

SCHEDULING NOTE

Title: STRATEGIC PROGRAMMATIC OVERVIEW OF THE
DECOMMISSIONING AND LOW-LEVEL WASTE AND SPENT
FUEL STORAGE AND TRANSPORTATION BUSINESS LINES
(Public Meeting)

Purpose: The purpose of the briefing is to provide the Commission with a discussion of strategic considerations associated with the Decommissioning and Low-Level Waste business line and Spent Fuel Storage and Transportation business line.

Scheduled: October 18, 2016
9:30 am – 12:00 pm

Duration: Approx. 2.5 hours

Location: Commissioners' Conference Room, 1st fl OWFN

Decommissioning and Low Level Waste Business Line

Participants:

NRC Staff¹

45 mins.*

Victor McCree, Executive Director for Operations

Marc Dapas, Director, Office of Nuclear Material Safety and Safeguards (NMSS)

Topic:

- Decommissioning and Low-Level Waste Business Line Safety and Security – Licensing and Oversight Successes and Challenges

John Tappert, Director, Division of Decommissioning, Uranium Recovery, and Waste Programs, NMSS

Topic:

- Current Decommissioning Environment

Gregory Suber, Chief, Low-Level Waste Branch, NMSS

Topic:

- Current Low-Level Waste Environment

¹ Other business line partner office directors and regional administrators will be located in the well as appropriate

Raymond Powell, Chief, Decommissioning and Technical Support
Branch, Region I

Topic:

- Decommissioning Inspection Program accomplishments and challenges

Commission Q & A

30 mins.

Break

5 mins.

Spent Fuel Storage and Transportation Business Line

Participants:

NRC Staff¹

35 mins.*

Victor McCree, Executive Director for Operations

Marc Dapas, Director, NMSS

Topic:

- Spent Fuel Storage and Transportation Business Line Safety and Security – Licensing and Oversight Success and Challenges

Mark Lombard, Director, Division of Spent Fuel Management, NMSS

Topic:

- Current Spent Fuel Storage Environment
- External Factors and Uncertainties

John McKirgan, Chief, Spent Fuel Licensing Branch

Topic:

- Current Licensing Activities for Consolidated Interim Storage Facility (CISF) and License Renewal Applications

Christine Lipa, Deputy Director, Division of Nuclear Materials Safety,
Region III

Topic:

- Oversight of Independent Spent Fuel Storage Installations

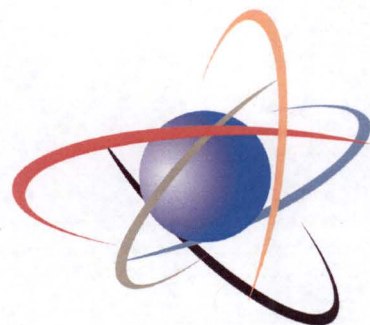
Commission Q & A

30 mins.

Discussion – Wrap-Up

5 mins.

*For presentation only and does not include time for Commission Q & A's



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Protecting People and the Environment

**Overview of the
Decommissioning
and Low Level Waste
Business Line**

October 18, 2016



Opening Remarks

Victor McCree
Executive Director for
Operations

NRC Panel will Address the Following Topics

- **Licensing and Oversight
Successes and Challenges**
- **Current Decommissioning
Environment**
- **Current Low-Level Waste
Environment**
- **Decommissioning Inspection
Program**



Office of Nuclear Material Safety and Safeguards

Marc Dapas, Director

Ensuring Safety Over a Broad Range of Activities

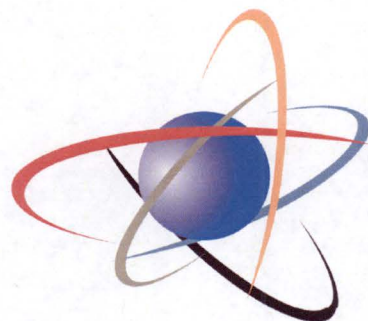
- **Licensing and Oversight for Reactor and Materials Decommissioning Sites**
- **Oversight of the Low-Level Waste Management Program**
- **Oversight of the DOE's Waste Incidental to Reprocessing Activities**

Realizing Success

- **Completion of License Terminations**
- **Completion of the Memorandum of Understanding with the Department of Defense**
- **Submission of the Draft Final Low-level Waste Rulemaking to the Commission**

Addressing Challenging and Complex Issues

- **Timely implementation of Radium Oversight Activities**
- **Potential Agreement State Regulatory Oversight of Greater-Than-Class C LLW disposal**



