination of selected procedures and records, observation of activities, and interviews with station personnel.

This report documents one NRC-identified finding of very low safety significance (Green) for Unit 3. This finding was determined to involve a violation of NRC requirements. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. This violation is being cited, in accordance with Section 2.3.2.a.2, of the NRC Enforcement Policy, because of Dominion's failure to restore compliance with License Condition 2.C.(10) (i.e. develop a valid verifiable strategy) within a reasonable period of time after a previous non-cited violation was identified in Inspection Report 05000423/2008007, issued on October 3, 2008, for this issue. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice of Violation when preparing your response. As of the date of this letter, compliance has not been restored and the required response should address your plan and schedule for restoring compliance. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory

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D. Heacock

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requirements. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the Senior Resident Inspector at Millstone. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room and from the Publicly Available Records System (PARS) component of the NRC Agency-wide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). However, because of the sensitive information contained in the enclosure, and in accordance with 10 CFR 2.390, a copy of this letter's enclosures will not be available for public inspection.

Sincerely,

/RA/

John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

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

Enclosures: 1) Notice of Violation
2) Inspection Report 05000336/2010011; 05000423/2010011
w/Attachment: Supplemental Information

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F. J. Murray, President and CEO, NYSEERDA, State of New York
R. Douglas Frazier, New York State of Homeland Security
E. L. Wilds, Jr., Ph.D., State Liaison Officer, State of Connecticut

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D. Heacock

requirements. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the Senior Resident Inspector at Millstone. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

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Sincerely,

/RA/

John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

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

Enclosures: 1) Notice of Violation
2) Inspection Report 05000336/2010011; 05000423/2010011
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D. Heacock

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

November 5, 2010

EA-10-175

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

SUBJECT: MILLSTONE POWER STATION - NRC TRIENNIAL FIRE PROTECTION
INSPECTION REPORT 05000336/2010008 AND 05000423/2010008 AND
NOTICE OF VIOLATION AND TEMPORARY INSTRUCTION 2515/181
INSPECTION REPORT 05000336/2010009

Dear Mr. Heacock:

On September 22, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Millstone Power Station Unit 2 and Unit 3. In addition to the triennial fire protection inspection results, these inspection reports also document the results of an inspection performed on Unit 2 in accordance with Temporary Instruction (TI) 2515/181, "Validate the Effectiveness of the Regulatory Infrastructure Related to Fire Induced Circuit Failures and Operator Manual Actions. The preliminary results of these inspections were discussed on August 5, 2010, with Mr. A. J. Jordan and other members of your staff. Following additional in-office and on-site reviews an exit meeting was conducted by telephone with Mr. A. J. Jordan and other members of your staff on September 22, 2010.

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. In conducting the inspection, the team reviewed selected procedures, calculations and records, observed activities, and interviewed station personnel.

One violation is cited in the enclosed Notice of Violation and the circumstances surrounding it are described in detail in the subject inspection report. The violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violation involved the use of unapproved manual operator actions to mitigate post-fire safe shutdown equipment malfunctions caused by a single spurious actuation on Millstone Unit 2, in lieu of protecting the equipment in accordance with 10 CFR Part 50 Appendix R, Section III.G.2 (EA-10-175). Although determined to be of very low safety significance (Green), this violation is being cited in the Notice because not all of the criteria specified in section 2.3.2.a of the NRC Enforcement Policy for a noncited violation were satisfied. Specifically, Dominion Nuclear Connecticut, Inc. failed to restore compliance within a reasonable amount of time after the violation was identified in condition report 119114 in November 2008. You are required to

respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

One additional finding of very low safety significance (Green) was also identified. This finding was also determined to be a violation of NRC requirements. However, because of the very low safety significance, and because the issue was entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV) consistent with section 2.3.2.a of the NRC Enforcement Policy. If you contest the NCV in this report, you should provide a written 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 D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Senior Resident Inspector at Millstone. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the Senior Resident Inspector at Millstone. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,



John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

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

Enclosures: 1. Notice of Violation
2. Inspection Report 05000336/2010008; 05000423/2010008; and,
05000336/2010009
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Sincerely,

/RA/

John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

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

Enclosures: 1. Notice of Violation
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NOTICE OF VIOLATION

Dominion Nuclear Connecticut, Inc.
Millstone Nuclear Station, Unit 2

Docket No: 50-336
License No: DPR-65
EA-10-175

During an NRC inspection conducted July 19 through September 22, 2010, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

License Condition 2.C.(3) specifies, in part, Dominion shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report and as approved in the Safety Evaluation Report (SER) dated September 19, 1978, and a supplement dated July 17, 1990.

The Final Safety Analysis Report, Section 9.10.6 specifies that Dominion will meet the requirements of 10 CFR Part 50, Appendix R, Section III.G.2, which requires, in part, except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of the means of ensuring that one of the redundant trains is free of fire damage shall be provided, per the requirements in G.2.a–G.2.f.

Contrary to the above, through September 22, 2010, Dominion failed to implement all provisions of the approved fire protection program as described in the Final Safety Analysis Report and as approved in the SER dated September 19, 1978, and a supplement dated July 17, 1990. Specifically, the safe shutdown strategy for Millstone Unit 2 relied upon unapproved manual operator actions to mitigate post-fire safe shutdown equipment malfunctions caused by a single spurious actuation, in lieu of protecting the equipment in accordance with 10 CFR Part 50 Appendix R, Section III.G.2, per the requirements in G.2.a–G.2.f. The use of manual actions in lieu of providing the required protection requires prior NRC approval. Dominion had not requested or received NRC approval for the use of manual actions affecting components that included the following: charging header containment isolation valve 2-CH-249, steam generator main steam isolation valves 2-MS-64A/B, steam generator blowdown control valves 2-MS-220A/B, charging system isolation valve 2-CH-192, auxiliary feedwater flow control valves 2-FW-43 A/B and turbine driven auxiliary feedwater pump 2-FW-P4.

This violation is associated with a Green Significance Determination Finding.

Pursuant to the provisions of 10 CFR 2.201, Dominion Nuclear Connecticut, Inc. is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region I, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation; EA 10-175" and should include for each violation: (1) the reason for the violation, or, if

Enclosure 1

contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 5th day of November, 2010

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos: 50-336, 50-423

License Nos: DPR-65, NPF-49

Report Nos: 05000336/2010008; 05000423/2010008; and
05000336/2010009

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Power Station, Units 2 and 3

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

Dates: July 19 through September 22, 2010

Inspectors: L. Scholl, Senior Reactor Inspector (Team Leader)
W. Schmidt, Senior Reactor Analyst
G. Replogle, Region IV, Senior Reactor Analyst
J. Richmond, Senior Reactor Inspector
R. Fuhrmeister, Senior Reactor Inspector
M. Patel, Reactor Inspector
E. Huang, Reactor Inspector
J. Rady, Reactor Inspector
G. Pick, Region IV, Senior Reactor Inspector
D. Frumkin, NRR (Observer)
G. Cooper, NRR (Observer)

Approved by: John F. Rogge, Chief
Engineering Branch 3
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000336/2010008, 05000423/2010008, and 05000336/2010009; 07/19/2010 - 09/22/2010; Millstone Power Station, Units 2 and 3; Triennial Fire Protection and Millstone Power Station, Unit 2; Temporary Instruction 2515/181 Inspection.

These reports covered an initial two week on-site triennial fire protection team inspection and a one week on-site inspection of regulatory infrastructure related to fire-induced circuit failures and operator manual actions by NRC Regions I and IV specialist inspectors. Additional in-office and site inspections were performed following the initial inspection. One cited and one non-cited finding of very low significance (Green) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)." The cross-cutting aspects were determined using IMC 0305, "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The team identified a non-cited violation of Millstone Unit 2 Operating License Condition 2.C.(3), and Unit 3 Operating License Condition 2.H, for the failure to implement all provisions of the approved Fire Protection Programs. Specifically, Dominion did not implement adequate review, approval and distribution of fire fighting strategies to provide for the adequate development and maintenance of effective strategies. As a result, the team found that Dominion did not provide adequate guidance in the fire fighting strategies for several areas that included the Unit 2 "B" emergency diesel generator (EDG) room, and the Unit 3 west switchgear room. This issue was entered into Dominion's corrective action program as condition report (CR) 388786.

The team determined that the failure to administratively control fire fighting strategies as required by the fire protection program was a performance deficiency. This finding was more than minor because it adversely affected the availability and capability objectives of the protection against external events (i.e., fire) attribute under the Mitigating Systems Cornerstone. Specifically, the above examples would likely cause delays in manual fire fighting activities and, therefore, adversely affected the defense-in-depth aspect of the fire protection program to limit fire damage by quick suppression of those fires that occur. The team performed a Phase 1 SDP screening, in accordance with NRC IMC 0609, Appendix F, "Fire Protection Significance Determination Process." This finding affected fire prevention and administrative controls, and was screened to very low safety significance (Green) because this failure to control fire fighting strategies was determined to represent a low degradation rating. This finding had a cross-cutting aspect in the area of human performance because Dominion failed to ensure complete and accurate fire fighting strategies were available to the fire brigade to support timely extinguishment of fires. [H.2(c)] (Section 1R05.03)

- Green. The team identified a cited violation of 10 CFR Part 50, Appendix R, Section III.G.2 for the failure to protect required post-fire safe shutdown components and cabling to ensure one of the redundant trains of equipment remains free from fire damage. In lieu of providing the required separation, Dominion utilized unapproved operator manual actions to mitigate component malfunctions or spurious operations caused by a single fire induced circuit fault (hot short, open circuit or short to ground). Dominion has entered this issue into the corrective program for resolution. The team found the manual actions to be reasonable interim compensatory measures pending final resolution by Dominion.

Dominion's failure to protect components credited for post-fire safe shutdown from fire damage caused by single spurious actuation is considered a performance deficiency. The performance deficiency was more than minor because it affected the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to an external event to prevent undesirable consequences in the event of a fire. Specifically, the use of operator manual actions during post-fire shutdown is not as reliable as normal systems operation which could be utilized had the separation requirements of 10 CFR 50, Appendix R, Section III.G.2 been met and therefore prevented fire damage to credited components and/or cables. The team used IMC 0609, Appendix F, "Fire Protection Significance Determination Process (SDP)," Phase 1 and an SRA conducted Phase 3 evaluation, to determine that this finding was of very low safety significance (Green). The team determined the finding had a low degradation rating because the manual actions were reviewed by the team and were found to be acceptable interim compensatory measures (pending licensee actions to resolve the non-compliances or obtain exemptions) because they did not require complicated actions, adequate time was available to accomplish the actions and the actions were properly included in the appropriate abnormal operating procedures. This finding had a cross cutting aspect in the area of problem identification and resolution associated with the corrective action program because Dominion did not completely and accurately identify deficiencies related to single spurious actuations of credited post-fire safe shutdown components. [P.1.(a)] (Section 1R05.06)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Background

This report presents the results of a triennial fire protection inspection conducted in accordance with NRC Inspection Procedure (IP) 71111.05T, "Fire Protection." The objective of the inspection was to assess whether Dominion Nuclear Connecticut, Inc. (Dominion) had implemented an adequate fire protection program and whether post-fire safe shutdown capabilities had been established and were properly maintained at Millstone Power Station Unit 2 and Unit 3 (Millstone). The following fire areas and fire zones were selected for detailed review based on risk insights from the Millstone Individual Plant Examination of External Events, past inspection results, recent operational experience, and resident inspector input:

Unit 2 Fire Areas / Fire Zones

- R-1 / A-1B, Reactor Building Closed Cooling Water (RBCCW) Pump & Heat Exchanger Area
- R-2 / T-10, Upper 4 kV Switchgear (SWGR)
- R-8 / A-16, "B" EDG Room
- R-13 / T-6, West 480 Volt Load Center Room

Unit 3 Fire Areas / Fire Zones

- AB-5, East Motor Control Center and Rod Control Area
- CB-1, West SWGR Area
- CB-7, Battery Room 5
- CB-8, Cable Spreading Area

Inspection of these fire areas/zones fulfilled the inspection procedure requirement to inspect a minimum of three samples on each unit.

The team evaluated Dominion's fire protection program (FPP) against applicable requirements which included Unit 2 Operating License Conditions 2.C.(3) and 2.C.(13), Unit 3 Operating License Conditions 2.C.(10) and 2.H, NRC Safety Evaluation Reports (SERs), 10 CFR 50.48, 10 CFR 50 Appendix R, and the NRC Branch Technical Position (BTP) Chemical Engineering Branch (CMEB) 9.5-1. The team also reviewed related documents that included the Updated Final Safety Analysis Report (UFSAR), Fire Protection Program, Fire Hazards Analyses (FHA), and post-fire Safe Shutdown Analyses Reports.

Section 4.0.A.5.2 presents the results of an inspection of Unit 2 conducted in accordance with Temporary Instruction (TI) 2515/181, "Validate the Effectiveness of the Regulatory Infrastructure Related to Fire Induced Circuit Failures and Operator Manual Actions."

Specific documents reviewed by the team are listed in the attachment to this report.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R05 Fire Protection (IP 71111.05T)

.01 Protection of Safe Shutdown Capabilities

a. Inspection Scope

The team reviewed the FHA, safe shutdown analyses, and supporting drawings and documentation, to evaluate the fire protection of safe shutdown equipment and capabilities. The team compared the separation requirements described in the UFSAR and in 10 CFR 50, Appendix R, Section III.G to the designed and installed fire protection features for credited safe shutdown equipment, including their supporting power, control, and instrumentation cables to assess the protection adequacy of safe shutdown capabilities. The team's review included an assessment of the adequacy of the selected systems for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and associated support system functions.

