

STATE OF CONNECTICUT



THE NUCLEAR ENERGY ADVISORY COUNCIL REPORT

2007

Established Pursuant to Public Act 96-245

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

January 24, 2008

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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 twelfth annual report presented by the Nuclear Energy Advisory Council (NEAC). During Calendar Year 2007, the NEAC met four times and received reports from representatives of the Nuclear Regulatory Commission (NRC), a representative of the Office of Logistics Management of the Department of Energy Office of Radioactive Waste Management, and Dominion Nuclear Connecticut. Routine NRC Millstone Power Station inspection and performance assessment reports were also received and reviewed. During the fourth quarter of 2006, Millstone Units 2 and 3 plant performance (Action Matrix) was classified as "GREEN", meaning the sixteen inspection findings for CY 2006 were classified as having no or low safety significance. In the first quarter of 2007 there were two findings of very low safety significance and both Millstone 2 and Millstone 3 remained in the GREEN classification. During the second quarter, there were two NRC-identified and two licensees revealed findings of very low safety significance. In the third quarter there was 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 were performed by the NRC of Millstone 2 and 3 in CY 2007. Included in those baseline inspections were the NRC Physical Security Inspection and the Triennial Fire Inspection. There were no findings for the Physical Security Inspection and three NRC-identified findings of very low safety significance for the Fire Protection Inspection. Decommissioning activities at CYAPC are complete. The Connecticut Yankee Site with the exception of the Spent Fuel Dry Cask Storage Area was released for public use on November 26, 2007.

COUNCIL ACTIVITIES IN 2007

MEETINGS:

As required by PA 96-245, the NEAC held four public meetings as follows: (1) March 22, 2007, (2) September 19, 2007, and (3) November 29, 2007 at Waterford Town Hall, Waterford Connecticut and (4) July 26, 2007 at East Lyme Town Hall. 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:

March 22, 2007: 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 calendar quarters of CY2006. 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, 2007.

July 26, 2007: This meeting was conducted at East Lyme Town Hall in East Lyme, Connecticut. Members of the Dominion Nuclear Connecticut staff presented a status of

Employee Concerns Program and the Safety Conscious Work Environment at Millstone Power Station and the current status of the Millstone Corrective Action Program. Recent inspection results correspondence received from the NRC was also discussed.

Resignation Email from CoChairperson Evan Woolacott was received.

September 19, 2007: This meeting was held at the Waterford Town Hall. There was a presentation of the current status of the Yucca Mountain Disposal Site by Corinne Macaluso, Office of Logistics Management of the Department of Energy Office of Civilian Radioactive Waste Management. Ms. Pearl Rathbun was elected Vice Chairperson in place of Co-Chairperson Evan Woolacott who resigned from the Council in July 2007.

November 29, 2007: This meeting was held at the Waterford Town Hall. Representatives of Dominion Nuclear Connecticut briefed the Council on Millstone Power Station Issues for 2008 and provided an update on the renewal of the Millstone Power Station NPDES (Plant Discharge) Permit. NRC Correspondence and Inspection Results received since the last meeting was discussed. The meeting schedule for CY2008 was approved and possible topics for the meetings were discussed.

Millstone I 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 CY2007. M1DAC committee membership is included in Appendix 3.

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. No findings of significance were documented on routine baseline inspections conducted through September 30, 2007. Routine inspections conducted between October 1, 2006 and September 30, 2007 resulted in the identification of four Unit 2 issues, and three Unit 3 issues, all of very low safety significance (GREEN). An additional NRC Inspection was completed on October 5, 2007 that examined activities conducted under the Dominion license as they related to fire protection and compliance with the NRC rules and regulations and with the conditions of the license. Three NRC- identified violations that were determined to be of very low safety significance were listed in the November 16, 2007 report of the inspection. In August the NRC completed a security baseline inspection. Although the exact findings are not reported due to security concerns, no findings of significance were reported in September 2007 when the cover letter of the inspection report was released. On October 19, 2007 the NRC completed an event follow-up inspection relating to security. In the cover letter released on November 27, 2007 one finding of very low safety significance (GREEN) that was promptly corrected was reported. The exact nature of the finding was not identified. The results of the fourth quarter 2007 inspections had not been released by NRC at the close out time of this report.

DOMINION EMPLOYEE CONCERNS PROGRAM AND SAFETY CONSCIOUS WORK ENVIRONMENT

Representatives from Dominion Nuclear Connecticut and Dominion Nuclear Corporate Offices briefed NEAC on the status of the Dominion Employee Concerns Program (ECP) and how it is consistent with a Safety Conscious Work Environment (SCWE). The briefing noted that some of the areas for improvement included 1) Communication to close performance gaps; 2) Timely feedback and leadership development plans; 3) Coaching to improve performance; 4) Repeat equipment issues; 5) Change not managed effectively; 6) Resource sharing and allocation; and 7) Work flow and initiation. In a letter dated October 18, 2007, the NRC reported on the alleged discrimination of a mechanic by the immediate supervisor for raising concerns about non-qualified personnel performing work on the Millstone Unit 3 emergency diesel generators. The discriminatory act was issuing a verbal warning to the mechanic, with a written copy placed in his file, on October 2, 2006. In the NRC investigation, the staff did not find "...that the actions of the supervisor were a deliberate effort to violate NRC regulations. Rather, the supervisor failed to realize that the question raised by the mechanic was a protected activity." The NRC recognized that the matter was identified by Dominion Nuclear Connecticut (DNCT). The licensee took significant action to reverse the discrimination including 1) removing the documentation from the employee's file; 2) counseling the supervisor; 3) providing a briefing to the management team and supervisors on actions to detect and prevent retaliation; and 4) emphasizing the need to refer to the safety conscious work environment section of DNCT disciplinary policy. The NRC decided not to issue a Notice of Violation or a proposed civil penalty under an Exercise of Discretion because of the prompt, comprehensive, and effective corrective action taken by the licensee.

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 involves some decontamination and dismantlement early in the process. After these initial activities are complete, the unit is 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.

CONNECTICUT YANKEE

Demolition, final remediation and site restoration of the former Connecticut Yankee nuclear plant was successfully completed in June 2007. Waste shipments are also scheduled to be completed by the end of the year with 365 million pounds of decommissioning waste shipped since demolition began in 2003. Only one intermodal remains to be shipped from the site and a few intermodals need to be shipped from waste processors to the disposal facilities. The plant site surpassed 6 million safe work hours and seven years since the last lost time accident.

Two groundwater-monitoring wells were installed at the Haddam Meadows State Park across the Connecticut River from the former plant site in 2006 to complement onsite groundwater monitoring activities, which will continue until 2011. No indications of plant activity has been seen in the offsite monitoring wells at the State Park or in DEP samples of neighboring wells from residents living along the Connecticut River near the former plant site.

Final status surveys of the land areas were completed in June 2007. CYAPCO terminated their NRC license for the remainder of its property on November 26, 2007. Approximately 5 acres will remain under the NRC license for fuel storage activities at the ISFSI. A new administration building was constructed near the ISFSI to support long-term fuel storage operations.