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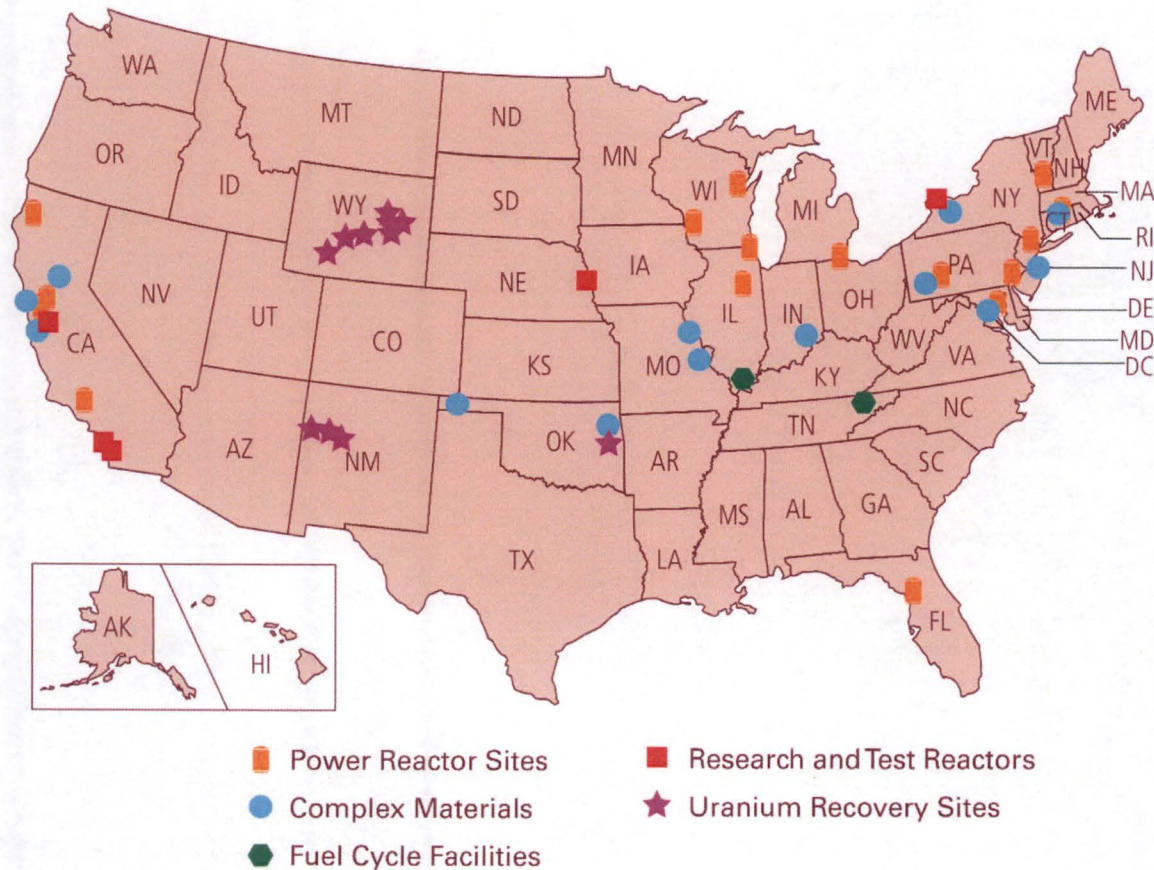
Division of Decommissioning, Uranium Recovery and Waste Programs

John Tappert, Director

Supporting Several Priorities

- **Licensing and Oversight of Complex Decommissioning Materials Sites**
- **Licensing and Oversight of Reactor Decommissioning Sites**
- **Oversight of Radium**

Locations of NRC-Regulated Sites Undergoing Decommissioning



Accomplishments in Materials Decommissioning

- **Issuance of Amendment for 16 US Army Installations**
- **Termination of Licenses at Legacy Sites**
- **Completion of Unlicensed AAR Corporation Site Activities**

Addressing Challenges in Materials Decommissioning

- **Providing Oversight of
Groundwater Issues**
- **Ensuring Clean Up at Sites
with Limited Financial
Resources**

Ongoing Activities in Reactor Decommissioning

- **19 power reactors in decommissioning**
- **6 power reactors in active DECON or active dismantling**
- **13 power reactors in SAFSTOR or deferred dismantlement**
- **6 power reactors announced permanent cessation of operations by 2019**

Accomplishments in Reactor Decommissioning

- **Completion of License Terminations and Partial Site Release Authorizations**
- **Completion of the Decommissioning Lessons Learned Report**
- **Completion of an Evaluation Regarding Prompt Remediation of Contamination During Licensed Operation**

Addressing Challenges in Reactor Decommissioning

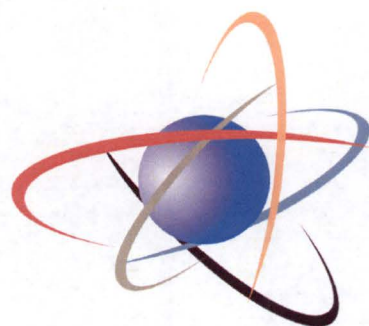
- **Planning and Coordinating
Reactor transitions into
Decommissioning**
- **Addressing Complex Policy
Matters**
- **Evaluating and Assessing First
of a Kind Requests**