The team reviewed procedures and programs for the control of ignition sources and transient combustibles to assess their effectiveness in preventing fires and in controlling combustible loading less than the analyzed limits established in the FHA. The team reviewed selected hot work permits, transient combustible control, and fire protection program evaluations to assess the adequacy of the fire protection program administrative controls. During plant walkdowns, the team observed permanent and transient combustible loading and potential ignition sources to independently verify whether the installed protective features were being properly maintained and administrative controls were being adequately implemented.

b. Findings

No findings were identified.

.02 Passive Fire Protection

a. Inspection Scope

The team walked down accessible portions of the selected fire areas to evaluate whether the observed material conditions of the fire area boundaries were adequate for the fire hazards in the area. The team compared the fire area boundaries, including walls, fire doors, fire dampers, penetration fire barrier seals, electrical raceway fire barriers, and redundant equipment fire barriers to design basis requirements, industry standards, and the Millstone FPP, as approved by the NRC, to identify any potential degradation or non-conformances.

The team reviewed selected engineering evaluations, installation work orders, and qualification records for a sample of penetration fire barrier seals to determine whether

the fill material was properly installed and whether the as-left configuration satisfied design requirements for the intended fire rating. For Unit 2, there were no credited fire protection wraps in the selected fire areas.

In addition, the team reviewed the most recent test results for fire damper functionality tests and inspection records of penetration fire barrier seals and fire separation barriers for the selected fire areas, to verify whether the inspection and testing was adequately conducted, the acceptance criteria were met, and any potential performance degradation was identified.

b. Findings

No findings were identified.

.03 Active Fire Protection

a. Inspection Scope

The team evaluated the fire detection and suppression systems in the selected fire areas to determine whether they were installed, tested, maintained, and operated in accordance with NRC requirements and approved exemptions, National Fire Protection Association (NFPA) codes of record, and the fire protection program, as approved by the NRC. The team also assessed whether the suppression systems capabilities were adequate to control and/or extinguish fires associated with the hazards in the selected areas. The team reviewed initial discharge testing, design specifications, modifications, and engineering evaluations for Unit 3 carbon dioxide (CO₂) suppression systems for the west switchgear room, east motor control center and rod control area, and cable spreading room. The team also reviewed and walked down the associated fire fighting strategies and CO₂ system operating procedures.

The team reviewed the design capability of the fire water supply system to verify whether the design basis and NFPA code requirements for the hazards involved were adequately satisfied. The team reviewed the fire water system hydraulic analyses and assessed the adequacy of the underground fire loop flow tests to verify whether the tests adequately demonstrated that the flow distribution circuits were able to meet design basis requirements. The team evaluated the motor-driven and diesel-driven fire pump capacity tests to assess the adequacy of the test acceptance criteria. In addition, the team reviewed the most recent pump and loop flow test results to verify whether the testing was adequately conducted, the acceptance criteria were met, and any potential performance degradation was identified.

The team walked down accessible portions of the detection and suppression systems in the selected areas and major portions of the fire water supply system, including motor and diesel driven fire pumps, fire water storage tank, interviewed system and program engineers, and reviewed selected open condition reports (CRs) to assess the material condition of the systems and components. In addition, the team reviewed the most recent test results

for the Unit 2 "B" emergency diesel generator (EDG) room deluge system, and for the smoke and heat detectors for the selected fire areas, to verify whether the testing was adequately conducted, the acceptance criteria were met, and any potential performance degradation was identified.

The team assessed the fire brigade capabilities by reviewing training, qualification, and drill critique records. In addition, the team interviewed fire brigade members, fire brigade leaders, a fire brigade advisor, and the site Fire Marshall, to better assess the site fire fighting capabilities. The team reviewed Dominion's fire fighting strategies (i.e., pre-fire plans) and smoke removal plans for the selected fire areas to determine if appropriate information was provided to fire brigade members and plant operators to identify safe shutdown equipment and instrumentation, and to facilitate suppression of a fire that could impact post-fire safe shutdown capability. The team independently inspected the fire brigade equipment, including personnel protective gear (e.g., turnout gear) and smoke removal equipment, to determine operational readiness for fire fighting.

b. Findings

Introduction. The team identified a finding of very low safety significance (Green), involving a non-cited violation of Millstone Unit 2 Operating License Condition 2.C.(3), and Unit 3 Operating License Condition 2.H, to implement and maintain all aspects of the approved fire protection programs (FPPs), in that Dominion had not adequately controlled fire fighting strategies as required by the FPPs. Specifically, Dominion did not implement adequate review, approval and controlled distribution of fire fighting strategies to provide for the adequate development and maintenance of effective strategies. As a result, the team determined that the guidance in the fire fighting strategies for several Unit 2 and 3 fire areas would likely result in a delay in manual fire suppression activities.

Description. The team reviewed eight fire fighting strategies, and identified multiple issues with the strategies. The team determined that the fire fighting strategies were not controlled as required by CM-AA-FPA-100, "Fire Protection/Appendix R (Fire Safe Shutdown) Program," and CM-AA-FPA-102, "Fire Protection and Fire Safe Shutdown Review and Preparation Process and Design Change Process." Specifically, CM-AA-FPA-102, Attachment 12A, required Dominion to maintain effective fire fighting strategies, including review, approval, and controlled distribution of fire fighting strategies. The team identified that fire fighting strategies were being updated and informally distributed by the site Fire Marshall in lieu of the implementation of appropriate independent reviews, approvals, and controlled distribution.

Unit 2 Issues

The team reviewed the fire fighting strategy and the relevant fire zone design features for Unit 2 fire zone A-16, the "B" EDG room. The team noted that the "A" and "B" EDG rooms shared a common ventilation system that included fan F-27 to circulate air between the two rooms. The team also noted that the fire detection systems in the two rooms utilize heat detectors and that normal personnel access to the "B" room is via the "A" room. Based on the ventilation, fire detection (i.e., heat vs. smoke detection) and personnel access design features, the team concluded that the first indication of a fire, in

particular a small or slowly developing fire, in the "B" EDG room would likely be the observation of smoke in the "A" EDG room. The team identified that the fire fighting strategy did not alert the fire brigade to the possibility that smoke in the "A" EDG room could be due to a fire in the "B" EDG room, did not provide any guidance regarding operations of recirculation fan F-27, and did not provide any guidance for additional fire location diagnostics, such as early verification of conditions in adjacent areas. The team also noted that the fire fighting strategy for EDG rooms did not provide guidance for operators to consider securing of a running EDG prior to initiation of manual suppression activities.

The team also identified an inconsistency in the fire fighting strategy for the Unit 2 west 480V load center room, in that the strategy did not appropriately identify the fire suppression equipment. Specifically, the strategy's "Fire Suppression Capabilities" section specified one specific fire hose station that included a hose that was not long enough to reach the areas covered by the specific strategy, while the "Initial Actions" section listed a different hose station that did include a hose of sufficient length.

As a result, the team determined that manual suppression in these Unit 2 areas could reasonably be delayed as a result of the fire fighting strategy deficiencies.

Unit 3 Issues

The team reviewed the fire fighting strategy for Unit 3 fire zone CB-1, west switchgear room, and determined that the strategy provided inadequate guidance for manual discharge of CO₂. The strategy for the west switchgear room provided instructions for aligning fire dampers prior to initiating the CO₂ suppression system. However, the section of the strategy erroneously referred to the damper alignment as if the strategy was dealing with a fire in the east switchgear room. In addition, the team discussed this issue with a fire brigade leader and interviewed a fire brigade advisor. The team determined that the information provided in the strategy, which referenced both west and east switchgear rooms, was sufficiently inconsistent and misleading to result in the brigade members delaying the initiation of the CO₂ suppression system until they could verify the damper operation instructions were correct.

The team also identified an error in the fire fighting strategy for the Unit 3 main transformer area, in that the specified fire hydrant for manual fire fighting had been removed by a modification, and a new hydrant, installed in an adjacent area, was not listed.

As a result, the team determined that manual suppression in these Unit 3 areas could reasonably be delayed as a result of the fire fighting strategy deficiencies.

Analysis. The team determined that the failure to control fire fighting strategies as required by the fire protection program was a performance deficiency. Specifically, CM-AA-FPA-100 and CM-AA-FPA-102 required Dominion to maintain effective fire fighting strategies, and required review, approval, and controlled distribution of fire fighting strategies. As a result, Dominion had not provided fully effective guidance in the

fire fighting strategies for the Unit 2 "B" EDG room, and the Unit 3 west switchgear room, such that delays in manual fire fighting activities would likely occur.

This finding was more than minor because it adversely affected the availability and capability objectives of the protection against external events (i.e., fire) attribute under the Mitigating Systems Cornerstone. Specifically, the above examples would likely cause delays in manual fire fighting activities and, therefore, adversely affected the defense-in-depth aspect of the fire protection program to limit fire damage by quick suppression of those fires that occur. The team performed a Phase 1 SDP screening, in accordance with NRC IMC 0609, Appendix F, "Fire Protection Significance Determination Process." This finding affected fire prevention and administrative controls, and was screened to very low safety significance (Green) because this failure to control fire fighting strategies was determined to represent a low degradation rating. A low degradation rating was assigned because there was only a minimum impact to the performance of manual fire fighting activities, such that those activities were expected to display nearly the same level of effectiveness and reliability as they would have the degradation not been present. In addition, this issue did not affect the likelihood that a fire might occur. The team concluded that this performance deficiency was reasonably within Dominion's ability to foresee and prevent.

This finding had a cross-cutting aspect in the area of Human Performance, Resources component, because Dominion failed to ensure complete and accurate fire fighting strategies were available to the fire brigade to support timely extinguishment of fires. [H.2.(c)]

Enforcement. Unit 2 License Condition 2.C.(3), and Unit 3 License Condition 2.H, in part, require that Dominion implement and maintain in effect all provisions of the approved FPP as described in the Final Safety Analysis Report. Dominion's FPP as implemented by CM-AA-FPA-100 and CM-AA-FPA-102 require the maintenance of effective fire fighting strategies, through a program that includes appropriate review, approval, and controlled distribution of fire fighting strategies. Contrary to above, fire fighting strategies for Unit 2 and 3 were not controlled as required by Dominion's Fire Protection Program. Because this finding was of very low safety significance (Green) and was entered into Dominion's corrective action program (CR 388786), this violation is being treated as a non-cited violation (NCV), consistent with section 2.3.2.a. of the NRC Enforcement Policy. **NCV 05000336/2010008-01; 05000423/2010008-01, Failure to Properly Control Fire Fighting Strategies.**

.04 Protection from Damage from Fire Suppression Activities

a. Inspection Scope

The team walked down the selected fire areas and adjacent areas, and reviewed selected documents to determine whether redundant safe shutdown trains could be potentially damaged from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems. Specifically, to determine whether a potential existed to damage redundant safe shutdown trains, the team evaluated whether:

- A fire in one of the selected fire areas would not release smoke, heat, or hot gases that could cause unintended activation of suppression systems in adjacent fire areas which could potentially damage all redundant safe shutdown trains;
- A fire suppression system rupture, inadvertent actuation, or actuation due to a fire, in one of the selected fire areas, could not directly damage all redundant trains (e.g., sprinkler caused flooding of other than the locally affected train); and,
- Adequate drainage was provided in areas protected by water suppression systems.

b. Findings

No findings were identified.

.05 Alternative Shutdown Capability

a. Inspection Scope

Methodology

The team reviewed the safe shutdown analysis, operating procedures, piping and instrumentations drawings (P&IDs), electrical drawings, the UFSAR, and other supporting documents to evaluate whether Dominion could achieve and maintain hot and cold shutdown from outside the control room, for fire scenarios that rely on a shutdown methodology from outside the control room. The team assessed Dominion's ability to shutdown the plant from outside the control room both with and without the availability of offsite power. Plant walkdowns were also performed to independently verify whether the plant configuration was consistent with that described in the FHA and safe shutdown analysis. The team's review focused on systems selected for reactivity control, reactor coolant make-up, reactor decay heat removal, process monitoring instrumentation, and support system functions to assess the adequacy of the selected systems. In addition, the team assessed the systems and components credited for use during the shutdown to determine whether they would remain free from fire damage. The team reviewed the transfer of control from the control room to the alternative shutdown locations to verify whether it would be affected by fire-induced circuit faults (e.g., by the provision of separate fuses and power supplies for alternative shutdown control circuits).

Similarly, for fire scenarios that relied on a shutdown from the control room, the team also evaluated the shutdown methodology to verify the adequacy of the selected components and systems to achieve and maintain safe shutdown conditions.

Operational Implementation

The team reviewed the training program for licensed and non-licensed operators to assess training adequacy for alternative shutdown systems and procedures. In addition, the team evaluated operator minimum shift staffing requirements to verify whether an adequate number of operators were available on-site at all times, exclusive of those assigned as fire brigade members, to perform fire related safe shutdown activities using either the normal or alternative shutdown systems.

The team reviewed the procedures utilized for post-fire safe shutdown, walked down key equipment and control stations, and performed a tabletop walk through of selected procedure steps to independently assess human factor elements and procedure adequacy. The team also evaluated the available time to assess whether operators could reasonably perform the specific actions needed to maintain plant parameters within specified limits. Specifically, the team evaluated the time critical operator actions to restore alternating current (AC) electrical power, transfer operational command and control from the main control room to the remote shutdown panel, establish reactor coolant make-up, and establish decay heat removal.

