



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

September 6, 2000

MEMORANDUM TO: File

FROM: David J. Wrona, Project Manager
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: SLIDES USED DURING DECOMMISSIONING/DRY STORAGE
PLANNING AND TECHNOLOGY FORUM

Personnel from the Nuclear Regulatory Commission's Office of Nuclear Reactor Regulation (NRR) made presentations during a Nuclear Energy Institute-sponsored Decommissioning/Dry Storage Planning and Technology Forum. The purpose of this memorandum is to make the slides used by the NRR staff available to the public.

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Attachments: 1. Slides used by Mr. Stuart A. Richards
2. Slides used by Mr. Dino C. Scaletti



Decommissioning/Dry Storage Planning & Technology Forum

Stuart A. Richards

**Director, Project Directorate IV &
Decommissioning**

**Division of Licensing Project
Management**

Office of Nuclear Reactor Regulation

July 24, 2000

BACKGROUND

- Staff Charter: Improve Decommissioning Regulations for Nuclear Power Plants using Risk-Informed Approach Where Possible
- Staff Goals
 - Reduce Unnecessary Regulatory Burden using Risk Information
 - Improve Efficiency and Effectiveness by Reducing Amendments and Exemptions Needed During Decommissioning
 - Increase Public Confidence by Providing Clear Predictable Requirements
 - Maintain Safety by Basing Regulatory Improvements on Technical Risk Assessment
- SECY-99-168 Laid Out Plan to Commission

SPENT FUEL POOL RISK

- Staff Technical Working Group Formed to Conducted Spent Fuel Pool Risk Assessment
 - Extensive Stakeholder Interactions
 - Draft Report Issued February 2000
 - Final Report Pending (May Impact Rulemaking)
- Frequency of Zirconium Fire Event Is Low but Not Insignificant
- Frequency Less Than 3 E-6
- Frequency Contingent on Decommissioning Plants Implementing Certain Industry Commitments and Staff Assumptions Documented in the Study
- Accident Scenarios Dominated by Severe Earthquake

SPENT FUEL POOL RISK (Continued)

- Vulnerability to a Zirconium Fire is essentially Bounded by 5 Years of Spent Fuel Decay Time (Site Specific Time Would Be Less)
- Long Time for Event Response (~10 Hours) After 1 Year Decay Time
- Draft Decommissioning Spent Fuel Pool Risk Report Results:
 - Reduction in Emergency Planning Requirements after 1 Year
 - No Specific Safeguards Risk Insights
 - Unable to Risk-Inform Insurance

INTEGRATED RULEMAKING PLAN

- The Integrated Rulemaking Plan for Nuclear Power Plant Decommissioning was Forwarded to the Commission by SECY-00-145 Dated June 28, 2000
- Plan is Publicly Available (Will be Posted on Website)
- The Rulemaking Plan Addresses Decommissioning Regulations in the Areas of EP; Insurance; Safeguards; Staffing and Training; Backfit
- The Rulemaking Plan Is Risk Informed:
 - Implements Recommendation of the Spent Fuel Pool Risk Study for EP
 - Reduces NRC Required Licensing Reviews and Approvals Based on Low Risk

EMERGENCY PLANNING

- Rulemaking Plan Recommends Significant Reductions in EP After 1 Year of Spent Fuel Decay
 - Offsite EP Could be Discontinued
 - Onsite EP Would be Similar to That Required for a Monitored Retrievable Storage Installation Under Part 72
- After 5 Years of Spent Fuel Decay Time Onsite EP would be Similar to That Required for an Independent Spent Fuel Storage Installation
- No EP Required When No Fuel Onsite
- EP would be Contingent on Licensees Committing to Risk Reduction Measures as Documented in Their FSAR
- Changes to EP Could be Implemented Without NRC Approval

INSURANCE

- No Change in Insurance Requirements for First 5 Years of Spent Fuel Decay Time *
- After 5 Years
 - Offsite Liability Reduced to \$100 Million and Participation in Secondary Rating Pool No Longer Required
 - Onsite Liability Reduced to \$25 Million
- After Fuel Removed From Spent Fuel Pool
 - Offsite Liability Reduced to \$25 Million
 - Onsite Liability Reduced to \$0
- No Licensing Actions Would be Required to Implement Insurance Liability Changes

* Insurance Coverage Could be Reduced Before 5 Years with a Plant - Specific Analysis Demonstrating a Zirconium Fire is No Longer Possible