The DEP terminated the RCRA storage permit for hazardous materials. The site completed chemical remediation in May 2007 with all areas meeting the Connecticut Remediation Standard Regulations in soil. The DEP issued a Stewardship Permit in October 2007 certifying that site remediation for soil was complete. Long-term groundwater monitoring will continue until June 2011 to verify that the groundwater is meeting EPA drinking water standards.

The Connecticut Yankee Fuel Storage Advisory Committee held its first two meetings on April 17 and October 30, 2007. The committee will meet in the spring and fall of 2008.

HIGH LEVEL NUCLEAR WASTE

- NEAC continued to monitor activity to establish a permanent solution for spent nuclear fuel rods disposal highlighted by a presentation by a representative of the Department of Energy in September 2007. 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 is:

- License Application in 2008
- U.S. Nuclear Regulatory Commission Construction Authorization and begin construction in 2011.
- U.S. Nuclear Regulatory Commission License Approval and begin waste acceptance in 2017.

Hearings required prior to License Application were conducted in the vicinity of Yucca Mountain in November and December of 2007. 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 Nuclear Waste and the safe transfer of high-level nuclear waste from Connecticut.

NUCLEAR ENERGY ADVISORY COUNCIL MEMBERSHIP

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

Evan W. Woollacott (Co-Chair) Simsbury: MBA Wharton School, Former Vice President Combustion Engineering, and Vice Chair, CT DPUC – Resigned July 2007

Paul A. Blasioli Waterford: Manager, Millstone Environmental Services, 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. Professor, Mechanical Engineering, US Coast Guard Academy.

Mark Holloway Waterford: BS Interdisciplinary Sciences, Charter Oak. Task Manager and analyst in nuclear submarine development.

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

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

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

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 (NEAC) Meeting
Waterford Town Hall Auditorium
Waterford, Connecticut
March 22, 2007**

Members Present

Mr. Bill Sheehan, Co-Chair
Mr. John Markowicz
Ms. Marge DeBold
Dr. Gregg Dixon
Mr. Robert Klancko
Rep. Kevin Ryan
Dr. Edward Wilds, representing DEP, Commissioner Gina McCarthy

1. Call to Order of Meeting Co-Chaired by NEAC and NRC Region 1

NEAC Co-Chair Sheehan called the meeting to order at 6:02 PM at Waterford Town Hall Auditorium, Waterford, Connecticut.

Pledge of Allegiance

2. Review NEAC Meeting Minutes

No minutes were reviewed.

3. NRC Presentation on NRC Reactor Oversight Program/Millstone End of Cycle Report

NRC Introduction of Staff Present:

J. Clifford

P. Krohn

R. Powell

E. Huang

M. Schneider, MP Senior Resident Inspector

J. Benjamin, MP Resident Inspector

R. Fernandes, MP Resident Inspector

a) NRC Presentation

P. Krohn, M. Schneider, J. Benjamin, and R. Fernandes

See the attached PowerPoint Slide Presentations.

b) NEAC Question Period – 6:30 PM

NEAC members asked clarifying questions during the presentations. Additional questions related to SCWE were also asked.

c) Closing Remarks – 7:10 PM

P. Krohn stated overall plant operated well. They do have issues that will need to be address and in the next 6 months NRC will review Millstone's activities.

d) Meeting break – 7:14 PM

e) Public Question Period – 7:20 PM to 7:53 PM

Nancy Burton made comments to the public via CT-N that was televising the meeting and did not wish to address NEAC or NRC. Ms. Burton is opposed to continued operation of Millstone.

John Markowicz requested the NRC to clarify statements made by Nancy Burton.

3. NEAC Business Meeting – 7:58 PM

Discussion on future meeting topics and potential dates. Proposals are SCWE around June and HLW around September or October.

4. Adjournment

Motion was made and seconded to adjourn; no objections; majority voted in favor; meeting adjourned at 8:10 PM

Attachment 1
NRC Presentation Slides

NRC & NEAC Meeting
Concerning Millstone Station Performance

2006 Reactor Oversight Program

Purpose of Today's Meeting

- NRC will address Millstone's performance as described in the annual assessment letter
- NEAC will be given the opportunity to respond to the information, request clarifications, and ask additional questions as needed
- NRC will be available to engage interested stakeholders on performance of the plant and our role in ensuring safe plant operations

Agenda

- Introduction and NRC Organization
- Review of NRC Reactor Oversight Process
- Regulatory Summary of National Plant Performance
- NRC Assessment of Millstone's Performance
- NEAC Response and Remarks
- NRC and NEAC Closing Remarks
- Break
- NRC available to address public questions

Region I Organization

Samuel J. Collins
Regional Administrator
Marc L. Dapas
Deputy Regional Administrator

David C. Lew
Director Division of Reactor Projects
Safety

James W. Clifford
Deputy Director

Paul G. Krohn
Branch Chief

Millstone Resident Inspectors
Max Schneider
Jamie Benjamin
Ricardo Fernandes

Senior Project Engineer
Barry Norris
Project Engineer
Eugene Huang

A. Randolph Blough
Director Division of Reactor

Marsha K. Gamberoni
Deputy Director

Regional Specialists

NRC Representatives

- Jim Clifford, Deputy Division Director, DRP
(610) 337—5080

- Paul Krohn, Branch Chief
(610) 337--5120

- Max Schneider, Senior Resident Inspector
Jamie Benjamin, Resident Inspector
Ricardo Fernandes, Resident Inspector,
(860) 447—3170

- Eugene Huang, Project Engineer
(610) 337--5322

NRC Performance Goals

- **Safety:** Ensure protection of the public health and safety and the environment
- **Security:** Ensure the secure use and management of radioactive materials
- **Openness:** Ensure openness in our regulatory process
- **Effectiveness:** Ensure that NRC actions are effective, efficient, realistic, and timely
- **Management:** Ensure excellence in agency management to carry out NRC strategic objectives

Reactor Oversight Process

**Strategic
Performance Areas**

Safety Cornerstones

**Baseline Inspection
Indicator**

Performance

Results

Results

**Significance Threshold
Threshold**

Significance

Action Matrix

Regulatory Response

Typical Baseline Inspection Areas

- **Equipment Alignment**
- **Triennial Fire Protection**
- **Operator Response**
- **Emergency Preparedness**
- **Radiation Release Controls**
- **Worker Radiation Protection**
- **Corrective Action Program**
- **Corrective Action Case Reviews**

Significance Threshold

Performance Indicators

Green: Only Baseline Inspection
White: May increase NRC oversight
Yellow: Requires more NRC oversight
Red: Requires more 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

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Rep. Degraded Cornerstone	Unacceptable Performance
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- **Increasing Safety Significance**