The team reviewed selected operator manual actions to determine whether Dominion had adequately validated and verified that the actions could be implemented in accordance with approved procedures, and in the time necessary to support the safe shutdown method for each fire area. In addition, the team reviewed the most recent test results for alternative shutdown transfer capability, and instrumentation and control functions, to verify whether the testing was adequately conducted, the acceptance criteria were met, and any potential performance issues were identified, to ensure the alternative shutdown capability remained functional.

b. Findings

No findings were identified.

.06 Circuit Analysis

a. Inspection Scope

The team reviewed Dominion's post-fire safe shutdown analysis for the selected fire areas to determine whether the analysis appropriately identified the structures, systems, and components important to achieving and maintaining safe shutdown. In addition, the team evaluated the analysis to assess whether the necessary electrical circuits were properly protected and whether circuits that could adversely impact safe shutdown due to hot shorts, shorts to ground, or other failures were identified, evaluated, and properly dispositioned to ensure spurious actuations would not prevent safe shutdown.

The team's review considered fire and cable attributes, potential undesirable consequences, and common power supply or bus issues. Specific review aspects included fire threat credibility, cable insulation properties, cable failure modes, and potential spurious actuations which could result in flow diversion or loss of coolant events.

The team also reviewed cable routing data bases for a sample of components required for post-fire safe shutdown to determine whether the cables were routed as described in the safe shutdown analyses.

Cable failure modes were reviewed for the following components:

Unit 2

- 3RCS*LI459C, Pressurizer Level Indicator
- 3RCS*PI455B, Pressurizer Pressure Indicator
- 3RCS*MV8000A, Pressurizer Relief Isolation Valve
- 3RHS*MV8701A, Residual Heat Removal Inlet Isolation Valve
- 3CHS*MV8438C, Charging Header Isolation Valve

Unit 3

- A-EDG, Emergency Diesel Generator
- LI-1123B, Steam Generator Level Indicator
- LI-110X, Pressurizer Level Indicator

In addition, the team reviewed circuit breaker coordination studies to assess whether equipment needed to support post-fire safe shutdown activities could be impacted due to inadequate over-current coordination. Additionally, the team reviewed a sample of circuit breaker maintenance records to verify whether the circuit breakers for components required for post-fire safe shutdown were properly maintained in accordance with approved procedures.

b. Findings

Introduction. The team identified a finding of very low safety significance (Green), involving a cited violation of Millstone Unit 2 Operating License Condition 2.C.(3) to implement and maintain all aspects of the approved fire protection program. Specifically, Dominion failed to protect required post-fire safe shutdown components and cabling to ensure one of the redundant trains of equipment remained free from fire damage as required by 10 CFR Part 50, Appendix R, Section III.G.2. In lieu of providing the required separation, Dominion utilized unapproved operator manual actions to mitigate component malfunctions or spurious operations caused by potential single fire induced circuit faults (hot short, open circuit or short to ground).

Description. As a result of a self-assessment (Self-Assessment Report 000506), Dominion initiated condition report (CR) 119114 in November 2008 to identify the lack of

documentation concerning a review of their use of operator manual actions against the guidance contained in Regulatory Issue Summary (RIS) 2006-10, "Regulatory Expectations with Appendix R Paragraph III.G.2 Operator Manual Actions," dated June 30, 2006. The CR also identified that exemption requests may be needed to obtain NRC approval for the use of operator manual actions.

In addition to information provided to the licensees in RIS 2006-010, the NRC issued several enforcement guidance memoranda (EGM) to promulgate interim enforcement guidance to the staff while the issues of non-compliant manual actions and fire induced circuit faults were being resolved. Specifically, EGM 07-004 defined March 6, 2009, as the date by which corrective actions were to have been completed for non-compliances involving the use of unapproved post-fire manual actions. If corrective actions were completed by this date the licensees would be eligible to receive enforcement discretion for the associated violations of NRC requirements. The scope of this EGM included use of manual actions to mitigate component malfunctions that resulted from fire-induced single spurious actuations but did not include malfunctions due to multiple spurious actuations. The NRC subsequently issued EGM 09-002 to describe the conditions limiting enforcement during the resolution of fire protection concerns involving multiple spurious actuations. EGM 09-002 made enforcement discretion available provided licensees entered these non-compliances into their corrective action program and implemented interim compensatory measures within six months of the issuance of NRC Regulatory Guide (RG) 1.189, Rev. 2, and then implemented corrective actions within three years of the issuance of RG 1.189, Rev. 2. Accordingly, based on the issuance date of the RG, May 2, 2010, was established as the date by which non-compliances associated with multiple spurious actuations were to be entered into the corrective action program and November 2, 2012, is the date by which corrective actions must be completed for licensees to be eligible to receive enforcement discretion for the associated non-compliances. At the time of this inspection, a fleet wide Dominion project for identification and resolution of multiple spurious operation issues was in progress.

In June 2010, during the performance of a fire protection self-assessment (SAR001036), Dominion initiated CR 383734 which documented that CR 119114 had been improperly closed to the multiple spurious operations evaluation process. Further review by the team confirmed that issues opened in CR 119114 associated with the use of unapproved manual actions to address single spurious actuation had not yet been resolved. Additional licensee reviews during this inspection subsequently identified numerous components that did not meet the separation requirements of 10 CFR Part 50, Appendix R, Section III.G.2. This issue was entered into Dominion's corrective action program as CR 388775.

Specifically, the team reviewed information provided by Dominion concerning potential unapproved manual operator actions in seven fire areas (R-2, R-4, R-9, R-10, R-13, R-14, and R-17). The team focused on actions that needed to be completed in a relatively short period of time to ensure core cooling, specifically feeding of the steam generators (SG) using the available auxiliary feedwater system (AFW). The team reviewed the Fire Safe Shutdown Analysis and procedures to reach hot shutdown for each of these areas, identifying the credited path that would need to be free of fire

damage to be in compliance with Appendix R, Section III.G.2. This included identification of the required pump or pumps and flow path including the SG flow control valve (FCV) to one of the two SGs, referred to as the required path. The team then identified any flow path to the other SG using the other FCV, referred to as the redundant path.

The team identified the post-fire safe shutdown required paths and the associated components that were operated by procedures from outside the control room using manual actions to restore/maintain the required safe shutdown function because of potential fire damage. This review identified five general types of actions needed to maintain decay heat removal with the SGs that could be subject to exemption. These included: 1) operating the required flow path FCV locally or from the fire safe shutdown panel; 2) closure of the required SG blowdown valve; 3) restoration of instrument air, if offsite power is lost, to allow continued operation of the FCVs from the control room or fire safe shutdown panel; 4) operation of the turbine driven (TD) AFW pump from the fire safe shutdown panel including not over filling the SGs; and 5) actions to protect the required 4160 volt AC bus and DC power supplies. This resulted in 11 actual individual unapproved manual actions for which the licensee had not requested exemption.

Analysis. The team identified a performance deficiency in that Dominion failed to protect components credited for post-fire safe shutdown from fire induced damage that could result in a single spurious actuation. The performance deficiency was more than minor because it affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences in the event of a fire. Specifically, the use of operator manual actions during post-fire shutdown is not as reliable as normal systems operation which could be utilized had the separation requirements of 10 CFR 50, Appendix R, Section III.G.2 been met and therefore prevented fire damage to credited components and/or cables. The team used IMC 0609, Appendix F, "Fire Protection Significance Determination Process (SDP)," Phase 1 and an SRA conducted Phase 3 analyses, to determine that this finding was of very low safety significance (Green).

In six of the identified fire areas actions were needed to maintain AFW flow to the required SG within 30 to 45 minutes. The actions to restore charging flow were not needed until over three hours and were not reviewed. Actions needed to operate SG atmospheric dump valves to control the plant cooldown were not reviewed, because steam generator safety valves were the assumed path for decay heat removal. Simple actions to isolate components such as repositioning switches at the bottle-up panel to force isolations and prevent spurious actuations to isolate the SGs were not reviewed, because they were essentially equivalent to actions from the control room. Actions needed to restore instrument air to support control room operation of the AFW FCVs were not reviewed because of installed two-hour air bottles on each FCV. As such, fire areas R-4, R-9, R-10, and R-17 were screened as having low degradation in the Phase 1 of the Fire SDP, Inspection Manual Chapter 0609, Appendix F.

The SRA conducted Phase 3 risk evaluations for the unapproved manual action in fire areas R-2, R-13, and R-14. The individual analyses reviewed the increase in risk due to the unapproved manual actions. These evaluations allowed for use of the available flow

path to the redundant steam generator. The bases case assumed conformance with III.G.2 (i.e., operation from the required flow path components from the control room)

and the condition case assumed non-conforming manual actions taking place outside the control room. SPAR H was used to model both the conforming and non-conforming manual actions. Specifically:

- R-2 - the required path to the #1 steam generator with operation of the "A" MD AFW pump from the control room with local manual operation of the "A" FCV vice operation from the control room.
- R-13 - the required path to the #2 steam generator with operation of the TDAFW pump and the "B" FCV from the fire safe shutdown panel vice the control room.
- R-14 - the required path to the #2 steam generator with either the TDAFW pump or the "B" MDAFW pump operating from the control room, with:
 - local manual action to isolate the 24D safety bus, and align the "B" EDG, vice no action needed
 - local manual operation of the "B" FCV vice operation from the control room.

Based on the fire frequencies specified in the Individual Plant Evaluation of External Events (IPEEE) for these areas, the total conditional core damage probability increase given the local manual actions vice control room was estimated to be in the range of 1 core damage accident in 1.1 million years (high E-7 range).

The team found the unapproved manual actions in fire areas R-2, R-4, R-9, R-10, R-13, R-14, and R-17 to be reasonable interim compensatory measures (pending licensee actions to resolve the non-compliances or obtain exemptions) because they did not require complicated actions, adequate time was available to accomplish the actions and the actions were properly included in the appropriate abnormal operating procedures. This finding has a cross cutting aspect in the area of problem identification and resolution associated with the corrective action program because Dominion did not completely and accurately identify deficiencies related to single spurious actuations of credited post-fire safe shutdown components. As a result, appropriate actions were not taken to address the use of unapproved manual actions as described above. (P.1.a)

Enforcement. License Condition 2.C.(3) specifies, "The licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report and as approved in the SER dated September 19, 1978, and supplements dated October 21, 1980, November 11, 1981, October 31, 1985, April 15, 1986, January 15, 1987, April 29, 1988, July 17, 1990, and November 3, 1995." Final Safety Analysis Report, Section 9.10.6 specifies that the licensee will meet the requirements of 10 CFR Part 50, Appendix R, Section III.G.2 that identifies three methods of protecting post-fire safe shutdown equipment from fire damage. Additionally, by letter B17399, dated March 17, 1999, Dominion informed the NRC staff of variances between the SER supplement (dated July 17, 1990) related to post-fire alternative shutdown capability, and their current (1999) safe shutdown strategy for Millstone Unit 2. Letter B17399, in part, clarified that only four fire areas (R-1, R-3, R-11, and R-16) relied on alternative shutdown capability. As a result, use of manual

operator actions in lieu of protecting the equipment in accordance with 10 CFR 50, Appendix R, III.G.2 would only be allowed if approved by the NRC.

Contrary to the above, through September 22, 2010, Dominion failed to implement their fire protection program by using one of the three methods described in Appendix R, Section III.G.2 to protect circuits required for post-fire safe shutdown from fire induced circuit damage. Specifically, Dominion continued to use unapproved manual actions to mitigate post-fire safe shutdown equipment malfunctions caused by a single spurious actuation without having obtained NRC approval. This finding is being cited because not all of the criteria specified in section 2.3.2.a of the NRC Enforcement Policy for a non-cited violation were satisfied. Specifically, Dominion failed to restore compliance within a reasonable amount of time after the violation was identified in CR 119114 in November 2008. Additionally, because the violations were not corrected by March 6, 2009, Dominion is not eligible to receive enforcement discretion previously available by EGM 07-004. **VIO 05000336/2010008-02, Failure to Protect Safe Shutdown Equipment From the Effects of Fire.**

.07 Communications

a. Inspection Scope

The team reviewed selected fire related safe shutdown procedures, the FHA, the safe shutdown analysis, and associated documents to assess whether the expected method of communications would be available during and following a fire. During this review, the team considered the effects of ambient noise levels, clarity of reception, reliability, and coverage patterns. The team inspected the designated emergency storage lockers to verify whether sufficient portable radios would be available for the fire brigade and operators. In addition, the team assessed whether communications equipment, such as sound powered phone system cables, repeaters, transmitters, and uninterruptable and back-up power supplies would be adversely affected by a fire.

b. Findings

No findings were identified.

08 Emergency Lighting

a. Inspection Scope

The team walked down the emergency lights in the selected fire areas to independently evaluate the placement and coverage areas of the lights. The team assessed whether the lights provided adequate illumination on local equipment and instrumentation, required for post-fire safe shutdown, to ensure local operations could be reliably performed under expected post-fire conditions. Emergency light placement was also evaluated to determine adequate illumination of local area access and egress pathways.

The team verified whether the emergency light batteries were rated for at least an eight-hour capacity. Preventive maintenance procedures, the vendor manual, completed surveillance tests, and battery replacement practices were also reviewed to evaluate whether the emergency lighting was being maintained in a manner that would ensure reliable operation.

b. Findings

No findings were identified.