Regulating Radium

- **Energy Policy Act of 2005**
 - **Expanded Byproduct Material Definition to include Discrete Sources of Radium-226**
- **NARM Rule of 2007**
 - **Implemented Provisions of the 2005 Energy Policy Act**
- **Development of MOU with DoD**
- **Non-Military Radium Oversight**

Ongoing Activities in the Radium Program

- **Managing an Outreach and Information Gathering Campaign (non-Military)**
- **Addressing Policy Issues with the Regulation of Radium Sites (non-Military)**
- **Implementing a Memorandum of Understanding (Military)**



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**Division of Decommissioning,
Uranium Recovery and Waste
Programs**

Low-Level Waste Branch

Gregory Suber, Chief

Low-Level Waste Overview

- **Current Program Activities**
- **Recent Program Accomplishments**
- **Emerging Issues and Challenges**

Ensuring Safe Disposal of Low-Level Waste

- **Focus includes:**
 - **Assessing the National Low-Level Waste Regulatory Framework**
 - **Supporting Agreement State Oversight of Disposal Facilities**
 - **Monitoring Certain DOE Disposal Activities**
 - **Conducting External Outreach**

Ongoing Activities in the LLW Program

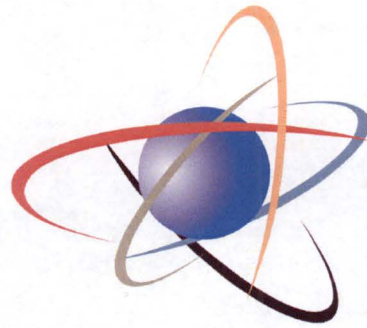
- **GTCC and Transuranic Waste
Regulatory Basis**
- **Byproduct Material Financial
Assurance Rulemaking Plan**
- **Savannah River Site Waste
Incidental to Reprocessing**

Accomplishments in the LLW Program

- **Published Proposed Part 61 Rulemaking for Public Comment**
- **Assessed and Responded to Numerous Comments**
- **Provided Draft Final Rule to the Commission**
- **Issued the Branch Technical Position on Concentration Averaging and Encapsulation**

Managing Challenges in the Low-Level Waste Program

- **LLW Programmatic Assessment**
 - **Prioritize Existing and Identify New Tasks**
 - **Implement Branch Technical Position on Concentration Averaging and Encapsulation**
 - **Perform Low Activity Waste Scoping Study**



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Region I
Division of Nuclear
Materials Safety
Decommissioning & Technical
Support Branch
Raymond Powell, Chief

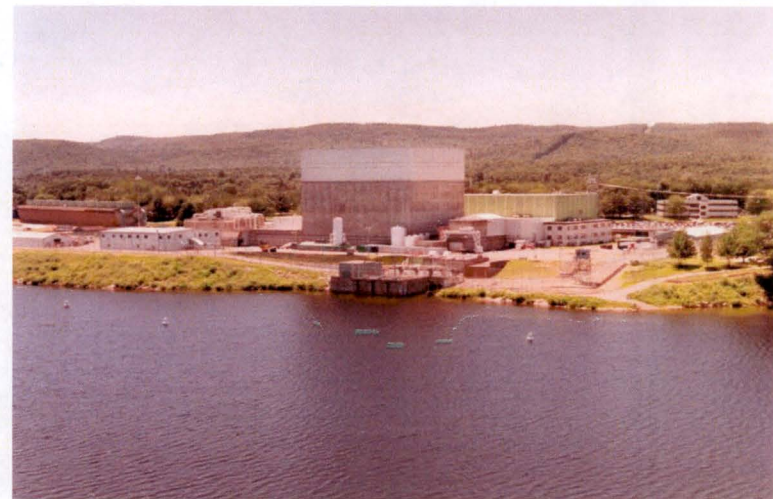
Assuring Safety of Decommissioning Units



