

# VERMONT YANKEE LICENSE RENEWAL INSPECTION

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Nuclear Regulatory Commission- Region 1

Brattleboro, Vermont  
May 24, 2007

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- Purpose of Today's Meeting
  - ▶ Discuss License Renewal Process in General
  - ▶ Communicate The Vermont Yankee License Renewal Inspection Results To Entergy
  - ▶ Entergy Will Be Given The Opportunity To Respond
  - ▶ NRC Representatives Will Be Available To Answer Questions From Members of the Public

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## ■ Agenda

- ▶ Introductions
- ▶ Discussion of the License Renewal Process
- ▶ Inspection Results
- ▶ Entergy Response
- ▶ Break
- ▶ NRC Available To Answer Public's Questions

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CONDUCT OF THIS MEETING

INTRODUCTION

MEETING WITH APPLICANT - OBSERVATION

QUESTION AND ANSWERS

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## ■ NRC Participants

- ▶ Marsha Gamberoni- Director, Division of Reactor Safety
- ▶ Raj Auluck - Chief, License Renewal Branch B, NRR
- ▶ Rich Conte - Chief, Engineering Branch 1
- ▶ Dave Pelton - Senior Resident Inspector

## ■ Entergy Vermont Yankee Participants

- ▶ Ted Sullivan - Site Vice President
- ▶ John Dreyfuss - Director Nuclear Safety
- ▶ Norm Rademacher - Director of Engineering
- ▶ Dave Mannai - Licensing Manager

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## THE RULE

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## THE RULE: Basis

- Atomic Energy Act established 40 year license term
- Atomic Energy Act allows for renewal of the license
- 10 CFR 54 - new license can be granted up to 20 additional years



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## THE RULE: Scope

- Systems, Structures, and Components relied upon to:
  - ▶ Maintain integrity of the Reactor Coolant Boundary
  - ▶ Ensure capability to shut down and maintain the plant in a safe shutdown condition during an accident
  - ▶ Prevent or mitigate offsite exposures

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THE RULE: “Nonsafety affects Safety”

- Systems, structures and components whose failure could prevent systems, structures and components previously identified from performing their function

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THE RULE: “Unique Regulations”

- Systems, structures, and components relied upon for compliance with special regulations:
  - ▶ Fire Protection (10CFR50.48)
  - ▶ Environmental Qualification (10CFR50.49)
  - ▶ Pressurized Thermal Shock (10CFR50.61)
  - ▶ Anticipated Transient without Scram (10CFR50.62)
  - ▶ Station Black Out (10CFR50.63)

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REVIEW AND AUDIT

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## REVIEWS and AUDITS

- Audit of the Application
  - ▶ Audit the Scoping and Screening Portion
    - Methodology consistent with the rule
    - Implementation of method consistent with the application
  - ▶ Audit the Aging Management Review and Programs
    - Programs are consistent with application and the provisions of Generic Aging Lessons Learned (GALL) Report
- Safety Review at NRR

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## Schedule to the Point

- Application Received January 2006
- Public Information Meeting March 2006
- Aging Management Audit April 2006
- Scoping Screening Audit April 2006
- Aging Managment Review Audit May 2006
- Public Meeting Environmental June 2006
- Draft Environmental Impact Statement December 2006
- Aging Management Program Inspection January 2007
- Containment Walk-down of Aging Mangement LAST WEEK

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**INSPECTION**

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## INSPECTION STANDARD OF ACCEPTANCE

### ■ DEMONSTRATE

- ▶ Aging of Non-Safety systems will not affect Safety Systems
- ▶ Effects of aging will be adequately managed so that the intended function will be maintained consistent with the current licensing basis for the period of extended operation



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## INSPECTION

- Verify Aging Management Programs will reasonably manage effects of aging:
  - ▶ Existing Program
  - ▶ Existing Program Modified
  - ▶ New Program
- Review supporting documentation

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## INSPECTION AT VERMONT YANKEE

- Inspector Field Walkdowns To Look For Non-Safety Systems That May Affect Safety Systems
- Examples of Field Walkdowns Conducted:
  - Reactor, Control Room, and Turbine Buildings,
  - Intake Structure,
  - Condensate Storage Tank Valve and Instrument Enclosure,
  - Fuel Oil Storage Tank and Pump House, and
  - Diesel Generator Rooms.

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## INSPECTION AT VERMONT YANKEE

- Walk-downs Continued:
  - High Pressure Coolant Injection (HPCI) System,
  - Turbine Building Closed Cooling Water (TBCCW) System,
  - Standby Liquid Control (SLC) System,
  - Standby Gas Treatment System,
  - Heating, Ventilation, and Air Condition System,
  - Compressed Air/Instrument Air System, and
  - Service Water System.

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## AGING MANAGEMENT INSPECTION

- Verify the Applicant evaluated site specific and industry information for applicability
  - ▶ Surveillance Tests
  - ▶ Maintenance Records
  - ▶ History Files
  - ▶ Inservice Test and Inspection Results
  - ▶ Work Orders, Corrective Actions
  - ▶ Interviews
  - ▶ Walk-Down of Accessible Portions of Systems

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## Aging Management Inspection

- 19 of 36 Vermont Yankee Aging Management Programs Were Inspected
- Examples of Aging Management Program Inspections Conducted:
  - ▶ Buried Piping Inspection
  - ▶ BWR Stress Corrosion Cracking Program
  - ▶ Containment Leak Rate
  - ▶ Diesel Fuel Monitoring
  - ▶ Environmental Qualification of Electrical Components
  - ▶ Fire Protection Program and Fire Water System Program

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## AGING MANAGEMENT INSPECTION

- More Examples of Aging Management Program Inspections Conducted:
  - ▶ Containment Inservice Inspection
  - ▶ Inservice Inspection
  - ▶ Instrument Air
  - ▶ Reactor Vessel Surveillance
  - ▶ Service Water Integrity
  - ▶ Structures Monitoring Program
  - ▶ Masonry Wall
  - ▶ Water Chemistry Control - Closed Cooling Water

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## NEXT STEPS

- Advisory Committee on Reactor Safeguards  
Subcommittee on License Renewal - June 5, 2007
- Safety Evaluation Report Issued- August 1, 2007
- Environmental Impact Statement Issued - August 3, 2007
- Advisory Committee Full Meeting - September 2007
- Director Decision (No Hearing) - November 27, 2007
- Hearing Granted Commission Decision: July 27, 2008

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## Reference Documents for Vermont Yankee

- Inspection Report Will By Issued and Available Publically Within 45 days of this Meeting
- Safety Evaluation Report - ML070890638
- Audit Report Aging Managment - ML070860158
- Environmental Impact Statement - ML063390344



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EXIT MEETING

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## INSPECTION EXIT

- CORRECTED WEAKNESSES IDENTIFIED BY THE NRC:
  - ▶ Scoping within Turbine Building
  - ▶ Containment Management
    - Visual Examination Acceptance Standards
    - Procedures for Sandbed Drain Monitoring
    - Torus Corrosion Rate
  - ▶ Firewater System Corrosion and Biofouling
  - ▶ Structural Program Trending