.09 Cold Shutdown Repairs

a. Inspection Scope

The team reviewed dedicated repair procedures for selected components which might be damaged by the fire, to determine whether the a cold shutdown could be achieved within the time specified in the design and licensing bases. The team also reviewed the associated equipment, materials, and tools needed to perform the repairs (e.g., pre-cut cables with lugs attached), to determine whether they were available and accessible on-site.

b. Findings

No findings were identified.

.10 Compensatory Measures

a. Inspection Scope

The team reviewed selected fire protection and post-fire safe shutdown equipment, systems, or features that were out-of-service, degraded, or inoperable (e.g., detection and suppression systems, passive fire barriers, pumps or valves, or electrical devices providing safe shutdown functions or capabilities) to determine whether Dominion had implemented appropriate compensatory measures. The team also evaluated selected short term compensatory measures to assess whether the degraded function or feature was adequately compensated until appropriate corrective action could be taken to return the equipment to service. In addition, the team assessed Dominion's effectiveness to return equipment to service in a reasonable period of time.

b. Findings

No findings were identified.

.11 Large Fires and Explosions Mitigation Strategies

a. Inspection Scope

The team reviewed Dominion's preparedness to handle large fires or explosions by reviewing two mitigating strategies on each unit to verify they continue to meet the requirements of the Unit 2 and Unit 3 license conditions 2.C.(13) and 2.C.(10), respectively by determining that:

- Procedures are being maintained and adequate;
- Equipment is properly staged and is being maintained and tested; and,
- Station personnel are knowledgeable and can implement the procedures.

b. Findings

The results of this inspection are document in NRC Inspection Report 05000336/2010011 and 05000423/2010011.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (IP 71152)

a. Inspection Scope

The team reviewed a sample of CRs associated with the FPP and post-fire safe shutdown issues to determine whether Dominion was appropriately identifying, characterizing, and correcting problems associated with these areas and whether the planned or completed corrective actions were appropriate. The CRs reviewed are listed in the attachment.

The team determined that the licensee had identified several multiple spurious operation (MSO) scenarios for further review. Dominion placed the identified scenarios into their corrective action program and implemented alternate compensatory measures prior to May 2, 2010.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 (Closed) URI 50-423/2003-02-03, Generic Industry and NRC Resolution of Fire Safe Shutdown Issues

NRC Inspection Report 50-423/2003-002 closed Licensee Event Report 50-423/2002-00 Supplement 01, which was associated with inadequate validation of fire safe shutdown assumptions (fire-induced circuit fault). In addition, that inspection report also closed a previous NRC unresolved item (URI) 50-423/2002-05-07 which tracked the resolution of

an NRC and industry initiative to develop generic guidance to evaluate fire-induced circuit failures. That URI was closed because it was considered too narrow in scope, in that it only addressed the resolution of an issue related to power operated relief valves. That inspection report opened a new URI (50-423/2003-02-01) to track the broader resolution of the issue. (Note: The NRC tracking number was subsequently administratively changed to URI 50-423/2003-02-03.)

There were two specific aspects of fire-induced circuit faults that the NRC subsequently addressed. The first issue involved fire-induced single circuit cable faults and associated operator manual actions, not specifically approved by the NRC, which licensees relied upon as compensatory measures to mitigate potential adverse effects on equipment required for post-fire safe shutdown. NRC EGM 2007-004 authorized enforcement discretion for such issues, provided that licensees entered those issues into their corrective action programs, instituted appropriate compensatory measures until the issues were corrected, and either (a) corrected the conditions or (b) submitted an exemption request to the NRC, by March 6, 2009. The EGM also stated that non-compliances involving single fire-induced circuit faults identified after March 6, 2009 would be subject to enforcement actions.

The second issue involved fire-induced multiple circuit cable faults and associated operator manual actions. EGM 2009-002, dated May 14, 2009, authorized enforcement discretion for such issues, provided that licensees identified those issues, entered them into their corrective action programs, and instituted appropriate compensatory measures until the issues were corrected, within the six month period following a planned revision to RG 1.189, "Fire Protection for Nuclear Power Plants." RG 1.189, Rev. 2, issued in October 2009, provided a method acceptable to the NRC to evaluate and resolve multiple fire-induced circuit faults. After the 6 month period for identification of issues, the EGM further authorized enforcement discretion an additional 30 month period, for licensees to resolve the identified multiple fire-induced circuit fault issues.

The two EGMs and RG 1.189, discussed above, provide adequate technical guidance and an acceptable time table to evaluate and resolve the issues tracked by URI 50-423/2003-02-03, regarding fire-induced cable faults. The adequacy of licensee actions to address these issues will continue to be reviewed within the framework of the NRC's reactor oversight process which includes the triennial fire protection team inspections and problem identification and resolution inspections. Therefore, URI 50-423/2003-02-03 is no longer necessary to track these issues and is closed.

.2 Temporary Instruction (TI) 2515/181, "Validate the Effectiveness of the Regulatory Infrastructure Related to Fire-Induced Circuit Failures and Operator Manual Actions"

Background

This TI is intended to verify that the regulatory infrastructure is sufficient for licensees to achieve compliance in the areas of fire induced circuit failures and post-fire operator manual actions for spurious actuations due to fire-induced failures. 10 CFR Part 50, Appendix R, Section III.G.2, identifies three acceptable methods to meet the requirement for maintaining one of the redundant trains in the same fire area, outside of primary

containment, free of fire damage. The three methods include a combination of physical barriers, spatial separation, and fire detection and automatic suppression systems.

In October 2009, the NRC issued guidance in Regulatory Guide 1.189, "Fire Protection for Nuclear Power Plants," Revision 2, to identify acceptable methods for resolving issues related to circuits required for post-fire safe shutdown and circuits important to post-fire safe shutdown. Equipment required post-fire safe shutdown (credited train) must use one of the three methods identified in Section III.G.2 to protect the circuits located within the same fire area from fire damage, including single and multiple spurious operations. For important to post-fire safe shutdown circuits, the licensee may use operator manual actions if the licensee demonstrates they can be shown to be feasible and reliable or resolve issues using other analysis methods including fire modeling.

a. Inspection Scope

During this inspection, the team reviewed a representative sampling of single and multiple spurious issues for Unit 2 to:

- 1) Determine if the licensee used the guidance in Regulatory Guide 1.189, Revision 2 and Nuclear Energy Institute (NEI) 00-01, "Guidance for Post Fire Safe Shutdown Analysis," Revision 2, to successfully address single and multiple spurious issues in a manner that met the regulations. This included equipment required for safe shutdown and equipment important for safe shutdown.
- 2) Evaluate the adequacy of the licensee's method for determining that the required trains of safe shutdown equipment do not rely on operator manual actions.
- 3) Evaluate the adequacy of the licensee's method for determining if redundant trains of post fire safe shutdown equipment (required and important to post fire safe shutdown equipment) are made inoperable or nonfunctional due to single or multiple spurious actuations.
- 4) Evaluate the adequacy of the licensee's multiple spurious actuation evaluation in accordance with RG 1.189 and NEI 00-01 for alternative or dedicated shutdown areas.
- 5) Evaluate the licensee's understanding of the requirements related to allowed operator manual actions. (Note: The team added this question to assure sufficient information was available related to Task 4 of the fire protection stabilization plan.)

The team reviewed the Unit 2 post-fire safe shutdown analysis, Unit 2 licensing basis, project instructions, drawings, and corrective action documents. The team interviewed the multiple spurious operation project expert panel chairman, the fire protection safe shutdown engineer, the fire protection system engineer, and a reviewer who participated in the screening circuit analysis and disposition of the expert panel questions. Two NRC staff with expertise in circuit analysis and the requirements related to multiple spurious

operations from the Fire Protection Branch in the Office of Nuclear Reactor Regulation provided assistance to the team during this inspection.

b. Findings

No findings were identified.

Licensee Process

Dominion established a process that followed the guidelines established in NEI 00-01. This process included the following components:

- Establishment of an expert panel that reviewed the generic list of multiple spurious operations established in NEI 00-01, Appendix G, "Generic List of MSOs," for pressurized water reactors. The expert panel identified the multiple spurious operations that could be applicable based on the Unit 2 plant-specific design;
- Evaluation of the identified applicable multiple spurious operation scenarios to determine whether the existing post-fire safe shutdown analysis and safe shutdown strategy already included measures that adequately addressed any potential adverse impacts of the particular scenario;
- Identification of cables for the components within the scope of the multiple spurious operations scenario evaluation and identification of their physical routing by fire areas;
- Performance of an initial circuit analysis to determine which of the cables selected in the previous step could cause a component to actuate from their initial state to an undesired state due to fire induced circuit damage;
- Performance of fire area analyses to identify fire areas that contained the cables for each of the components whose combinations are necessary to result in a multiple spurious operation of concern;
- Documentation and evaluation of multiple spurious operation scenarios that require resolution in the corrective action program and implement compensatory measures;
- Performance of additional circuit and fire area analyses for those multiple spurious operation scenarios that have been entered into the corrective action program to confirm which scenarios could realistically occur and implement corrective for final resolution; and,
- Documentation of the multiple spurious operation project process, evaluations and results.

At the time of this inspection, the team determined that Dominion had not implemented this process for their alternative or dedicated shutdown areas. Dominion indicated that they had plans to evaluate their alternative or dedicated shutdown areas following the same process described above.

1) Determine if the licensee used the guidance contained in Regulatory Guide 1.189, Rev. 2, and NEI 00-01, Rev. 2, to successfully address single and multiple spurious operations in a manner that met regulations. This includes equipment required for safe shutdown and equipment important for safe shutdown.

The team found that Dominion established appropriate project instructions for conducting their expert panel and for conducting their circuit analysis. The project instructions utilized the guidance contained in NEI 00-01, Section 3 for evaluating the different circuit failure combinations and utilized the guidance contained in NEI 00-01, Appendix F for conducting the expert panel evaluations of potential MSO scenarios including the generic multiple spurious operations listed for pressurized water reactors in NEI 00-01, Appendix G. The team also found that Dominion programs were adequate to identify single spurious operations. However, the team found that unapproved operator manual actions were being used to mitigate previously identified equipment spurious actuations that could be caused by single fire induced circuit failures. Refer to section 1R05.06 above for details.

The team concluded Dominion used the guidance in RG 1.189 and NEI 00-01 to conduct their review for single and multiple spurious operations. The team concluded that these documents provided sufficient guidance for Dominion to establish an appropriate review process that evaluated spurious operations of both required and important post fire safe shutdown equipment.

2) Evaluate the adequacy of the licensee's method for determining that the redundant trains of safe shutdown equipment do not rely on operator manual actions.

The team found that Dominion's existing safe shutdown analysis program adequately determined where required trains of post-fire safe shutdown equipment relied upon operator manual actions. The use of manual operator actions to address single spurious actuation issues are identified and documented in 25203-SP-M2-SU-1046, MP 2, Appendix R Compliance Report, Rev. 01. However, the team also found that the licensee had not corrected conditions that resulted in reliance on operator manual actions, nor had Dominion obtained NRC approval for the use of operator manual actions that involved equipment required for safe shutdown. Refer to section 1R05.06 for details.

The team also noted that Dominion has not yet identified MSO scenarios whose resolution may require reliance on operator manual actions. At the time of this inspection Dominion's MSO program had progressed to the point where CRs have been initiated for multiple spurious operation scenarios for which their initial reviews determined to be potential viable concerns. As a result, additional licensee reviews and evaluations will be necessary to determine which MSO scenarios may require corrective

actions and whether operator manual actions would be considered as a viable corrective action.

Based on these reviews, the team concluded that Dominion's methods are adequate to identify where the redundant trains of safe shutdown equipment do not meet the separation requirements of 10 CFR 50, Appendix R and the safe shutdown methodology for single or multiple spurious operations may rely on operator manual actions.

3) Evaluate the adequacy of the licensee's method for determining if redundant trains of safe shutdown equipment are made inoperable or nonfunctional due to single or multiple spurious actuations.

Dominion does not consider safe shutdown equipment to be inoperable or nonfunctional due to a potential single spurious actuation if they have determined that an acceptable operator manual action has been established. However, Dominion did acknowledge the need to take actions to establish compliance with the requirements of 10 CFR 50, Appendix R, Section III.G.2. Refer to section 1R05.06 for details of the violation.

Dominion performed a functionality assessment for potential component failures as a result of multiple spurious operations on a fire area basis. Dominion considered these components as "operable but degraded and nonconforming." Consequently, Dominion evaluated the components using the guidance described in Regulatory Information Summary 2005-20, "Revision to NRC Inspection Manual Part 9900 Technical Guidance, Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," Rev. 1. Dominion determined that the types of issues identified by the multiple spurious operation review would not significantly affect the plant margin of safety and that these multiple spurious operations did not constitute a degraded fire protection feature within the scope of the Millstone Unit 2 Technical Requirements Manual (TRM).

Dominion has determined the impact of multiple spurious operations had low risk and safety consequences. Dominion based this conclusion, in part, on the following technical factors: (1) a large fire lasting longer than 20 minutes would likely be necessary to result in a multiple spurious operation; (2) the fire will likely have been detected prior to reaching a damaging level; (3) the suppression systems will actuate long before the temperatures reach the levels required to damage thermoset cables (500–700 °F); (4) the fire must continue in the area of the cables for long periods to result in maloperation; and, (5) multiple hot shorts would need to occur.

Based on the above assessment, Dominion implemented interim compensatory measures in the form of enhanced operator rounds as described in their functional assessment prior to May 2, 2010 to provide an additional level of awareness. Dominion enhanced the operator rounds by: (1) training operators on the fire hazards to increase their awareness, (2) adding statements to the rounds for the types of items to monitor (e.g., degraded fire features and increased combustibles), and (3) requiring the operators to routinely document that these items were reviewed. In addition to the changes to the operator rounds, additional monitoring of fire detection system operability

has been implemented. Upon final confirmation that specific multiple spurious operation scenarios are valid concerns that require corrective actions.