Increasing Efficiency through Enhancements to Inspection Guidance



Millstone Unit 1



Vermont Yankee

Progress has been Made at Complex Materials Decommissioning Sites



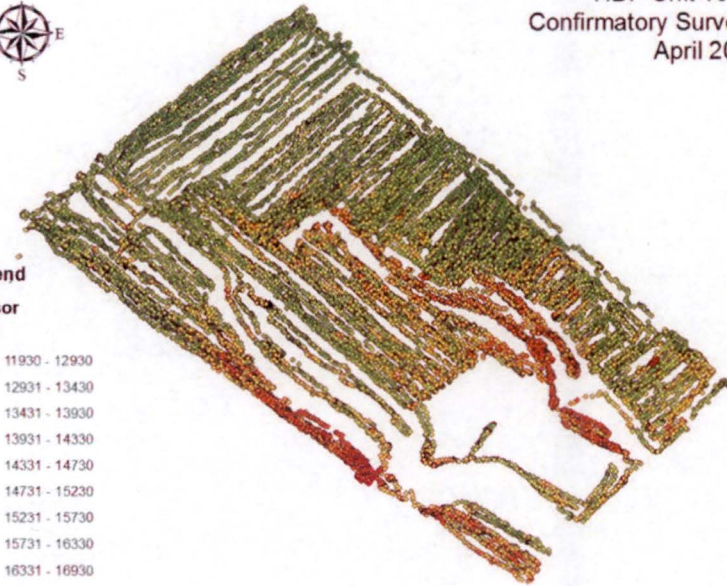
Inspection Value – Added



HDP Unit 10-13
Confirmatory Surveys
April 2015

Legend Sensor CPM

- 11930 - 12930
- 12931 - 13430
- 13431 - 13930
- 13931 - 14330
- 14331 - 14730
- 14731 - 15230
- 15231 - 15730
- 15731 - 16330
- 16331 - 16930
- 16931 - 17830



Gamma Walk Over Survey Results

Training Decommissioning Health Physics Inspectors

- **Unique inspection skillset**
- **Additional training needs:**
 - Licensing Practices and Procedures**
 - MARSSIM**
 - MARSAME**
 - RESRAD**



Addressing Challenges to Develop the Future Workforce

- **Core Competency Modeling Project**
- **More Clearly Defined Individual Training Needs**
- **Improved Qualification Journal**



Supporting Upcoming Work on Non-Military Radium



**Former New
Haven Clock Co.**



**Former Gilbert
Clock Company**



**Overview of the
Spent Fuel Storage
and Transportation
Business Line**

October 18, 2016

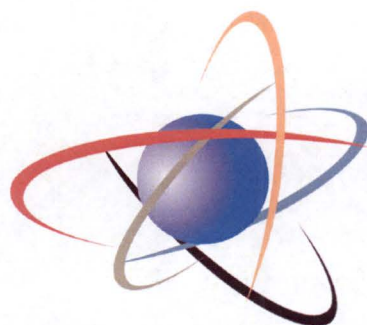


Opening Remarks

Victor McCree
Executive Director for
Operations

NRC Panel will Address the Following Topics

- **Current spent fuel environment and licensing process changes**
- **Current licensing activities for CISF and Renewals**
- **Oversight of Independent Spent Fuel Storage Installations**



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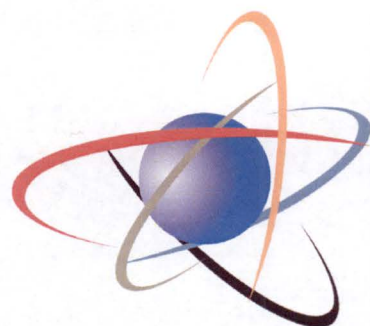
Protecting People and the Environment

Office of Nuclear Material Safety and Safeguards

Marc Dapas, Director

Ensuring Safety Over a Broad Range of Activities

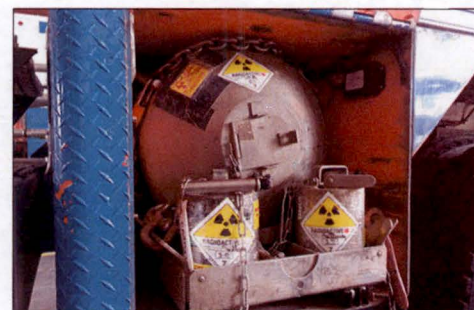
- **Spent Fuel Storage Licensing**
- **Transportation Certification**
- **Optimizing Available
Resources and Collaboration**
- **ISFSI Oversight**