- **Increasing NRC Inspection Efforts**

- **Increasing NRC/Licensee Management Involvement**

- **Increasing Regulatory Actions**

Regulatory Summary of National Plant

Performance

Status at End of 2006

Licensee Response	70
Regulatory Response	24
Degraded Cornerstone	6
Multiple/Repetitive Degraded Cornerstone	3
Unacceptable	0
Total	103

National Summary

Performance Indicator Results (at end of 2006)

- .Green 1843
- .White 11
- .Yellow 0
- .Red 0
-

Total Inspection Findings (2006)

- .Green 676
- .White 13
- .Yellow 0
- .Red 0

NRC 2006 Inspection Activities Millstone

- Hours of inspection and assessment related activities

--5720 hours at Millstone Unit 2

--3431 hours at Millstone Unit 3

- Three resident inspectors assigned to the site
--Ricardo Fernandes started at Millstone in Nov. 2006
- Other Inspections
--13 Regional inspections

--6 Team inspections

NRC Major Inspection Activities Millstone

- Daily Resident Inspections
- Problem Identification and Resolution team inspection
- Component Design Basis team inspection
- Unit 2 Unplanned Scrams with Loss of Normal Heat Removal supplemental inspection
- Unit 2 Pressurizer Replacement team inspection
- Emergency Preparedness Exercise team inspection
- Unit 2 Refueling Outage

**NRC 2006 Results
Millstone**

Licensee Response Column for Unit 2 and Unit 3 at the end of 2006

Unit 2 had a White Performance Indicator for the first three quarters.

- Unplanned Scrams with Loss of Normal Heat Removal**
- NRC completed Supplemental Inspection (September 2006)**
- PI returned to Green in 4thth Quarter**

**NRC 2006 Inspection Results
Millstone**

Inspection Findings

- 8 Findings of very low safety significance (Green) at Unit 2
- 8 Findings of very low safety significance (Green) at Unit 3
- 1 Finding of very low safety significance (Green) common to both units

**NRC 2006 Inspection Results
Millstone**

Common Theme Evaluation

- **Identified five findings with a common theme in the area of problem identification and resolution (specifically, quality of operability determinations).**
- **Reviewed Millstone's corrective actions.**
- **Concluded that Millstone's actions are acceptable in scope, timeliness, and effectiveness to address these issues.**
- **As a result, no substantive cross--cutting issue was identified.**

NRC Annual Assessment Summary Millstone

- Dominion operated Millstone Units 2 & 3 in a manner that preserved public health and safety
- All Reactor Oversight Process cornerstone objectives were met
- NRC plans baseline inspections at Millstone for the 2007 assessment period

Contacting the NRC

- Report an emergency
(301)816-5100 (call collect)
- Report a safety concern:
(800)695-7403
Allegation@nrc.gov
- General information or questions
www.nrc.gov
Select "What We Do" for Public Affairs
- Paul Krohn, Branch Chief
pgk1@nrc.gov

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)

NEAC Response and Remarks

**Millstone Nuclear Power Station
Unit 2 and Unit 3**

END OF THE PRESENTATION

**Nuclear Regulatory Commission --Region I
King of Prussia, Pennsylvania
March 22, 2007**

Nuclear Energy Advisory Council (NEAC) Meeting
Board of Selectmen Meeting Room
East Lyme Town Hall
East Lyme, Connecticut
July 26, 2007

Members Present

Mr. John W. Sheehan, Co-Chair
Mr. John Markowicz
Mr. Mark Holloway
Ms. Marjorie W. DeBold
Dr. Gregg Dixon
Ms. Pearl Rathbun

1. Call to Order

Chair Sheehan called the meeting to order at 7:05 PM in the Board of Selectmen Meeting Room, East Lyme Town Hall, East Lyme, CT.

2. Review NEAC Meeting Minutes

Minutes of the March 22, 2007 meeting were not available for approval.

3. Presentation by Dominion Nuclear Connecticut

Mr. Dan Weekly, Mr. Richard MacManus, Mr. Peter Hyde, and Ms. Nancy Bulkely made a presentation on the following topics:

- a. Employee Concerns Program
- b. Safety Conscious Work Environment
- c. Significant events at Millstone Power Station since last briefing

A copy of the briefing is an attachment to these minutes. Questions by NEAC members on future Dominion plans, including the planned power uprate for Millstone 3, the future of electrical power in Connecticut, and background on new nuclear power plants in United States.

4. Public Comment

There were no members of the public or press at the meeting.

5. Next Meeting Date and Agenda

Next meeting will be in late September and the topic will be Yucca Mountain and High Level Waste Storage. The date and location will be announced later after Dr. Ed Wilds makes arrangements with staff from Yucca Mountain.

The Council was interested in getting more detailed information on proposed new nuclear power plants for the United States. Chairman Sheehan was asked to coordinate with Dominion Nuclear Connecticut to obtain such a briefing in late November (Possibly Thursday, November 29, 2007).

6. Adjournment

Motion was made and seconded to adjourn; no objections; majority voted in favor; meeting adjourned at 8:35 PM.

Slide 1



Nuclear Energy Advisory Council
July 26, 2007

Slide 2

Agenda

- Operational Update
- Operator Workarounds
- Unit 3 Power Uprate
- ECP Status
- Safety Conscious Work Environment
- Future Challenges



Operational Update



Rich MacManus, Director, Nuclear Engineering



Operational Update - 2007

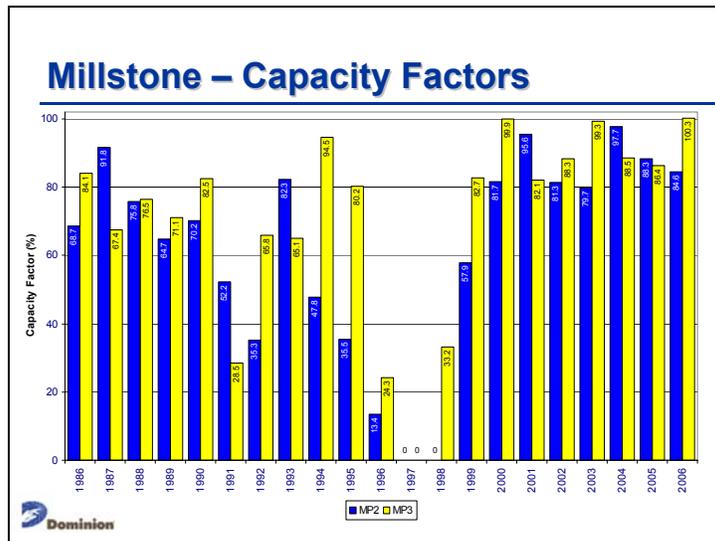
- Unit 3 Outage – 42 Days – completed 10 year reactor vessel inspection
- Transformer replacement on Unit 3
- “Force on Force” drills
- NPDES Permit renewal