Dominion specified that they would initiate individual corrective action documents and implement compensatory measures specified in their TRM for the identified nonconformance.

The team concluded Dominion had an adequate method for evaluating the operability and functionality of components subject to multiple spurious operations. However, actions to ensure compliance with Appendix R for single spurious actuation issues were not timely (refer to section 1R05.06 above).

4) Evaluate the adequacy of the licensee's multiple spurious actuation evaluation in accordance with Regulatory Guide 1.189 and NEI 00-01 for alternative or dedicated shutdown areas.

The team determined that Dominion had established a process to evaluate their alternative or dedicated shutdown areas. Dominion planned to implement this review following the steps used for evaluating the 10 CFR Part 50, Appendix R, Section III.G.2 multiple spurious operation evaluations.

5) Evaluate the licensee's implementation of the requirements related to allowed operator manual actions.

The team reviewed Dominion's implementation of guidance and requirements involving the use of operator manual actions for post-fire safe shutdown. Aspects reviewed included the differences regarding the use of operator manual actions contained in 10 CFR Part 50, Appendix R, Sections III.G.2 and III.G.3, including the circumstances under which an NRC exemption would be required. The team confirmed that Dominion understood that when reviewing the acceptability of specific manual actions associated with a licensing action, the NRC would utilize the guidelines contained in NUREG-1852, "Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire."

The team also reviewed Dominion's program for addressing the use of operator manual actions to resolve MSO issues. Specifically, the team confirmed that Dominion's program was consistent with the guidance specified in RG 1.189 and NEI 00-01, including differentiation between "required" and "important" to safe shutdown equipment.

4OA6 Meetings, including Exit

The team presented the preliminary inspection results to Mr. A. J. Jordan, Site Vice President, and other members of Dominion's staff on August 5, 2010. Following additional in-office and on-site reviews, an exit meeting was conducted by telephone with Mr. A. J. Jordan and other members of your staff on September 22, 2010. The team verified that this report does not contain proprietary information.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

P. Anastas, Safe Shutdown Program Engineer
J. Armstrong, Fire Protection Engineer
R. Beal, Senior Reactor Operator
R. Bonner, Supervisor, Electrical and I&C System Engineering
C. Chatman, Senior Reactor Operator
K. Cyr, Electrical Design Engineer
P. Dillon, Diesel System Engineer
P. Freeman, Electrical Design Engineer
W. Harrelson, Senior Reactor Operator
C. Karpinski, Fire Brigade Training
L. LeBaron, System Engineer
J. Lupa, Reactor Operator
J. Mangeno, Fire Protection Engineer
J. Martin, MSO Project Manger
T. McNatt, System Engineer
R. Patel, Electrical Design Engineer
B. Pinkowitz, Simulator Instructor
J. Powers, System Engineer
J. Rigatti, Manager, Nuclear Engineering
T. Ryan, System Engineer
S. Wainio, Engineering Supervisor
B. Wilkens, Site Fire Marshal

NRC Personnel

S. Shaffer, Senior Resident Inspector- Millstone
B. Haagensen, Resident Inspector- Millstone
J. Krafty, Resident Inspector- Millstone

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000336/2010008-02 NOV Failure to Protect Safe Shutdown Equipment From the Effects of Fire. (Section 1R05.06)

Opened and Closed

05000336/2010008-01 NCV Failure to Control Fire Fighting Strategies
05000423/2010008-01 (Section 1R05.03)

Closed

05000423/2003002-03 URI Generic Industry and NRC Resolution of Fire Safe Shutdown Issues (Section 4OA5.1)

LIST OF DOCUMENTS REVIEWED

Fire Protection Licensing Documents

25203-SP-M2-SU-1046, Unit 2 Appendix R Compliance Report, Rev. 1
25212-BTP-9.5-1, Unit 3 Branch Technical Position 9.5-1 Compliance Report, Rev. 3
Unit 3 FSAR Fire Protection Evaluation Report, Rev. 23
Unit 2 Fire Hazards Analysis Report, Rev. 11
Unit 2 FHA Boundary Dwg., Sh. 1, Auxiliary & Containment Bldg, Elev. minus 45 ft., Rev. 3
Unit 2 FHA Boundary Dwg., Sh. 2, Auxiliary & Containment Bldg, Elev. minus 25 ft., Rev. 2
Unit 2 FHA Boundary Dwg., Sh. 3, Auxiliary & Containment Bldg, Elev. minus 5 ft., Rev. 3
Unit 2 FHA Boundary Dwg., Sh. 4, Auxiliary & Containment Bldg, Elev. 14 ft., Rev. 5
Unit 2 FHA Boundary Dwg., Sh. 5, Auxiliary & Containment, Elev. 25 ft., Rev. 3
Unit 2 FHA Boundary Dwg., Sh. 6, Auxiliary & Containment, Elev. 38 ft., Rev. 6
Unit 2 FHA Boundary Dwg., Sh. 7, Turbine Bldg, Elev. 14 ft., Rev. 4
Unit 2 FHA Boundary Dwg., Sh. 8, Turbine Bldg, Elev. 31 ft., Rev. 3
Unit 2 FHA Boundary Dwg., Sh. 9, Turbine Bldg, Elev. 54 ft., Rev. 2
Unit 2 FHA Boundary Dwg., Sh. 10, Outside Buildings, Rev. 4
Unit 2 FHA Boundary Dwg., Sh. 11, Yard Areas, Rev. 4

Fire Protection Program Procedures

CM-AA-FPA-100, Fire Protection / Appendix R (Fire Safe Shutdown) Program, Rev. 1
CM-AA-FPA-101, Control of Combustible and Flammable Materials, Rev. 2
CM-AA-FPA-102, Fire Protection, Fire Safe Shutdown Review, and Preparation Process and Design Change Process, Rev. 0
Unit 2 Technical Requirements Manual, Section 7.1, Appendix R Safe Shutdown Requirements, 2/02/10

Calculations and Engineering Evaluation Reports

25203-ER-08-0042, Unit 2 Delayed AFW Following a Fire in Area R-2, Rev. 0
 25205-ER-09-0002, Unit 2 & 3 Fire Protection Time Critical Operator Actions, Rev. 0
 25203-ER-99-0092, Unit 2 App- R Cooldown Analysis Assumptions and Results, Rev. 3
 25212-ER-97-0302, Section 6.4, Communications, Rev. 3
 98-ENG-02411-C2, Flooding Outside of Containment Evaluation, Rev. 1
 98-ENG-02621-M2, Instrument Air Requirement for Certain Safety Related Valves, Rev. 3
 99-026, Millstone Site Fire Loop Hydraulic Model, Rev. 1
 ACE 1392-CR107561, Potential for Water Relief through Pressurizer Safety Valves from a Control Room Fire, Rev. 0
 C OP 200.18, Time Critical Action Validation and Verification, Rev. 0
 M2-EV-970061, Unit 2 Compensatory Actions, Loss of Ventilation in Electric Switchgear Areas, Rev. 3
 M2-EV-97-0061, Compensatory Actions for Loss of Ventilation to Switchgear Areas, Rev. 3
 M2-EV-98-0013, 120 VAC Vital Bus Coordination Study, Rev. 0
 M2-EV-99-0093, Compensatory Measures for Loss of Ventilation, Rev. 4
 MP2-CD-1457, MEPL Determination, Rev. 0
 P1164-MP2-COORD, Breaker & Fuse Coordination for Panels D11, D12, D21, and D22, Rev. 0
 P1117-025, Unit 2 NFPA Code Compliance Deviation Closeout Review, 1/98
 PA84-065-0753GE, Unit 2 480V Breaker Over-current Trip Devices, Rev. 2
 PA85-082-0812GE, Unit 2 125VDC Coordination Study, Rev. 2
 RAS 121147, Reasonable Assurance of Safety for CR 121147, 12/18/08
 RAS 000159, Emergency Lighting Units with Melted & Discolored Lens, 7/21/10
 RAS 000066, Potential for Fire Damage to LCV112B/C, VCT Outlet Valves, Could Result in Damage to "A" CHS PP Credited for Post Fire Shutdown, Rev. 1
 S2-EV-99-0103, Safety Evaluation for TRM Change-99-2-16, Minimum Shift Staffing Required to Implement App-R Manual Actions, Rev. 0
 SP-GEE-6, Specification for 600 Volt Switchboard Wire, Rev. 2
 SP-GEE-19, Specification for 600 Volt Control Cable, Rev. 4
 SP-GEE-20, Specification for 600 Volt Instrument Cable, Rev. 3
 SP-GEE-22, Specification for 600 Volt Power Cable, Rev. 4
 SP-M3-EE-269, Appendix R Breaker Coordination Study, Rev. 2
 W2-517-744-RE, Unit 2 App-R Cooldown, Rev. 3

Drawings and Wiring Diagrams

25203-24071, Sh. 5, Unit 2 Fire Damper Schedule, Rev. 2
 25203-24091, Sh. C0102, Unit 2 Conduit Fire Seal Foam for Floor & Wall Detail, Rev. 2
 25203-24091, Sh. G0002, Unit 2 Fire Grout Seal Detail, Rev. 2
 25203-24092, Sh. T10F12, Unit 2 Penetration Seal Survey Map & Inspection Record, Rev. 1
 25203-28200, Sh. 69, Unit 2 LT-110X, LT-110Y Pressurizer Level Functional Diagram, Rev. 3
 25203-28500, Sh. 69A, Unit 2 LT-110X & 110Y Pressurizer Level Loop Diagram, Rev. 11
 25203-28500, Sh. 69B, Unit 2 LT-110X & 110Y Pressurizer Level Loop Diagram, Rev. 7
 25203-28500, Sh. 69C, Unit 2 LT-110X, 110Y Pressurizer Level Loop Diagram, Rev. 9
 25203-28500, Sh. 69D, Unit 2 LT-110X, 110Y Pressurizer Level Loop Diagram, Rev. 7
 25203-28500, Sh. 381, Unit 2 LT1123B Steam Generator Level Loop Diagram, Rev. 10
 25203-29550, Sh. 1, Unit 2 EDG Rooms Pre-action Systems, Rev. 1

25203-30001, Unit 2 Main Single Line Diagram, Rev. 30
25203-30101, Unit 2 Fire Shutdown Panel C10, Rev. 3
25203-31148, Sh. 3, Unit 2 Process Instruments Level Transmitters Connection Diag., Rev. 7
25203-32020, Sh. 27, Unit 2 ADV PV4224 Schematic, Rev. 1
25203-32020, Sh. 61, Unit 2 ADV Quick Open Control Schematic, Rev. 6
25203-32021, Sh. 5, Unit 2 Cable Vault Recirculating Fan MF19 Schematic, Rev. 4
25203-32023, Sh. 33, Unit 2 Cable Vault Fan MF123 Schmidt, Rev. 8
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25203-32041, Sh. 4, Unit 2 Diesel Generator 15G-12U Engine Control, Rev. 10
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25203-32041, Sh. 6, Unit 2 Diesel Generator 15G-12U Engine Control, Rev. 8
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25203-32041, Sh. 8, Unit 2 Diesel Generator 15G-12U Engine Control, Rev. 2
25203-32041, Sh. 9, Unit 2 Diesel Generator 15G-12U Engine Control, Rev. 6
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25203-39212, Sh. 1, Unit 2 "A" EDG Panel C26H Connection Diagram, Rev. 2
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25212-32449, Unit 3 RHS Inlet Isolation Valve 3RHS*MV8701A Cable Block Diagram, Rev. 6
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- 25212-34035, Unit 3 Conduit Plan Containment Structure Elev. 3 ft, Rev. 14
- 25212-34042, Unit 3 Containment Outer Annulus Elevation Safe Shutdown Review, Rev. 1
- 25212-34085, Unit 3 Conduit Plan, Auxiliary Building Elev. 24 ft., Rev. 17
- K-13942, Actuator Fail in Last Position for 2-SW-3.1A/B, 2-SW-3.2A/B, 2-SW-97A/B, Rev. 3

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- 25205-25003, Fire Loop operating & Hydraulic Schematic, Rev. 9
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- 25203-26005, Sh. 3, Unit 2 Condensate Storage & Auxiliary Feedwater System, Rev. 57
- 25203-26008, Sh. 2, Unit 2 Service Water, Rev. 94
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- 25203-26011, Sh. 5, Unit 2 Fire Protection Auto Sprinkler Valve Details, Rev. 8
- 25203-26011, Sh. 7, Unit 2 Fire Protection Auto Sprinkler Valve Details, Rev. 1
- 25203-26017, Sh. 1, Unit 2, Charging System, Rev. 60
- 25203-26027, Sh. 1, Unit 2 HVAC for EDG Rooms, Rev. 47
- 25212-24036, Unit 3 Fire Stop & Seals Map Locations, Rev. 0
- 25212-26902, Sh. 3, Unit 3 Reactor Coolant System, Rev. 23
- 25212-26904, Sh. 1, Unit 3 Chemical and Volume Control, Rev. 50
- 25212-26912, Sh. 1, Unit 3 Low Pressure Safety Injection, Rev. 48
- 25212-26946, Sh. 1, Unit 3 Fire Protection, Rev. 29
- 25212-26946, Sh. 2, Unit 3 Fire Protection, Rev. 49
- 25212-26946, Sh. 3, Unit 3 Fire Protection, Rev. 21
- 25212-26946, Sh. 4, Unit 3 Fire Protection, Rev. 25
- 25212-26946, Sh. 5, Unit 3 Fire Protection System Details, Rev. 2
- 25212-26951, Sh. 2, Unit 3 Control Building Heating, Ventilation and Air Conditioning, Rev. 20
- 25212-26951, Sh. 3, Unit 3 Control Building Heating, Ventilation and Air Conditioning, Rev. 0