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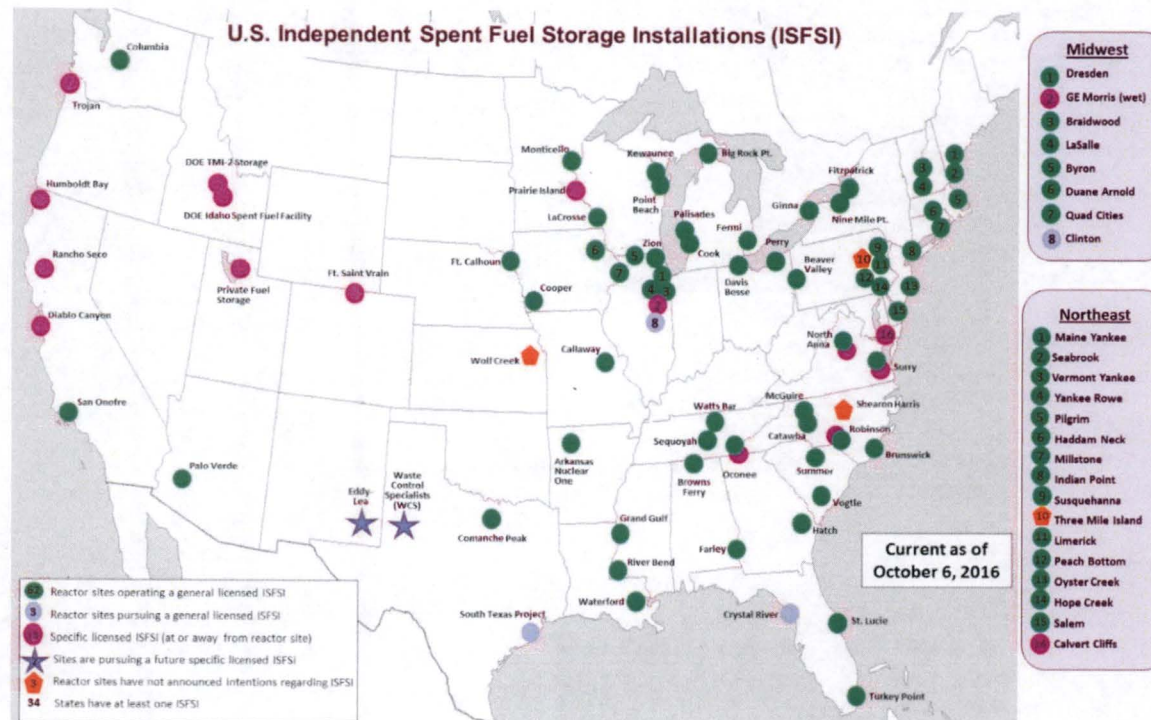
Protecting People and the Environment



Division of Spent Fuel Management

Mark Lombard, Director

Solid Baseline and Potential Increase in Workload



Proactively Addressing the Potential Workload Increase

- **Modifying internal processes**
- **Issuing Division Instructions**
 - **Prompt Issue Resolution**
- **Developing a graded approach to dry cask storage regulatory framework**

Monitoring External Factors

- **Potential workload increase as National High-Level Waste Management Strategy evolves**
- **High level of public interest and interactions**
- **Anticipating large number of ISFSI and storage CoC renewals**

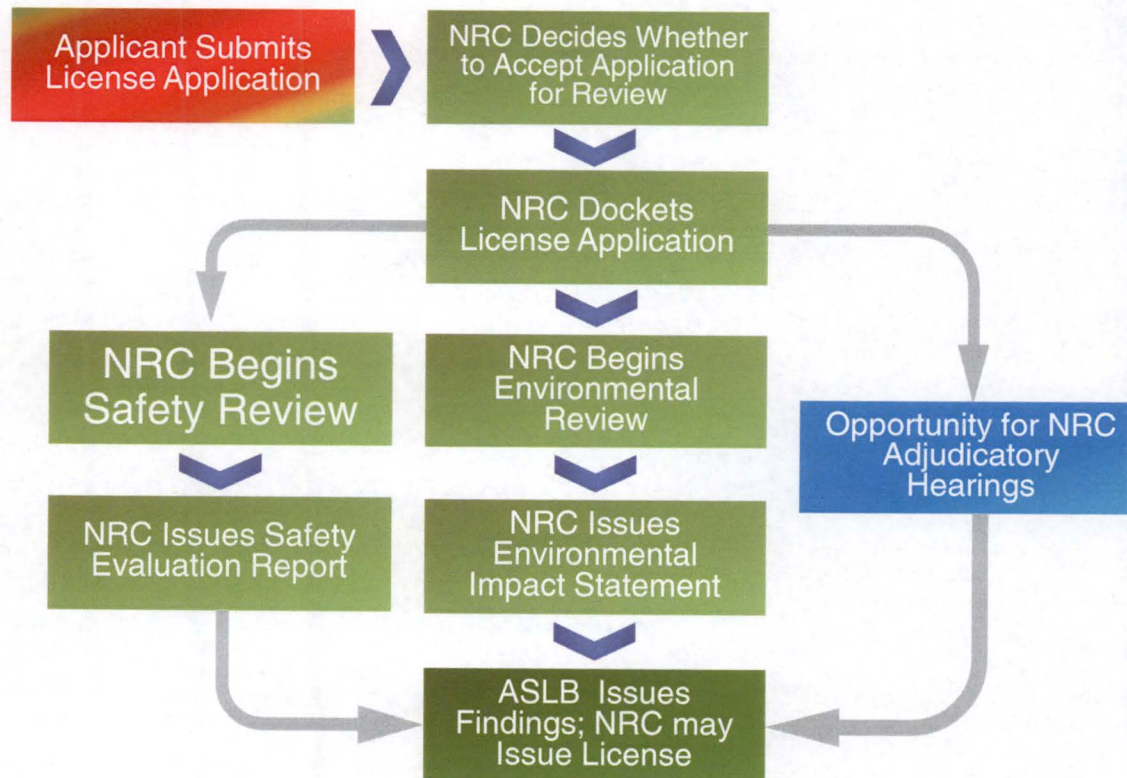
Addressing Challenging Licensing Activities