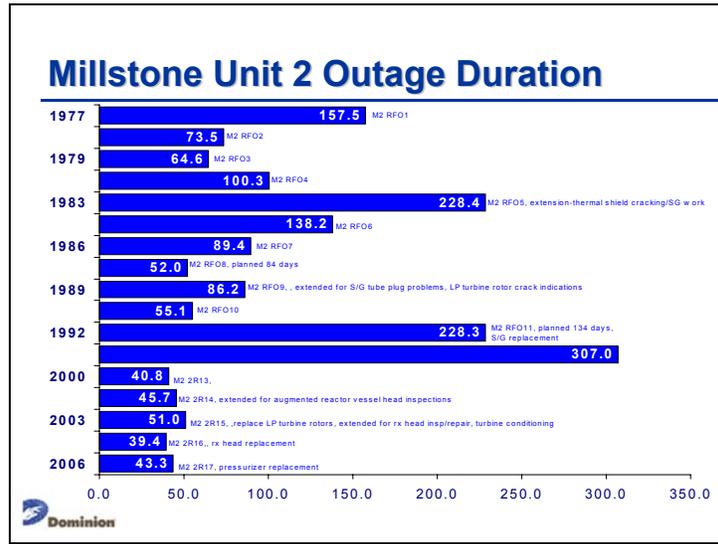
Millstone – Investments for Reliability

Roughly \$300 million since acquisition in '01

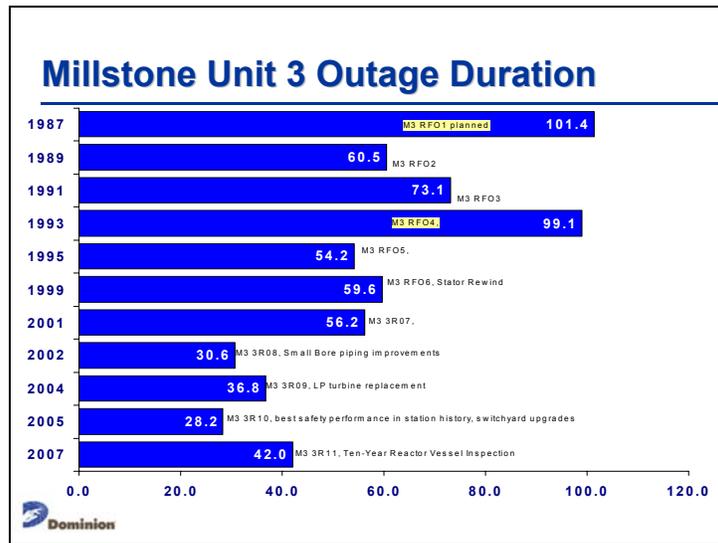
- 2002 New voltage system installed at Unit 3
- 2003 LP Turbines replaced at Unit 2
- 2004 LP Turbines replaced at Unit 3
- 2005 Reactor vessel head replaced at Unit 2
- 2006 Pressurizer replaced at Unit 2
- 2006 Step-up transformer Unit 2
- 2007 Step-up transformer Unit 3

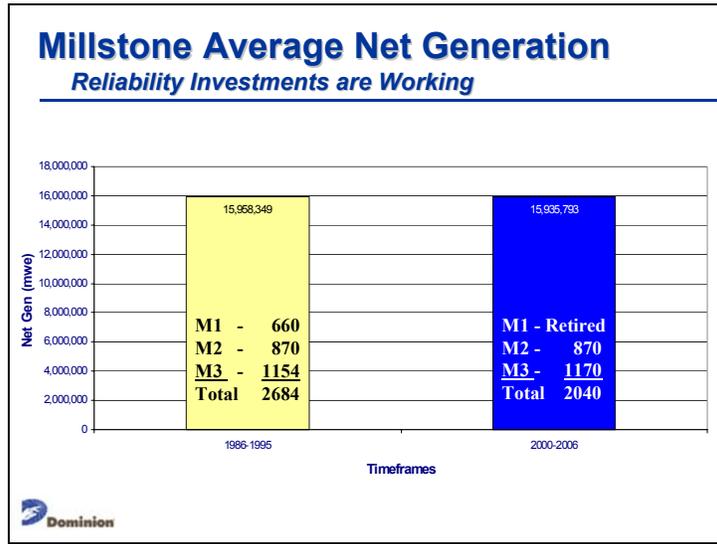
Slide 7



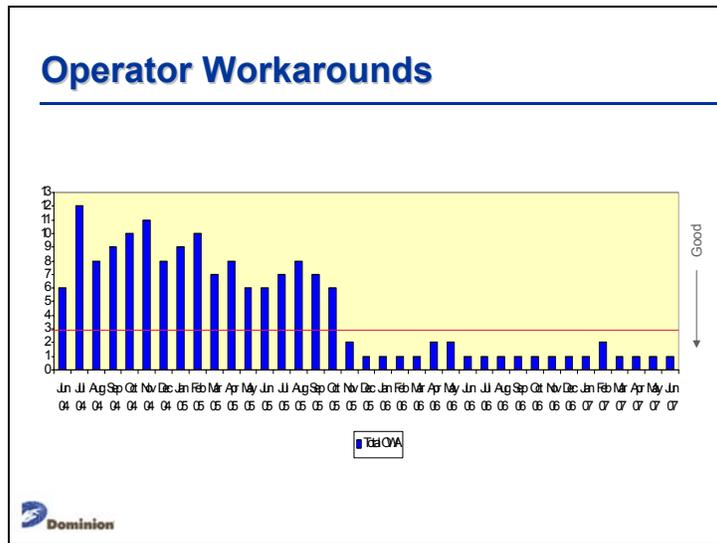
Slide 8



Slide 9



Slide 10



Unit 3 Stretch Power Uprate



Unit 3 Stretch Power Uprate

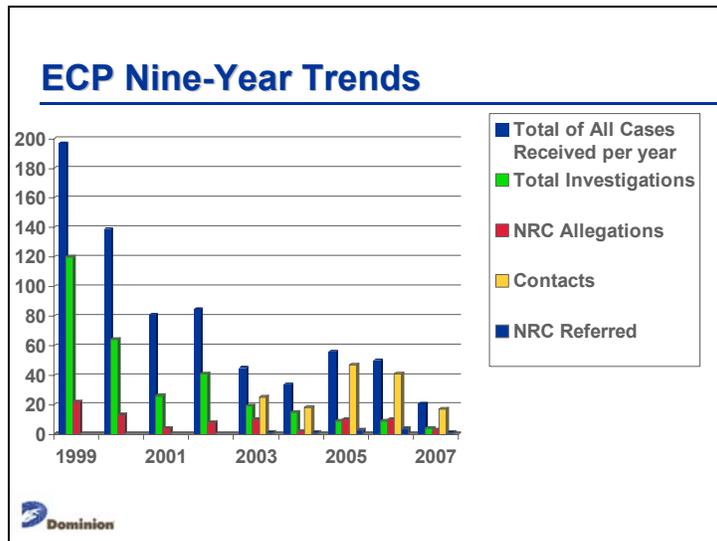
- More than 100 uprates successfully completed
- 16-month review/investigation
- M3 output to increase by up to 80 megawatts
- Minor equipment modifications
- Scheduled implementation during Fall 2008 outage
- Application submitted to NRC July 16, 2007