Modifications and Fire Protection Engineering Evaluations

- DCR-M3-08024, Unit 3 Main Transformer Fire Detection and Deluge Building, Rev. 0
- DM2-00-0073, Roof Hatch Seal Installation in Fire Area T-6, Rev. 10
- DM2-00-0343, Replace 24-inch Service Water Cross Connect Valve 2-SW-97A, Rev. 8
- DM3-00-0045-09, Charging Valve Control Circuit Appendix R Modification, Rev. 1
- DMG-00-0280, Fire Penetration Seal Installation in Fire Areas T-6 and T-10, Rev. 9
- DMG-00-0015-09, Power Supply Changes and Lighting Control, Rev. 0

Transient Combustible Evaluations

- | | | | |
|-------------|-------------|-------------|-------------|
| 24991-04-FP | 26756-07-FP | 37175-07-FP | 37981-08-FP |
| 26660-07-FP | 27077-08-FP | 37178-07-FP | |
| 26675-07-FP | 28018-09-FP | 37191-07-FP | |
| 26676-07-FP | 37167-07-FP | 37195-07-FP | |

Hot Work Permits

26656-07-IS	37262-07-IS	37672-07-IS	39454-10-IS
26657-07-IS	37262-07-IS	38350-08-IS	
26870-07-IS	37402-07-IS	38351-08-IS	
27655-09-IS	37626-07-IS	38461-08-IS	

System Health Reports

Unit 3, 4.16KV, 1st Quarter 2010
 Unit 3, Load Centers, 1st Quarter 2010
 Unit 3, Motor Control Centers, 1st Quarter 2010
 Unit Common, Safe Shutdown Lighting - Category B, 1st Quarter 2010

Procedures

C MP 790, Emergency Lighting Inspection and Testing, Rev. 3
 C OP 200.17, Fire Watch and Impairment Tracking, Rev. 0
 C SP 600.8, Diesel Fire Pump M7-7 Monthly Operability Demonstration, Rev. 3
 C SP 600.9, Diesel Fire Pump M7-7 Annual Operability Demonstration, Rev. 4
 C SP 600.6, Electric Fire Pump M7-8 Monthly Operability Demonstration, Rev. 3
 C SP 600.7, Electric Fire Pump M7-8 Annual Operability Demonstration, Rev. 4
 C SP 600.13, Electric Fire Pump P-82 Monthly Operability Demonstration, Rev. 2
 C SP 600.14, Electric Fire Pump P-82 Annual Operability Demonstration, Rev. 2
 C SP 600.16, Fire Protection System Underground Main Flush & Flow Test, Rev. 0
 CY-AA-AUX-310, Diesel Fuel Oil Sampling and Testing, Rev. 3
 SAIC 2.4, Fire PRA Cable Selection, Routing, Circuit Analysis, Rev. 0
 SAIC 4.1, Identification and Evaluation of Multiple Spurious Operations of Equipment Using Expert Panel, Rev. 0
 SAIC 4.2, Draft SECY 08-0093 Analysis Process, Rev. 0
 SFP 31, Fire Water System Back-up Supply Plan, Rev. 4
 SP 2618C, Fire Protection System Smoke and Heat Detector Test, Rev. 13
 SP 2618D, "B" EDG Deluge System Function Test, Rev. 0
 SP 2669A, PEO Rounds, Rev. 17
 SP 3442A02, RCS Wide Range Temperature Calibration, Rev. 6
 SP 3446C20, Appendix R Instrumentation Calibration, Rev. 0
 SP 3641D.5, Fire Damper Operability Verification, Rev. 10
 SP 3646A.1, EDG A Operability Test, Rev. 18

Operations Procedures

AOP 2559, Fire, Rev. 7
 AOP 2571, Inadvertent ESFAS Actuation, Rev. 5
 AOP 2579A, Hot Standby for Fire Area R-1, Rev. 9
 AOP 2579B, Hot Standby for Fire Area R-2, Rev. 6
 AOP 2579H, Hot Standby for Fire Area R-8, Rev. 6
 AOP 2579L, Hot Standby for Fire Area R-13, Rev. 6
 AOP 2579AA, Cooldown and Cold Shutdown for Fire Area R-1, Rev. 4

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AOP 2579BB, Cooldown and Cold Shutdown for Fire Area R-2, Rev. 5
AOP 2579FF, Cooldown and Cold Shutdown for Fire Areas R-8 and R-10, Rev. 5
AOP 2579LL, Cooldown and Cold Shutdown for Fire Area R-13, Rev. 5
EOP 2525, Standard Post Trip Actions, Rev. 23
EOP 2541, App-41, Aligning Compensatory Cooling for Switchgear Rooms, Rev. 1
EOP 3509, Fire Emergency, Rev. 24
EOP 3509.1, Control Room, Cable Spreading Area, or Instrument Rack Room Fire, Rev. 13
EOP 3509.2, Aux Bldg. Elev. 24 ft. South Floor, Elev. 43 ft. & 66 ft. Fire, Rev. 4
EOP 3509.5, Aux Bldg, East MCC & Rod Control Area Fire, Rev. 2
EOP 3509.5, EOP 3509.5 Basis Information, Rev. 2
EOP 3509.8, Control Bldg. Elev. 4 ft., West SWGR Area Fire, Rev. 3
EOP 35 GA-14, Establish Head Vent Letdown, Rev. 0
MP-14-OPS-GDL400, Operations Administrative Procedures, Rev. 9
MP-26-EPI-FAP06-002, Unit 2 Emergency Action Levels (EALs), Rev. 6
MP-26-EPA-REF02, Unit 2 EAL Technical Basis Document, Rev. 15
OP-AA-100, Conduct of Operations, Rev. 9
OP-AA-102, Operability Determination, Rev. 5
OP 2315K, Vital 480V Electrical Switchgear Room Cooling Systems, Rev. 1
OP 2315L, Vital 125V DC Electrical Switchgear Room Cooling Systems, Rev. 1
SP3670.1-009, Primary Plant Equipment Rounds, Rev. 6
SP3670.1-014, Radwaste Plant Equipment Rounds, Rev. 8

Cold Shutdown Repair Procedures

MP 2720U1, Cold Shutdown Fire Damage Repair for Fire Area R-1, Rev. 4
MP 2720U2, Cold Shutdown Fire Damage Repair for Fire Area R-3, Rev. 4
MP 2720U3, Cold Shutdown Fire Damage Repair for Fire Area R-11, Rev. 4
MP 2720U4, Cold Shutdown Fire Damage Repair for Fire Area R-16, Rev. 4
MP 2720U5, Splicing Fire-Damaged Power Cables and Connecting Pump Motors Needed for Cold Shutdown, Rev. 3
MP 3783EA, Component Cooling Pump Motor Replacement for Fire Protection, Rev. 5
EOP 3509.1 Attachment-I, BAT "A" Level Instrument installation, Rev. 13

Operator Safe Shutdown Training

C01216N, Auxiliary Shutdown Panel Operations, Rev. 0
C01217C, PEO Briefing SO1306C, Fire Emergency/ Control Room Evacuation, Rev. 0
C04602L, Operating Experience PowerPoint Presentation, Rev. 0
C98205L, Fire Safe Shutdown Overview, Rev. 0
C98027L, EOP 3509.1 In-Plant Walkdown, Rev. 1
C9888206L, EOP 3509.1 Procedure Overview, Rev. 0
E09809C, Chapter 0, Fire Emergency, Rev. 2
FPS086C, Chapter 2, Fire Protection, Detection and Control, Rev. 4
JIT-302-002, Just In Time Training for DCR M3-01008, Rev. 0
JIT-304-001, Chapter 2, Just In Time Training for DCRs M3-02006 & 01008, Rev. 0
JPM-052, Manual Operation of a 4160 Volt Breaker, Rev. 3
JPM-088, Commence Shutdown from Outside the Control Room, Rev. 3
JPM-092, Transfer Controls from the Control Room to C-10, Rev. 5

JPM-093, Local Manual Operation of the "A" Atmospheric Dump Valve, Rev. 9
JPM-141, Remove/Install opening and Closing Coils for 480V MCC Breaker, Rev. 1
JPM-206, Shutdown from Outside the Control Room (Alt. Path), Rev. 2
JPM-207, Local Manual Operation of the "A" Atmospheric Dump Valve, Rev. 1
JPM-217, Manual Operation of RBCCW SDC HX Outlet Valves, Rev. 2
P07602N, PEO In-Plant Walkdown, Cycle 07-6, Rev. 0
P08101JPM, Cycle 08-1 LORT/NLCT In-Plant JPMs, Rev. 0
P09101JPM, In-Plant JPMs, Rev. 0
PEO-04-J, Plant Equipment Operator On-the-Job Training, Rev. 6
S01306C, Simulator Scenario 6, Fire Emergency, Control Room Evacuation, Rev. 1
S03702L, Simulator Scenario 2, Fire Emergency, Control Room Evacuation, Rev. 0
S04405L, Cycle 04-4 Simulator Session 5, Rev. 0
S05105, Cycle 05-1 Simulator Session 5, Rev. 0
S05206L, Cycle 05-2 Simulator Session 6, Rev. 0
S05405L, CTMT Fire and Loss of Shutdown Cooling and/or RCS Inventory, Rev. 0
S05501L, Cycle 05-5 Simulator Session 1, Rev. 0
S07405L, Cycle 07-4 Simulator Session 5, Rev. 0
S98202L, Cycle 98-2 Simulator Session 2, Rev. 0
S99306L, Simulator Scenario 6, Fire Emergency, Control Room Evacuation, Rev. 0

Fire Fighting Strategies (i.e., Pre-Fire Plans)

Unit 2 Zone A-16, "B" EDG Room, 4/30/05
Unit 2 Zone T-6, West 480 Volt Load Center Room, 4/01/01
Unit 2 Zone A-1B, Auxiliary Bldg RBCCW & Heat Exchanger Area, 4/01/01
Unit 2 Zone T-10, Turbine Bldg 6.9 and 4.16 kV Switchgear Room, 4/01/01
Unit 3 Zone AB-5, East MCC and Rod Control Area, March 1998
Unit 3 Zone CB-1, West Switchgear Room, January 2002
Unit 3 Zone CB-7, East Switchgear Room, March 1998
Unit 3 Zone CB-8, Cable Spreading Area, April 2004

Fire Brigade Training, Drills, and Drill Critiques

TPD-7.209, Fire Protection Programs, Rev. 1

Unannounced Drills:

Unit 3 Turb. Bldg Enclosure, 3/16/09	Site Bldg 428, 12/23/08
Unit 2 Turbine Bearing, 5/14/09	Unit 2 Control Room A/C Area, 6/28/08
Unit 1 14H Bus, 9/13/09	Unit 2 DC SWGR "A" MG set, 9/14/07
Unit 3 Cable Spreading Area, 12/03/09	Unit 3 Fuel Pool Cooling Pumps, 10/10/07
Unit 2 4160 Switchgear, 12/27/09	Unit 2 Turbine Aux Battery Room, 11/07/07
Unit 3 East Elect. Rm Batt. Charger, 9/11/08	Bldg 434 - Site Warehouse, 11/09/07
Unit 2 Turb. Deck Wooded Bldg, 12/12/08	Unit 3 EDG, 12/12/07
Unit 3 Cable Spreading Room, 12/16/08	

Announced Drills:

Unit 2 "B" Main Transformers, 6/10/08
 Unit 2 "A" EDG, 7/15/08
 Unit 2 "B" EDG, 7/24/08

Unit 2 "B" EDG, 7/29/08
 Unit 2 "A" EDG, 8/05/08
 Unit 2 "A" EDG, 8/12/08

Completed Tests and Surveillances

C SP 600.6, Electric Fire Pump M7-8 Monthly Operability Demo, Performed 5/16/10 & 6/15/10
 C SP 600.7, Electric Fire Pump M7-8 Annual Operability Demo, Performed 5/14/09 & 6/15/10
 C SP 600.8, Diesel Fire Pump M7-7 Monthly Operability Demo, Performed 5/19/10 & 6/17/10
 C SP 600.9, Diesel Fire Pump M7-7 Annual Operability Demo, Performed 9/12/08 & 5/26/09
 C SP 600.10, Diesel Fire Pump Fuel Oil Storage Tank Sample Results, Performed 2/16/10 & 4/27/10

C SP 600.13, Electric Fire Pump P-82 Monthly Operability Demo, Performed 5/26/10 & 6/24/10
 C SP 600.14, Electric Fire Pump P-82 Annual Operability Demo, Performed 4/28/09 & 4/01/10
 C SP 600.26-002, Appendix R Ventilation Fan Operational Check, Performed 3/6/10
 C SP 600.26-001, Auxiliary Building Safe Shutdown Portable Emergency Ventilation Fan
 MTE 1122, MTE-00613 Calibration, Performed 5/2/08
 MTE 1122, MTE-00666 Calibration, Performed 10/2/08