- **Consolidated Interim Storage Facility (CISF) Reviews**
 - **Preparations for Safety-Focused Efficient Review of CISFs**
- **Renewal Reviews**
 - **Streamlined Framework for Storage Renewal**

Ensuring a Rigorous, Consistent, and Predictable Process for Reviewing CISF Applications

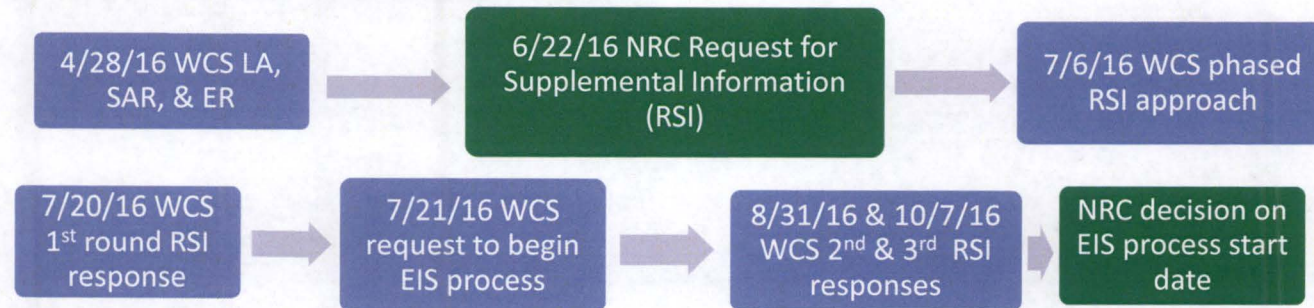
- **Issued division instructions to describe expectations and best practices**
 - **Pre-application meetings and audits**
 - **Prioritization framework to manage workload**
 - **Prompt issue resolution process**