Employee Concerns Program



**Dan Weekley,
Managing Director,
Northeast Government
Affairs**



Safety Conscious Work Environment

Strengths

- High regard for activities that affect reactivity and safety
- Roles and policies aligned to safety
- Everyone is responsible for problem identification
- Constructive criticism encouraged
- Leadership demonstrates conservative decision-making
- Individuals challenge assumptions



Safety Conscious Work Environment

- Communication to close performance gaps
- Timely feedback and leadership development plans
- Coaching to improve performance
- Repeat equipment issues
- Change not managed effectively
- Resource sharing and allocation
- Work flow and initiation



Slide 17

Future Challenges

- Back-to-back outages in 2008
- Unit 3 Power Uprate
- Triennial Force On Force Drills
- NPDES permit renewal
- ISFSI – fuel movement



Slide 18



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**Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall Board of Education Conference Room
Waterford, Connecticut
September 19, 2007**

Members Present

Mr. Bill Sheehan, Co-Chair
Mr. John Markowicz
Ms. Marge DeBold
Dr. Gregg Dixon
Mr. Robert Klancko
Ms. Pearl Rathbun
Dr. Edward Wilds, representing DEP, Commissioner Gina McCarthy

1. Call to Order of Meeting

NEAC Chair Sheehan called the meeting to order at 7:02 PM at Waterford Town Hall Board of Education Conference Room, Waterford, Connecticut.

2. Review NEAC Meeting Minutes

March 22, 2007 minutes were reviewed and approved.

July 26, 2007 minutes were reviewed and approved.

3. US DOE Presentation on High Level Radioactive Waste and Yucca Mountain Disposal Site titled Office of Civilian Radioactive Waste Management and Overview

Introduction of DOE Staff:

Corinne Macaluso, Office of Logistics Management

- f) DOE Presentation – 7:05 PM
Corinne Macaluso

See the attached PowerPoint Slide Presentations.

- g) NEAC Question Period

NEAC members asked clarifying questions during the presentations.

h) Public Question Period

Only one member of the public was present at the meeting. No questions were asked by this individual.

4. NEAC Business Meeting – 8:05 PM

a. Election of Vice Chair

Motion by Mr. John Markowicz to nominate Ms. Pearl Rathbun as Vice Chair. Second by Ms. Marge DeBold. Motion passed.

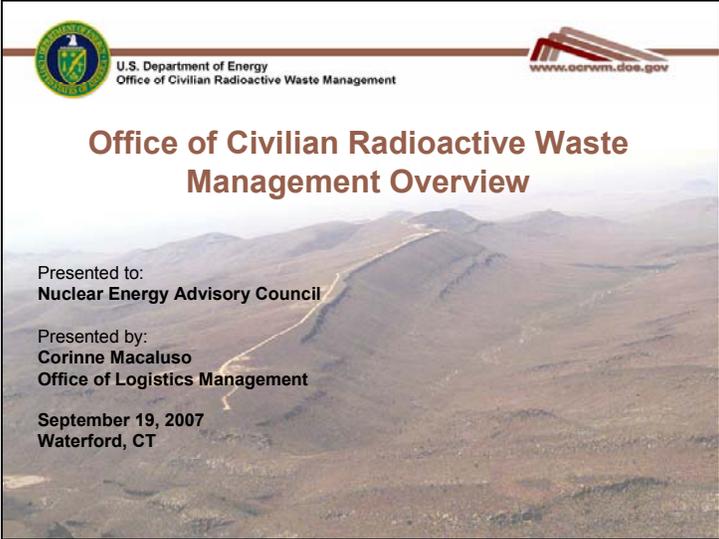
b. Next Meeting Date/Topic/Location

Next meeting November 29, 2007 in Waterford Town Hall Board of Education Conference Room, Waterford, Connecticut at 7:00 PM. Final 2007 Annual Report in January 2008.

5. Adjournment

Motion was made and seconded to adjourn; no objections; majority voted in favor; meeting adjourned at 8:18 PM

Slide 1



 U.S. Department of Energy
Office of Civilian Radioactive Waste Management  www.ocrwm.doe.gov

Office of Civilian Radioactive Waste Management Overview

Presented to:
Nuclear Energy Advisory Council

Presented by:
Corinne Macaluso
Office of Logistics Management

September 19, 2007
Waterford, CT

Slide 2

Introduction

- History of the program
- Program strategic objectives
- Schedule
- Budget
- Status of Yucca Mountain and transportation projects
- Proposed legislation
- Global Nuclear Energy Partnership (GNEP)

  www.ocrwm.doe.gov 2

Mission and Priorities

ission: Manage and dispose of **high-level radioactive waste (HLW) and spent nuclear fuel (SNF) in a manner that protects health, safety, and the environment; enhances national and energy security; and merits public confidence.**

riorities:

fter over 20 years of scientific study, Congress passed a joint resolution to designate the Yucca Mountain site for repository development and move ahead to submit a License Application for repository construction authorization.

Current locations of SNF and HLW destined for geologic disposal:

121 sites in 39 states

Symbols do not reflect precise locations

As of July 2007

Protecting public health, safety, and the environment remain our

www.nwma.com

Why This Program Matters

National Security
Safely dispose of waste in one location

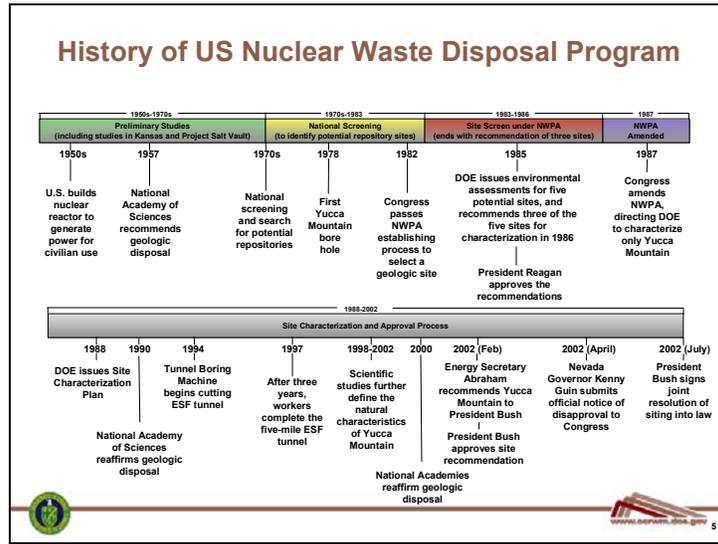
Energy Security
Support the availability of nuclear power