SP 2601M-01, Operability Test of Facility 2 Charging Pumps from C-10, Performed 3/4/10
 SP 2601P, CVS Valve Operability Tests from C-10 and C-02, Performed 10/16/09
 SP 2610BO-05, TDAFW Operational Tests from C-10, Performed 3/28/09
 SP 2610E, Atmospheric Dump Valve Testing from C-10, C-70A/B, Performed 10/11/09
 SP 2610E-03, Atmospheric Dump Valve Testing, Performed 11/18/04
 SP 2618C-01, Unit 2 Fire Protection System Smoke & Heat Detector Test, Performed 9/27/09
 SP 2618D-03, Unit 2 "B" EDG Deluge System Function Test, Performed 6/03/10 & 12/07/09
 SP 2618G, Fire Damper Operability Verification, Performed 7/25/09, 12/09/08, 11/28/08, & 10/27/08

SP 2618L-01, Fire Protection Coating Inspection, Performed 1/27/09 & 9/09/08
 SP 2618L-02, TSI (Thermo-Lag) Fire Wrap Inspection, Performed 1/29/10
 SP 2619C-01, Control Room Weekly Checks, Performed 8/1/10
 SP 2619E-01, Control Room Monthly Checks, Performed 7/10/10
 SP 3641D.5, Fire Damper Operability Verification, Performed 8/25/08, 9/4/09, & 9/26/06
 SP 3641D.6, Fire Rated Assemblies Inspection, Performed 11/29/08
 SP 3646A.1, Local Operation Test of "A" EDG, Performed 8/16/05 & 5/20/08
 SP 3673.2-02, Transfer Switch 3HVP*FN1A & FN1C Function Test, Performed 12/30/08
 SP 3673.2-03, Transfer Switch 3HVR*FN14A Function Test, Performed 10/13/08
 SP 3673.2-04, Transfer Switch 3HVR*MOD50A Function Test, Performed 10/8/08
 SP 3673.2-05, Transfer Switch 3HVR*ACU1A Function Test, Performed 8/14/08
 SP 3673.2-06, Transfer Switch 3HVY*FN2A & AOD23A Function Test, Performed 10/1/08
 SP 3673.2-07, Transfer Switch 3SWP*MOV54A/C Function Test, Performed 11/24/09
 SP 3673.2-08, Transfer Switch 3SWP*MOV71A Function Test, Performed 12/29/08
 SP 3673.2-09, Transfer Switch 3SWP*MOV102A/C Function Test, Performed 12/28/08
 SP 3673.2-10, Transfer Switch 3RCS*PCV455A Function Test, Performed 5/8/10
 SP 3673.2-11, Transfer Switch 3RCS*HCV442A Function Test, Performed 12/4/07
 SP 3673.2-12, Transfer Switch 3SIL*HCV943A Function Test, Performed 6/14/08
 SP 3673.2-13, Transfer Switch 3CHS*HCV190A Function Test, Performed 5/13/08

SP 3673.4-02, Aux. Shutdown Panel Operability Test RHR Isolation, Performed 4/22/10
 SP 3673.4-10, Aux. Shutdown Panel Operability Test, Charging Header MOVS, Performed
 1/21/09
 SP 3673.4-11, Aux. Shutdown Panel Operability Test, PORV Block Valve, Performed 6/14/08
 SP 3673.4-12, Aux. Shutdown Panel Operability Test, SIL Accumulator Vent Valves, Performed
 8/9/08
 SP 3673.4-13, Aux. Shutdown Panel Operability Test, Charging Pump Cooling Pump A,
 Performed 1/20/09
 SP 3673.4-21, Aux. Shutdown Panel Operability Test, Charging Isolation Path, Performed
 4/30/10
 SP 3673.5-01, Remote Shutdown Monitoring Instrumentation, Performed 5/28/10
 SFP 17-01, Unit 2 Group-1 Fire Penetration Seal Inspection, Performed 3/11/04 & 6/24/98
 SFP 17-02, Unit 2 Group-2 Fire Penetration Seal Inspection, Performed 7/12/05, 7/11/05, &
 9/24/98
 SFP 17-04, Unit 2 Group-4 Fire Penetration Seal Inspection, Performed 12/05/06
 SFP 17-09, Unit 2 Group-9 Fire Penetration Seal Inspection, Performed 4/18/01 & 1/17/00
 SFP 6, Fire Protection System Underground Main Flow and Flush Test, Performed 9/26/03
 SFP 6, Fire Protection System Underground Main Flow and Flush Test, Performed 2/22/07
 SFP 21-01, Unit 2 Appendix R Fire Cage Inventory, Performed 9/4/09
 SPROC 97-3-15, Unit 3 Emergency Lighting Test, Performed 12/5/97
 T3341CP, Unit 3 Initial CO2 Discharge Test, West Switchgear Room, Performed 11/06/85
 T3341CP, Unit 3 Initial CO2 Discharge Test, Cable Spreading Room, Performed 11/08/85
 T3341CP, Unit 3 Initial CO2 Discharge Test, East MCC/Rod Control Area, Performed 11/16/85

Condition Reports (* denotes NRC identified during this inspection)

CR-03-00383	CR119726	CR378579	CR383154
CR-03-00448	CR121019	CR378689	CR383205
CR-05-08134	CR121147	CR378691	CR383276
CR-05-08437	CR137203	CR378695	CR383304
CR-06-01133	CR316336	CR378699	CR383357
CR-06-02202	CR317567	CR378936	CR383363
CR-06-03953	CR320599	CR378939	CR383687
CR-07-08455	CR323868	CR378940	CR383841
CR-07-11917	CR327233	CR378941	CR384105
CR-07-12142	CR327631	CR378944	CR384243
CR-08-01677	CR331009	CR378945	CR384258
CR-08-02674	CR332133	CR378950	CR384311
CR-08-05317	CR332754	CR378951	CR384372
CR-08-05851	CR334825	CR378954	CR384384
CR-08-06786	CR336063	CR380609	CR384443
CR-08-08323	CR337602	CR382675	CR384805
CR-08-08741	CR340225	CR382835	CR385501*
CR108620	CR343586	CR382866	CR385687*
CR109594	CR344375	CR382968	CR387120*
CR119114	CR348684	CR382979	CR387186*
CR119611	CR358414	CR383130	CR387227*
CR119667	CR377915	CR383152	CR387870

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CR388484*	CR388786*	CR389495	CR389972
CR388508*	CR388788*	CR389590	CR390069*
CR388646*	CR388807	CR389660	CR390295*
CR388756*	CR388969	CR389736	M2-98-01891
CR388775	CR389332	CR389876*	

Work Orders

53130710605	53102270437	53102304691	M3-05-14068
53102310955	53102274953	M2-04-12928	M3-06-08987
53102200513	53102276397	M3-02-11954	M3-06-00018
53102269887	53102291903	M3-04-17886	M2-07-02847
53102269887	53102292975	M3-05-11850	M3-07-03861

Vendor Manuals

8M-1-70, Instructions for Fisher Actuators Types 496D, 496U, and 486L
MS2 Vendor Inspection Report for UPS System, dated 1/4/10 and 4/14/10

Industry Standards

Electric Power Research Institute (EPRI) TR-100249, Emergency Battery Lighting Unit
Maintenance and Application Guide, Rev. 1
NEI 2000-01, Guidance for Post-Fire Safe Shutdown Circuit Analysis, Rev. 2
NFPA 13-1987, Installation of Sprinkler Systems
NFPA 27-1975, Private Fire Brigades
NRC RG 1.189, Fire Protection for Nuclear Power Plants, Rev. 2
NRC EGM 2007-004, Enforcement Discretion for Post-Fire Manual Actions Used as
Compensatory Measures for Fire induced Circuit Failures, 6/30/07
NRC EGM 2009-002, Enforcement Discretion for Fire Induced Circuit Faults, 5/14/09

Miscellaneous Documents

Cable database printouts of cable routing for Valve 2-CH-429 in Fire Areas R1, R2 and R3
Cable database printouts of cable routing for Valve 2-MS-190B in Fire Areas R1, R2 R10
and R11
Calculation S-02824-S2, Millstone Unit 2, R-2 Fire, Appendix R Analysis, Rev. 2
Example of auxiliary building plant equipment operator rounds
Industry Position Paper on Use of Compensatory Measures for Multiple Spurious Operations,
4/16/2010
Letter B17399, 10CFR50, Appendix R Exemptions and Fire Protection Safety Evaluation Report
Comments, 3/17/1999
List of Millstone Power Station, Unit 2, expert panel members
Maintenance Rule Functional Failures Database Report on ELU Failures, 12/23/01 to 7/22/10
Millstone Power Station, Unit 2, Draft MSO Evaluation List
Millstone Power Station, Unit 2, Final Safety Analysis Report, Section 9.10
Millstone Power Station, Unit 2, Technical Requirements Manual, Sections 3.7.10 and 7.1
MP-2009-246, App-R ELU Recurring PM Tasks, 8/04/10

Attachment

N-2005-2208-E1, Review of NRC IN 05-14, Loss of Seal Cooling to Reactor Coolant Pumps
 NEI 00-01, Guidance for Post Fire Safe Shutdown Analysis, Rev. 2
 OE31606, Burn Mark on Plastic Lens Degrades Halogen Emergency Light, 7/19/10
 Part 9900 Technical Guidance - Operability Determinations & Functionality Assessments for
 Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety
 Reasonable Assurance of Safety RAS000117, Rev. 0
 Regulatory Guide 1.189, Fire Protection for Nuclear Power Plants, Rev. 2
 Results of component cable routing on a fire area basis for Generic Multiple Spurious
 Operation 9 (MSO 9), Reactor Coolant System Makeup Isolation; MSO 18, Multiple
 PORVs; MSO 19, Multiple PORV Block Valves; and MSO 28, Auxiliary Feedwater Flow
 Isolation”
 Safety Evaluation Report, Revocation of Exemption from 10 CFR Part 50, Appendix R,
 Sections III.G and III.L for Certain Fire Areas – Millstone Nuclear Power Station, Unit 2,
 7/17/1990
 Self Assessment SAR000506, Triennial Fire Protection Preparation Assessment, 6/9/2010
 Site Fire Protection Impairment Tracking Report (Active), 7/01/10 to 7/10/10
 SO-08-024, Unit 2 Operations Standing Order, 12/3/08
 Status update slides related to fire induced circuit failures/multiple spurious operations,
 6/16/2010
 Unit 2 Fire Protection Active Impairment List, 7/20/10
 Unit 3 Fire Protection Active Impairment List, 7/19/10

LIST OF ACRONYMS

AC	Alternating Current
ADAMS	[NRC] Agency-wide Documents Access and Management System
AFW	Auxiliary Feedwater System
ASME	American Society of Mechanical Engineers
ASSS	Alternate Safe Shutdown System
BAT	Boric Acid Tank
BTP	[NRC] Branch Technical Position
CCW	Component Cooling Water
CDF	Core Damage Frequency
CFR	Code of Federal Regulations
CMEB	[NRC] Chemical Engineering Branch
CO ₂	Carbon Dioxide
CR	Condition Report
EDG	Emergency Diesel Generator
EGM	[NRC] Enforcement Guidance Memorandum
ELU	Emergency Lighting Units
FCU	Flow Control Valve
FHA	Fire Hazards Analysis
FPP	Fire Protection Program
FW	Feedwater
HRR	Heat Release Rate
IMC	[NRC] Inspection Manual Chapter
IP	[NRC] Inspection Procedure

IPEEE	Individual Plant Evaluation of External Events
IR	[NRC] Inspection Report
kV	kilo-volts
LOCA	Loss of Coolant Accident
MOV	Motor Operated Valve
MSO	Multiple Spurious Operation
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NCV	Non-Cited Violation
NOV	Notice of Violation
NRC	Nuclear Regulatory Commission
P&ID	Piping and Instrumentation Drawing
PAR	Publicly Available Records
PARS	[NRC] Publicly Available Records
PRA	Probabilistic Risk Assessment
PZR	Pressurizer
RAS	Reasonable Assurance of Safety
RBCCW	Reactor Building Closed Cooling Water
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RG	[NRC] Regulatory Guide
RIS	Regulatory Issue Summary
RWST	Refuel Water Storage Tank
SDP	[NRC] Significance Determination Process
SER	[NRC] Safety Evaluation Report
SG	Steam Generator
SSAR	Safe Shutdown Analysis Report
SSC	Structures, Systems and Components
SW	Service Water
SWGR	Switchgear
TD	Turbine Driven
TI	Temporary Instruction
TRM	Technical Requirements Manual
UFSAR	Updated Final Safety Analysis Report
URI	[NRC] Unresolved Item
VCT	Volume Control Tank

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 29, 2010



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

SUBJECT: MILLSTONE POWER STATION, UNITS 2 & 3 – TARGET SET INSPECTION
05000336/2010201 & 05000423/2010201

Dear Mr. Heacock:

On September 16, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed a Target Set Inspection at the Millstone Power Station, Units 2 & 3. The inspection covered one or more of the key attributes of the security cornerstone of the NRC's Reactor Oversight Process. The enclosed inspection report documents the inspection results, which were discussed on September 16, 2010, with members of the site staff.

The inspection examined activities conducted under your license as they relate to security 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.

Based on the results of this inspection, no findings of significance were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). However, because of the security-related concerns contained in the enclosure, and in accordance with 10 CFR 2.390, a copy of this letter's enclosure will not be available for public inspection.

Enclosure(s) transmitted herewith contain(s) SUNSI.
When separated from enclosure(s), this transmittal
document is decontrolled.