Implementing and Communicating an Effective Licensing Process



Employing Revised Internal Processes for CISF Review

- **WCS Timeline**

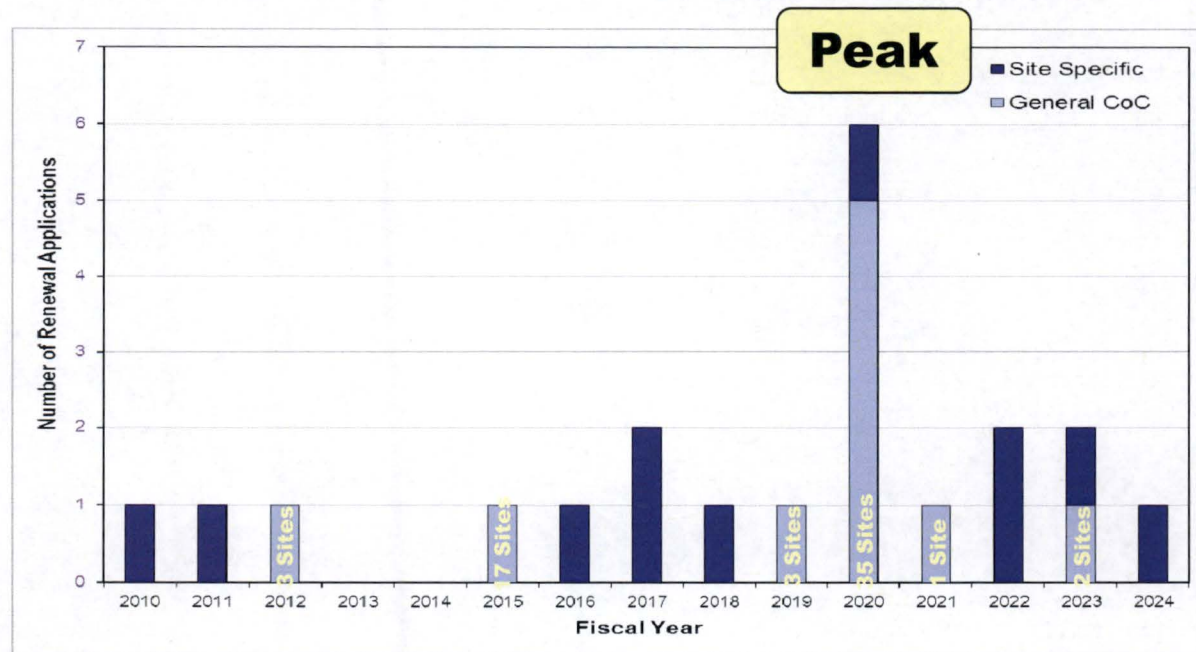


- **Second Application Anticipated in March 2017**

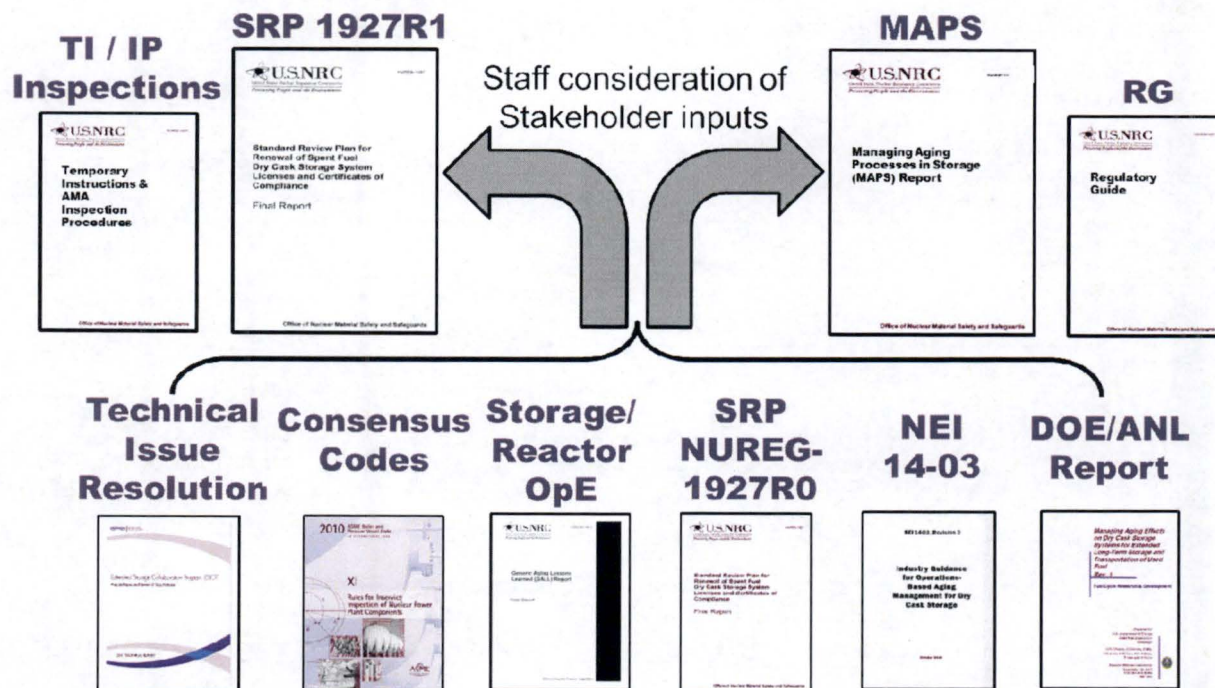
Implementing a Predictable, Stable, and Efficient Renewal Framework

- **Leveraged Agency Experience
Regarding Operating Reactor
Renewals**
- **Preparing for the anticipated
surge in renewal activities**

Implementing a Predictable, Stable, and Efficient Renewal Framework (cont'd)



Implementing a Predictable, Stable, and Efficient Renewal Framework (cont'd)

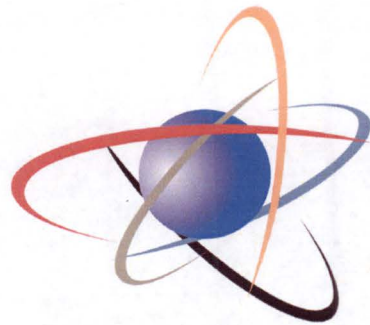


Implementing a Predictable, Stable, and Efficient Renewal Framework (cont'd)

- **Issued NUREG-1927 Rev. 1:
Standard Review Plan for Renewal
of Specific Licenses and
Certificate of Compliance for Dry
Storage of Spent Fuel**
- **Publishing for Comment the
Managing Aging Processes in
Storage Report**

Implementing a Predictable, Stable, and Efficient Renewal Framework (cont'd)

- **NRC Inspection Guidance**
- **Regulatory Guide**
 - **Potential endorsement of industry guidance NEI 14-03**
- **Consensus Standards**
 - **ASME and ACI**



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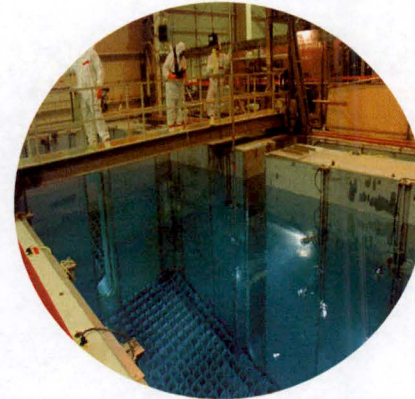
Protecting People and the Environment