Protect the Environment
Facilitate site cleanup

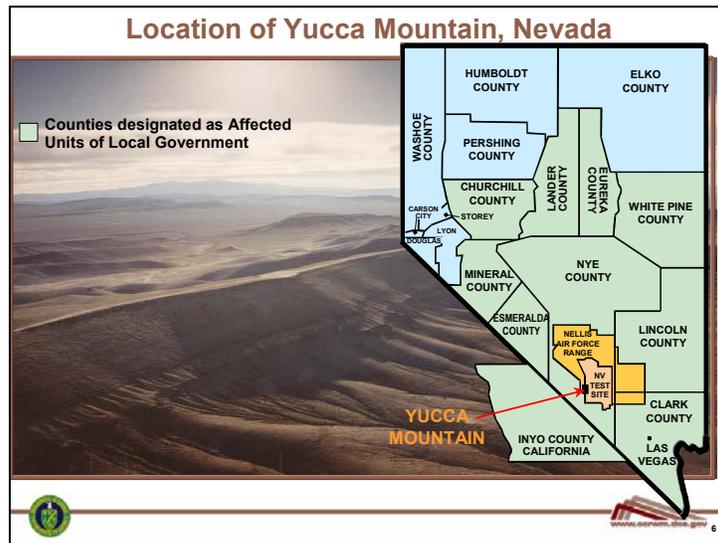
Non-proliferation
Support national policy

www.nwma.com

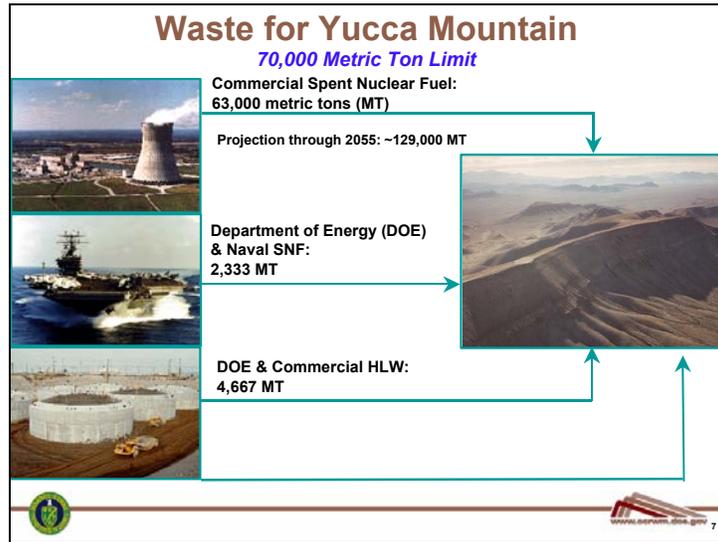
Slide 5



Slide 6



Slide 7



Slide 8

- ### Program Strategic Objectives
- License Application**
 - Submit a high-quality License Application to the Nuclear Regulatory Commission (NRC) no later than June 30, 2008
 - Staffing**
 - Design, staff and train the Office of Civilian Radioactive Waste Management (OCRWM) organization so it has the skills and culture needed to design, license, and manage the construction and operation of the Yucca Mountain Project with safety, quality, and cost effectiveness
 - Liability**
 - Address the Federal Government's mounting liability associated with unmet contractual obligations to move spent fuel from nuclear plant sites
 - Transportation**
 - Develop and begin implementation of a comprehensive National Transportation Plan that accommodates state, local and tribal concerns and input to the greatest extent practicable
-  

Slide 9



Slide 10

Yucca Mountain Repository License Application Schedule*

Activity	Date
License Application Design Complete	Nov 2007
Certify Licensing Support Network (LSN)	Dec 2007
Complete Repository Supplemental Environment Impact Statement (SEIS)	May 2008
Complete Nevada Rail Corridor EIS and Rail Alignment EIS	June 2008
Submit License Application to NRC	June 2008
NRC docket License Application	Dec 2008

*Schedule dependent on factors outside DOE's control: i.e., funding, NRC and Congressional actions, issuance of authorizations and permits, and potential litigation

Best Achievable Schedule for Yucca Mountain*

Activity	Date
Submit License Application to NRC	June 2008
NRC authorizes repository construction	Dec 2011
Complete construction for initial repository operations	June 2016
Begin receipt of waste	March 2017

* These milestones are based on a best achievable schedule and are dependent upon appropriations, timely issuance of all necessary authorizations and permits, the absence of litigation-related delays, and enactment of legislation proposed by the Administration






FY 2008 Budget Request Summary

(dollars in millions)



	FY 2006 Approp	FY 2007 Request	FY 2007 CR	FY 2008 Request
Yucca Mountain	\$305.9	\$355.4	\$ -	\$378.4
Transportation	19.9	67.7	0.0	15.0
Prog Mgmt & Integration/Prog Direction	119.7	121.4	0.0	101.0
Integrated Spent Fuel Recycling Facilities	49.5	0.0	0.0	0.0
TOTAL PROGRAM	495.0	544.5	445.5	494.5
Nuclear Waste Fund	99.0	156.4	99.0	202.5
Integrated Spent Fuel Recycling Facilities	49.5	0.0	0.0	0.0
Defense Nuclear Waste Disposal	346.5	388.1	346.5	292.0




Program Funding

- **Congress established the Nuclear Waste Fund to provide funding for repository development and operations**
- **Utilities pay 1 mil per kilowatt-hour fee on electricity generated and sold from nuclear power plants**
 - Revenues average \$750 million per year
 - Approximately \$15.4 billion in fees paid as of June 30, 2007
- **Excess funds invested in Treasury securities**
 - Approximately \$11.6 billion in interest earned as of June 30, 2007
- **Market value of the Fund is \$20.1 billion as of as of June 30, 2007**
- **Nuclear Waste Fund outlays are counted against the DOE appropriation, limiting the fund's use for its intended purpose**
- **The Administration has requested legislation essential to achieving the Program mission by making the Nuclear Waste Fund available for its intended purpose**



www.ocrwm.com 13

Supplement to Final Repository EIS

- **Since the 2002 EIS was issued, OCRWM has continued to develop repository design and associated plans**
 - Repository will be operated using a primarily canistered approach
 - Most commercial spent nuclear fuel would be packaged in transport, aging and disposal canisters (TADs)
- **OCRWM is preparing a supplement to the Yucca Mountain final EIS**



www.ocrwm.com 14

Licensing Support Network

- LSN is an online electronic repository that contains approximately 30 billion pages of documentary material related to the License Application
- NRC requires DOE to certify the LSN
 - At least 6 months before submitting the License Application, DOE must certify the LSN
- LSN will provide a single portal for public access
- DOE's certification of the LSN is on schedule
- LSN website: <http://www.lsnnet.gov>.