OFFICIAL USE ONLY – SECURITY-RELATED INFORMATION

D. Heacock

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In accordance with 10 CFR 2.390(b)(1)(ii), the NRC is waiving the affidavit requirements for your response, if any. This practice will ensure that your response will not be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system, ADAMS. If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21. Otherwise, mark your entire response "Security-Related Information-Withhold Under 10 CFR 2.390" and follow the instructions for withholding in 10 CFR 2.390(b)(1).

Sincerely,



Garmon West, Chief
Security Training and Support Branch
Division of Security Operations
Office of Nuclear Security and Incident Response

Docket No.: 05000336/2010201, 05000423/2010201

License No.: DPR-65, DPR-49

Enclosure: Inspection Report (IR) 05000336/2010201, 05000423/2010201;
September 16, 2010, Millstone Power Station, Units 2 & 3

cc: See next page



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

SAFEGUARDS INFORMATION

November 9, 2010

EA-10-214

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

**SUBJECT: MILLSTONE POWER STATION, UNITS 2 AND 3 - NRC SECURITY
INSPECTION REPORT 05000336/2010402 AND 05000423/2010402;
PRELIMINARY GREATER THAN GREEN FINDING**

Dear Mr. Heacock:

On September 28, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed a security baseline inspection at your Millstone Power Station, Units 2 and 3 (Millstone). The inspection covered one or more of the key attributes of the security cornerstone of the NRC's Reactor Oversight Process. The enclosed inspection report documents the inspection results, which were discussed on September 28, 2010, with Mr. S. Jordan, Site Vice President, and other members of your staff.

The inspection examined activities conducted under your licenses as they relate to security and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents one finding preliminarily determined to be greater than very low security significance (i.e., greater-than-Green as determined by the Baseline Security Significance Determination Process (BSSDP)), which may result in the need for further evaluation to determine significance, and therefore, the need for additional NRC action. The cause of the finding is related to the cross-cutting aspect of Problem Identification and Resolution in the corrective action program area because the issue was not thoroughly evaluated such that the resolution addressed the causes and extent of condition [P.1(c)].

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In addition, the finding is also an apparent violation of NRC requirements, and is therefore being considered for escalated enforcement action in accordance with the NRC's Enforcement Policy, found at: <http://www.nrc.gov/reading-rm/doc-collections/enforcement>.

In accordance with NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," we intend to complete our evaluation using the best available information and issue our final determination of significance within 90 days of the date of this letter. The significance determination process encourages an open dialogue between the NRC staff and the licensee, however, the dialogue should not impact the timeliness of the staff's final determination. Before we make a final decision on this matter, we are providing you an opportunity to (1) attend a Regulatory Conference where you can present to the NRC your perspective on the facts and the assumptions the NRC used to arrive at the finding and assess its significance, or (2) submit your position on the finding to the NRC in writing. If you request a Regulatory Conference, it should be held within 30 days of the receipt of this letter, and we encourage you to submit supporting documentation at least one week prior to the Conference in an effort to make the Conference more efficient and effective. If a Regulatory Conference is held, it will be closed for public observation because it involves sensitive security information. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of the receipt of this letter. If you decline to request a Regulatory Conference, or submit a written response, you relinquish your right to appeal the final SDP determination, in that by not doing either, you fail to meet the appeal requirements stated in the prerequisite and limitations sections of Attachment 2 of IMC 0609.

Please contact Mr. James Trapp, of my staff at 610-337-5186 within 10 days of the date of this letter to notify the NRC of your intentions. If we have not heard from you within 10 days, we will continue with our significance determination and enforcement decision. The final resolution of this matter will be conveyed in separate correspondence. Because the NRC has not made a final determination in this matter, no Notice of Violation is being issued for this inspection finding at this time. In addition, please be advised that the number and characterization of the apparent violation described in the enclosed inspection report may change as a result of further NRC review.

Additionally, two self-revealing findings which were determined to be of very low security significance are listed in this report. The cause of these findings is related to the cross-cutting area of Human Performance (work practices) because human error prevention techniques, such as self and peer checks were not utilized [H.4(a)]. If you disagree with the cross-cutting aspects assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Resident Inspectors at Millstone Power Station.

Two licensee-identified violations which were determined to be of very low security significance are documented in this report. However, because of the very low security significance and because they are entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest these non-cited violations, 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

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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 Power Station.

The deficiencies were promptly corrected or compensated for, and the plant was in compliance with applicable physical protection and security requirements within the scope of this inspection before the team departed the site.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system, ADAMS. ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). However, because of the security-related concerns contained in the enclosure, and in accordance with 10 CFR 2.390, a copy of this letter's enclosure will not be available for public inspection.

In accordance with 10 CFR 2.390(b)(1)(ii), the NRC is waiving the affidavit requirements for your response, if any. This practice will ensure that your response will not be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system, ADAMS. If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.22. Otherwise, mark your entire response "Security-Related Information - Withhold Under 10 CFR 2.390" and follow the instructions for withholding in 10 CFR 2.390(b)(1).

Sincerely,



Darrell J. Roberts, Director
Division of Reactor Safety

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

Enclosure: NRC Inspection Report Nos. 05000336/2010402, 05000423/2010402
w/Attachment: Supplemental Information
(CONTAINS SAFEGUARDS INFORMATION (SGI))

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Sincerely,

/RA by Peter R. Wilson for/

Darrell J. Roberts, Director
Division of Reactor Safety

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

Enclosure: NRC Inspection Report Nos. 05000336/2010402, 05000423/2010402
w/Attachment: Supplemental Information
(CONTAINS SAFEGUARDS INFORMATION (SGI))

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NAME	CCahill/WAC for*	DHolody/MMM for*	DRoberts/PRW for		
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cc w/encl; w/SGL:

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F. Murray, President and CEO, NYSERDA, State of New York

R. Frazier, New York State Office of Homeland Security

E. Wilds, Jr., Ph.D., State Liaison Officer, State of Connecticut

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

November 30, 2010

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

SUBJECT: MILLSTONE POWER STATION, UNITS 2 AND 3 – NRC EVALUATED
EMERGENCY PREPAREDNESS EXERCISE – INSPECTION REPORT NOS.
05000336/2010502 AND 05000423/2010502

Dear Mr. Heacock:

On October 22, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the October 19, 2010, evaluated emergency preparedness exercise at your Millstone Power Station, Units 2 and 3. The enclosed inspection report documents the inspection results, which were discussed on October 22, 2010, with Mr. A. J. Jordan, Millstone Site Vice President, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

James M. Trapp, Chief
Plant Support Branch 1
Division of Reactor Safety

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

Enclosure: NRC Inspection Reports 05000336/2010502 and 05000423/2010502

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

SUBJECT: MILLSTONE POWER STATION, UNITS 2 AND 3 – NRC EVALUATED
EMERGENCY PREPAREDNESS EXERCISE – INSPECTION REPORT NOS.
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Sincerely,

/RA/

James M. Trapp, Chief
Plant Support Branch 1
Division of Reactor Safety

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

Enclosure: NRC Inspection Reports 05000336/2010502 and 05000423/2010502

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C. Crisden, DRS

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos.: 50-336, 50-423

License Nos.: DPR-65, NPF-49

Report Nos.: 05000336/2010502 and 05000423/2010502

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Nuclear Power Station, Units 2 and 3

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

Dates: October 18 - 22, 2010

Inspectors: S. Barr, Sr. Emergency Preparedness Inspector, DRS, Region I (Lead)
S. LaVie, Sr. Emergency Preparedness Specialist, NSIR
J. Laughlin, Emergency Preparedness Specialist, NSIR
C. Crisden, Emergency Preparedness Inspector, DRS, Region I
C. Douglas, Project Engineer, DRP, Region I
J. Hawkins, Project Engineer, DRP, Region I

Approved By: James M. Trapp, Chief
Plant Support Branch 1
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000336/2010502, 05000423/2010502; 10/18/2010-10/22/2010; Millstone Power Station, Units 2 and 3; Emergency Preparedness Exercise Report.

This was an announced inspection conducted by four region-based inspectors and two headquarters-based inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Emergency Preparedness

No findings were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Exercise Evaluation (71114.01 – 1 Sample)

a. Inspection Scope

Prior to the October 19, 2010, emergency preparedness exercise, the inspectors conducted an in-office review of the exercise objectives and scenario, submitted to the NRC by Dominion Nuclear Connecticut, Inc., to determine if the exercise would test major elements of the Millstone emergency plan as required by 10 CFR 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

The exercise evaluation consisted of the following review and assessment:

- The adequacy of Millstone's performance in the biennial full-participation exercise regarding the implementation of the risk-significant planning standards (RSPTS) described in 10 CFR 50.47(b)(4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; and, protective action recommendations, respectively.
- The overall adequacy of Millstone's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Emergency Plan commitments. The facilities assessed were the Control Room Simulator, Operational Support Center (OSC), Technical Support Center (TSC), and Emergency Operations Facility (EOF).
- A review of other performance areas, such as: the emergency response organization's (ERO's) recognition of abnormal plant conditions; command and control; intra- and inter-facility communications; prioritization of mitigating activities; utilization of repair and field monitoring teams; interface with offsite agencies; staffing and procedure adequacy; and, the overall implementation of the emergency plan and its implementing procedures.
- A review of past performance issues from the last NRC exercise inspection report and Millstone's EP drill reports, to determine the effectiveness of licensee corrective actions as demonstrated during the October 19th exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- The licensee's post-exercise critiques, to evaluate Dominion's self-assessment of its ERO performance during the October 19th exercise and to ensure compliance with 10 CFR 50, Appendix E, Section IV.F.2.g.

The inspectors reviewed the documents listed in the attachment to this report.

b. Findings

No findings were identified.

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

a. Inspection Scope

Since the last NRC inspection of this program area, Dominion implemented various changes to the Millstone Power Station Emergency Plan. Dominion determined that in accordance with 10 CFR 50.54(q), the changes resulted in no decrease in effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspectors reviewed all EAL changes made since August 2009, and conducted a sampling review of other Emergency Plan changes, including changes to lower-tier emergency plan implementing procedures, to evaluate for any potential decreases in effectiveness of the Emergency Plan. However, this review was not documented in a Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator (PI) Verification (71151 – 3 Samples)

a. Inspection Scope

The inspectors reviewed data for the Millstone EP PIs, which are: (1) Drill and Exercise Performance (DEP); (2) Emergency Response Organization (ERO) Drill Participation; and, (3) Alert and Notification System (ANS) Reliability. The last EP inspection at Millstone was conducted in the third quarter of 2009, so the inspectors reviewed supporting documentation from EP drills and tests from third quarter 2009 through third quarter 2010 to verify the accuracy of the reported PI data. The review of these PIs was conducted in accordance with NRC Inspection Procedure 71151, using the acceptance criteria documented in NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 6.

This inspection activity represented the completion of three samples on an annual cycle.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On October 22, 2010, the inspectors presented the results of this inspection to Mr. A. J. Jordan, Millstone Site Vice President, and other members of the Millstone staff. No proprietary information was provided to the inspectors during this inspection.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

A. J. Jordan, Millstone Site Vice President
D. Smith, Millstone Emergency Preparedness Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Section 1EP1: Exercise Evaluation

Millstone Power Station Emergency Plan (Revision 41)
Millstone Power Station Emergency Plan Implementing Procedures
Millstone Power Station Emergency Plan Administrative Procedures
Millstone Power Station October 19, 2010, Emergency Exercise Scenario Package
Millstone Power Station Emergency Preparedness Drill Reports, January 2009 – September 2010
Condition Reports Submitted as a Result of the Exercise:
CR399716, CR399726, CR399861, CR400033, CR400037, CR400167, CR402269,
CR402274, CR402309, CR402860, CR403030, CR403034, CR403037, CR403039,
CR403040, CR403041, CR403042

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Millstone Power Station Emergency Plan (Revision 41)
EP-AA-101, 10 CFR 50.54(q) Change Evaluation (Revision 1)
EP-AA-303, Equipment Important to Emergency Response (Revision 1)
MP-26-EPA-FAP01, Management Program for Maintaining Emergency Preparedness (Revision 6)
MP-26-EPA-FAP04, Emergency Action Level Table Revision (Revision 1)
MP-26-EPA-FAP06, Emergency Plan Change Process (Revision 4)
10 CFR 50.54(q) Screening Packages: MP-09-21, MP-09-23, MP-09-24, MP-09-25, MP-09-26,
MP-10-01 through MP-10-39

Section 4OA1: Performance Indicator Verification

EN-EP-201, Performance Indicators (Revision 10)
DNAP-2605, Emergency Preparedness Performance Indicators (Revision 10)
DEP PI data, July 2009 – October 2010
ERO Drill Participation PI data, July 2009 – October 2010
ANS Reliability PI data, July 2009 – October 2010

LIST OF ACRONYMS

ANS	Alert Notification System
CFR	Code of Federal Regulations
CR	Condition Report
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center

Possible NEAC Meeting Topics

Joint NRC/NEAC Meeting

Tour of Millstone Power Station followed by Dominion Update Brief

Update on Dominion Operator Training Requirements

Update on Employee Concerns and Safety Conscious Work Environment

Status of Low Level Radioactive Waste Disposal Compact

Briefing on Activities of Blue Ribbon Commission on America's Nuclear Future

Annual Report Preparation

2011 Meeting Schedule

Thursday April 21, 2011 – NRC 2010 Performance Evaluation

Thursday July 21, 2011 - Briefing on Activities of Blue Ribbon Commission on America's Nuclear Future

Thursday September 22, 2011 – Tour of Millstone Power Station/Dominion Update

Thursday December 8, 2011 – Annual Report Preparation

Special Meetings would be at the call of the Chairman.