Region III
Division of Nuclear
Materials Safety

Christine Lipa, Deputy Director

Inspection Focus

**Safety
and
Security
of Spent
Fuel**



ISFSI Inspections Cover a Wide Range of Activities



Ensuring Safety through Effective Regional Oversight

- **Non-destructive Testing**
- **Control of Heavy Loads**

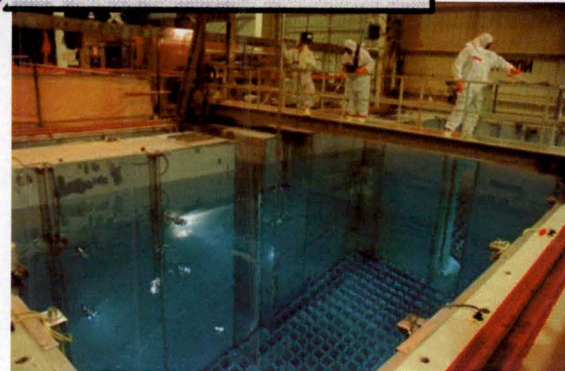


Addressing Dry Cask Storage Capacity

**Spent
Fuel
Pool**

**Limited
Capacity**

**Pool
re-racks
complete**

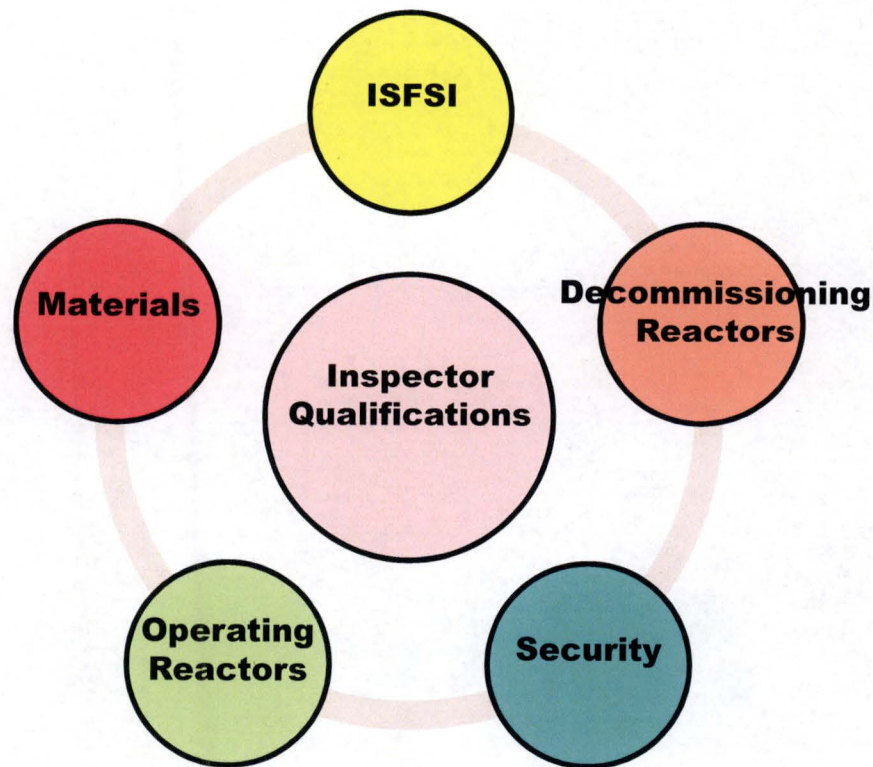


ISFSI

**Operating
ISFSIs
changing
cask
vendors**

**Shutdown
reactor
sites
expediting
transfer**

Inspector Flexibility and Cross-Training



Questions

Acronyms

- **American Concrete Institute (ACI)**
- **American Society of Mechanical Engineers (ASME)**
- **Atomic Safety and Licensing Board (ASLB)**
- **Certificate of Compliance (CoC)**
- **Consolidated Interim Storage Facility (CISF)**
- **Department of Defense (DoD)**
- **Department of Energy (DOE)**
- **Environmental Impact Statement (EIS)**
- **Greater-Than Class C (GTCC)**
- **Independent Spent Fuel Storage Installation (ISFSI)**

Acronyms

- **Low-Level Waste (LLW)**
- **Multi-Agency Radiation Survey and Assessment Equipment Manual (MARSAME)**
- **Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)**
- **Memorandum of Understanding (MOU)**
- **Naturally-occurring and accelerator produced radioactive material (NARM)**

Acronyms

- **Nuclear Energy Institute (NEI)**
- **Nuclear Regulatory Commission (NRC)**
- **Request for Supplemental Information (RSI)**
- **Residual Radioactivity (RESRAD)**
Waste Control Specialists (WCS)