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Transportation Priority Activities

- Issue National Transportation Plan
- Complete draft Nevada Rail Transportation Corridor and draft Rail Alignment EIS
- Publish draft Nuclear Waste Policy Act (NWPA) Section 180(c) policy
- Continue work on routing criteria for a preliminary national suite of routes
- Expand benchmarking efforts to identify best practices
- Coordinate with TAD development effort



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Slide 17

Transportation System Representative Routes (Identified in the Yucca Mountain final EIS)

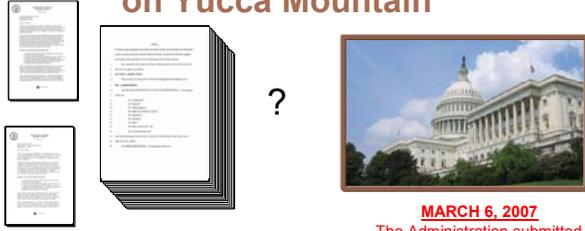


The map displays a network of transportation routes across the United States, with a focus on the western region. A legend in the bottom-left corner identifies various route types: Commercial routes (red dots), Interstate routes (thick red lines), National routes (thin red lines), and State routes (thin black lines). It also notes that routes are color-coded by whether they have been analyzed for National, State, or no analysis. Two inset photographs show a blue and white freight train and a white semi-truck with a trailer.

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Slide 18

Proposed Legislation on Yucca Mountain



The graphic features a stack of legislative documents on the left, a large question mark in the center, and a photograph of the United States Capitol building on the right.

MARCH 6, 2007
The Administration submitted legislation to the Congress

KEY PROVISIONS

- ? Land Withdrawal
- ? Lift Capacity Limits
- ? Funding Reform

18



Land Withdrawal



? ?

NRC requires DOE to have ownership and control of land surrounding Yucca Mountain

Legislation required for construction of the Repository



19



Lift Capacity Limits



The 70,000 metric ton limit was set by the NWPA of 1982



20



Funding Reform

? ? ?



DOE is unable to construct a repository with current constrained appropriation levels – Congress must make the Nuclear Waste Fund available for its intended purpose if the Program is to meet its mission



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GNEP and Yucca Mountain

- Yucca Mountain is needed under any fuel cycle scenario
- OCRWM is proceeding with its base case to deal with current and planned inventory of SNF and HLW
- If the technology is proven and developed, GNEP could provide improvements in the future for spent fuel disposal at a repository by:
 - Reducing the volume of waste
 - Enhancing thermal management by reducing waste from heat load
 - Reducing the amount of long-lived radionuclides requiring disposal
- OCRWM's flexible design can accommodate changes



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Summary

- **Entering an important period for the nuclear industry and for the disposition of nuclear waste in the U.S.**
- **The Department is committed to the development of Yucca Mountain as a geologic repository for SNF and HLW**
- **With appropriate funding from Congress, OCRWM is poised for success**



**Nuclear Energy Advisory Council (NEAC) Meeting
Waterford Town Hall Board of Education Conference Room
Waterford, Connecticut
November 29, 2007**

Members Present

Mr. Bill Sheehan, Chair
Mr. John Markowicz
Ms. Marge DeBold
Rep. Kevin Ryan
Mr. James Sherrard
Ms. Pearl Rathbun
Dr. Gregg Dixon
Dr. Edward Wilds, representing DEP, Commissioner Gina McCarthy

1. Call to Order of Meeting

NEAC Chair Sheehan called the meeting to order at 7:05 PM at Waterford Town Hall Board of Education Conference Room, Waterford, Connecticut.

2. Review NEAC Meeting Minutes

September 19, 2007 minutes were reviewed and approved.

3. Dominion Nuclear Presentation on Overview of Plant Issues for 2008 and Update on NPDES Renewal

Daniel Weekley, Managing Director
Northeast Government Affairs

- i) Dominion Presentation – 7:16 PM
Daniel Weekley

See the attached PowerPoint Slide Presentations.

- j) NEAC Question Period

NEAC members asked clarifying questions during the presentations.

- k) Public Question Period

No members of the public were present at the meeting. No questions were asked.

4. NRC Correspondence Received Since Past Meeting

- c. Chairman Sheehan reviewed information received from the NRC. See meeting handout.
- d. Members also discussed the recent finding of tritium in Sump 3 as a result of Millstone's voluntary ground water monitoring program. Sump 3 showed increased levels above the voluntary reporting level developed by industry of the EPA Safety Drinking Water Standard, 20,000 pCi/l. Sump 3 had tritium concentrations of approximately 30,000 pCi/l.

5. NEAC Business Meeting

Discussion of Meeting Topics and Meeting Dates for 2008 proposed by Chairman Sheehan. Motion by Mr. John Markowicz to accept proposed topics and dates. Second by Mr. James Sherrerd. Motion passed.

e. Proposed NEAC Meeting Topics:

- Joint NRC/NEAC Meeting,
- New Nuclear Power Plant Improvements and Construction,
- Brief by NRC on new reactor plant approval process,
- Tour of Millstone Power Station followed by Dominion Update Brief,
- Brief by DEP on State Responsibilities in monitoring Millstone and CY Storage Site,
- Update on Dominion Operator Training Requirements,
- Update on Employee Concerns and Safety Conscious Work Environment,
- Annual Report Preparation.

f. Proposed 2008 Meeting Schedule

- Thursday January 17, 2008
- Thursday March 20, 2008. Date may change due to scheduling with NRC.
- Thursday June 26, 2008
- Thursday September 25, 2008

Thursday December 11, 2008

6. Adjournment

Motion was made and seconded to adjourn; no objections; majority voted in favor; meeting adjourned at 8:26 PM

**NUCLEAR REGULATORY COMMISSION
LIST OF LETTERS FROM NEAC MEETING PACKAGE
NOVEMBER 29, 2007**

From: NRC
To: Mr. David A. Christian
Date: September 20, 2007
Subject: Millstone Power Station – NRC Physical Security Baseline Inspection Report
Nos. 05000336/2007402 and 05000423/2007402

From: NRC
To: Mr. David A. Christian
Date: October 15, 2007
Subject: Millstone Power Station Unit 3 – Stretch Power Uprate Acceptance Review
(TAC No. MD6070)

From: NRC
To: Mr. David A. Christian
Date: October 18, 2007
Subject: Exercise of Discretion, Dominion Nuclear Connecticut, Waterford, Connecticut
Site (Office of Investigations Report 1-2007-012)

From: NRC
To: Mr. David A. Christian
Date: October 29, 2007
Subject: Millstone Power Station, Unit No. 2 – Re: Final Accident Sequence Precursor
Analysis of February 23, 2006, Operational Event

From: NRC
To: Mr. David A. Christian
Date: October 31, 2007
Subject: Millstone Power Station – NRC Integrated Inspection Report 05000336/2007004
and 05000423/2007004

From: NRC
To: Mr. David A. Christian
Date: November 15, 2007
Subject: Millstone Power Station, Unit No. 2 – Distribution of Revision 2 of the NRC's
Significance Determination Process Risk-Informed Inspection Notebooks, and Accompanying
Phase 2 Pre-Solved Tables (TAC No. MD6415)

From: NRC
To: Mr. David A. Christian
Date: November 15, 2007
Subject: Millstone Power Station, Unit No. 3 – Distribution of Revision 2 of the NRC's
Significance Determination Process Risk-Informed Inspection Notebooks, and Accompanying
Phase 2 Pre-Solved Tables (TAC No. MD6415)

Page 2
NRC Letters

From: NRC
To: Mr. David A. Christian
Date: November 16, 2007
Subject: Millstone Power Station, Unit 3 – Triennial Fire Protection Inspection Report
05000423/2007007

From: NRC
To: Mr. David A. Christian
Date: November 21, 2007
Subject: Millstone Power Station, Unit 3 – Request For Additional Information Regarding
Steam Generator Tube Inspection Special Report (TAC No. MD3450)

From: NRC
To: Mr. David A. Christian
Date: November 21, 2007
Subject: Millstone Power Station, Unit Nos. 2 and 3 – Request For Additional Information
Regarding Control Room Habitability (TAC Nos. MD6115 and MD6116)

Possible NEAC Meeting Topics

Joint NRC/NEAC Meeting

New Nuclear Power Plant Improvements and Construction

Brief by NRC on new reactor plant approval process

Tour of Millstone Power Station followed by Dominion Update Brief

Brief by DEP on State Responsibilities in monitoring Millstone and the CY Storage Site

Update on Dominion Operator Training Requirements

Update on Employee Concerns and Safety Conscious Work Environment

Annual Report Preparation

Proposed 2008 Meeting Schedule

Thursday January 17, 2008

Thursday March 20, 2008 – Probably will be changed for date convenient for

NRC Reporting

Thursday June 26, 2008

Thursday September 25, 2008

Thursday, December 11, 2008

Slide 1



The slide features the Dominion logo in the top left corner. Below it is a collage of four images: a power plant structure, an oil pumpjack, a power plant with smokestacks, and a storage tank facility. The background is a light blue gradient.

Nuclear Energy Advisory Council

November 29, 2007

Slide 2

Agenda

- Operational Update
- NPDES Permit Renewal Process
- Refueling Outages
- Future Challenges



The slide contains an agenda list with four items, each preceded by a blue right-pointing arrowhead. The Dominion logo is located in the bottom right corner.

Operational Update – 2007



Operational Update – 2007

- Unit 2: 376 days online
- Unit 3: 195 days online
- Station capacity factor at 90.9% Jan. to present
 - ❖ Unit 3 outage duration extended 7 days
 - ❖ Forced outage at Unit 3 – 1/26 to 1/30
- Triennial Fire Inspection
- Back to back outages - 2008



NRC Triennial Fire Inspection

Millstone engineers evaluate potential impact of fire on all safety components throughout the station.



The review includes our ability to shut the units down safely.



NRC Triennial Fire Inspection - Outcomes

Areas for Attention:

- Unit 3 Control Room Relay
- MCC Rod Control Center



Unit 3 Relay Switch

- Circuitry in the control rooms is a particular focus of the review. At Unit 3, Millstone engineers identified a potential issue with a relay switch that could have affected our ability to shut down the unit in the unlikely event of a fire. The relay switch was relocated to an isolated area in the building.
- Repair completed October 3, 2007



Unit 3 Rod Control Center

- In the event of a fire in the MCC Rod Control Center (a central circuit area), cables that provide power to a motor-operated valve in the 'B' charging system could cause the valve to shut, disabling the 'B' charging system and causing damage to the operating 'A' charging pump. Under this unlikely scenario, both systems potentially could be lost.
- Classification of this issue is set for December



NPDES Permit Renewal Process



NPDES Permit Renewal Process

- As part of the NPDES Permit renewal process, Dominion continues to work with the Department of Environmental Protection (DEP) to find the best technology available to meet reductions in impingement and entrainment of aquatic life
- Northeast Utilities began the permit renewal process in 1997
- Dominion has been working with the DEP since 2001 to renew this permit. We have spent thousands of person hours and presented more than 11,000 pages of research, data and answers to questions



Riverkeeper II Decision

- In February, the Second Circuit Court of Appeals ruled that cost cannot be considered as a factor in determining “best technology available” to reduce impingement and entrainment of aquatic life
- We continue to work with the DEP on determining what will be the best technology available at Millstone



Seeking Solutions

- Dominion is moving forward with the use of variable speed circulating water pumps to reduce flow rates during spawning season. (at our \$\$ risk)
- We will continue with planned refueling outages during the peak winter flounder larval entrainment season two out of every three years.
- Additionally, other technologies will be evaluated to include the use of fine mesh screens and alternative unit cooling.



Closed Cycle Cooling

In general, there are two types of closed-cycle cooling: Natural Draft and Forced Draft cooling.

Natural Draft Cooling Tower



Forced Draft Cooling Tower



Refueling Outages – Units 2 & 3 – 2008



Refueling Outage – Unit 2

- 10-year ISI Inspection
- Replacing Main Transformer
- Service water piping replacement
- Replacing 32 in-core instruments
- Alloy 600 – six weld overlays



Refueling Outage – Unit 3

- “Stretch” Power Uprate - 7%
- Split-pin replacements
- Inverter 1 & 3 replacements
- Steam generator inspections
- Step-up transformer replacement



Slide 17

Future Challenges

- Back-to-back outages in 2008
- “Stretch” Power Uprate
- NPDES permit renewal
- Triennial Force On Force Drills



Slide 18



Dominion[®]

Visit our website at www.dom.com

Nuclear Energy Advisory Council

Millstone 1 Decommissioning Advisory Committee

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

Rep. Kevin Ryan (Co-Chair), Oakdale: O.D., Pennsylvania College of Optometry. Legislator, Adjunct Faculty University of New Haven.

Jerome Bobruff, M.D., New London: M.D. Degree, Yale University. Private Practice.

Joseph M. Coleman, Niantic: BSME, University of Notre Dame. Retired. Former experience includes Civil Engineer, Bethlehem Steel Company; Supervisor of Shipbuilding, USN and Electric Boat Division of General Dynamics Corp.

Gregg W. Dixon, Ph.D., Niantic: Ph.D., Mechanical Engineering (Nuclear), Stanford University. Mechanical Engineering, U.S. Coast Guard Academy.

Wayne L. Fraser, East Lyme: Former First Selectman, Town of East Lyme.

Robert A. Moore, Niantic: Master of Theology, Boston University. Pastor of Niantic Community Church.

James R. Sherrard, Mystic: MS Nuclear Science and Ph.D. Program in Nuclear Engineering, Catholic University of America. Chairman of Nuclear Engineering Technology Department, Three Rivers Community-Technical College.

Doran Shumway, Oakdale: School of Radiologic Technology, Windham Community Memorial Hospital, Willimantic. Former radiation control specialist, Connecticut Department of Environmental Protection.

Paul A. Suprin, Waterford: BA Psychology, Central Connecticut State University. Senior Commercial Lending Officer. Selectman, Town of Waterford

Geralyn Winslow, Waterford: Southern Connecticut State University and University of Arizona. Paraprofessional, lifelong resident of Waterford, member of Citizens Regulatory Commission (CRC).