SAFEGUARDS

- Proposes a New Rule for Protecting Spent Fuel Stored in SFPs at Decommissioning Plants
- Rule Would Reduce Requirements Where Appropriate:
 - Protected Area Could Be Reduced to Spent Fuel Pool
 - Spent Fuel Pool Building Could Qualify as Vehicle Barrier
 - Minimum Staffing Reduced to 2 Guards
- New Rule Would Continue Some Elements of Operating Plant Safeguards (for Spent Fuel Pool Only):
 - Vehicle Control Measures
 - Armed Security Personnel
 - Intrusion Detection Aids
- Rule Would Become Effective as Soon as Licensee Permanently Shutdown and Defueled
- The Decommissioning Safeguards Could Be Implemented Without NRC Approval

STAFFING AND TRAINING

- Clarifies That Licensed Operators Are Not Required
- Clarifies That a Shift Technical Advisor (STA) Training Program Is Not Required
- Specifies the Minimum Staffing Level of Certified Fuel Handlers and Other Nonlicensed Operators
- Specifies Training Requirements for Staff
- Define the Control Room for a Permanently Shutdown and Defueled Plant

BACKFIT

- Rulemaking Plan Implements Commission Direction Provided in SRM on SECY-98-253
 - Clarifies That Backfit Protection Applies to Decommissioning Plant Licensees
 - Revising the Factors Used in Evaluating Backfit Determination

Other Decommissioning Rulemaking

- **Partial Site Release**
 - Precipitated by Oyster Creek Request
Rulemaking Plan Approved by Commission
 - Expect Publication of Final Rule in 18-24 Months
 - Interim: Staff Will Handle All Proposed Partial Site Releases on Case-by-Case Basis Consistent With the Rulemaking Plan

Decommissioning Regulatory Improvements Choices

- Continue to Define Additional Decommissioning Regulatory Improvements and Combine All Changes Into One Large Decommissioning Rule

OR

- Proceed With Rulemakings in Progress (Integrated Rulemaking Plan & Partial Site Release) and Followup With Other Decommissioning Rulemaking as Staff Resources Permit

OR

- Complete the Integrated Decommissioning and Partial Site Release Rulemaking Only

OR

- Stop All Rulemaking



Development of a Generic Environmental Impact Statement for Permanently Shutdown Nuclear Power Plants

*Decommissioning/Dry Storage
Planning & Technology Forum*

*Newport Beach, California
July 25, 2000*

**Dino C. Scaletti
US Nuclear Regulatory Commission**

Outline

- Background
- Definition of Decommissioning as it Relates to the GEIS
- Reasons for Updating GEIS
- Scope of GEIS
- Issues Identified During Scoping
- Schedule for Update of GEIS

Background

- Update to NUREG-0586 Suggested by:
 - ▶ Public, EPA, and Industry
- January 2000 - Contract for GEIS Issued to PNNL
- February 2000 - Coordination Meeting with EPA
- March 2000 - Notice of Intent Published in FR
- April 2000- Meeting with NEI Seeking Assistance as Licensee Interface and Focal Point for Data Collection

Decommissioning is defined as

“The process of safely removing a facility from service followed by reducing residual radioactivity to a level that permits termination of the NRC license”

Why is the NRC updating the GEIS?

- Original GEIS was published in 1988
 - data is over 12 years old
- New regulations for decommissioning were published in Late 1990s
 - examples - PSDAR and LTP
- Increased U.S. decommissioning experience
 - 19 shutdown facilities in various stages of decommissioning
- New Issues
 - rubblization
 - partial site release
 - variations on entombment

What environmental impacts will be assessed in the revised GEIS?

- Land use
- Water use/quality
- Air quality
- Ecology
- Radiological impacts
- Postulated accidents
- Transportation
- Costs
- Socioeconomic impacts
- Environmental Justice
- Historical and archaeological
- Noise

Scoping Issues

- 25 millirem site release criteria
- Onsite storage of spent fuel
- Grandfathering
- Rubblization
- Entombment
- Partial Site Release
- Financial Liability of Licensees
- Consideration of Non Radiological Hazards
- Lack of Site Specific Environmental Analysis

Schedule to update Decommissioning GEIS

- Notice of Intent - March 14, 2000
- Scoping Process - March 14 - July 15, 2000
 - Scoping Meetings - April 27, May 17, June 13 and 21
- Evaluation of environmental impacts, alternatives, mitigation measures
 - RAIs to NEI - August
 - Two Additional Site Visits - September
- Draft EIS issued for public comment - early 2001
- Public comment period - 60 days after publication
- Final EIS issued – late 2001

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PDIV-3 Reading

RidsNrrDlpm (Zwolinski/Black)

RidsNrrDlpmLpdiv (Richards)

RidsNrrDlpmLpdiv3 (Masnik)

RidsNrrLACJamerson

RidsNrrPMDWrona

RidsNrrPMDScaletti

OFFICE	PDIV-3/PM	PDIV-3/LA	DLPM/SC
NAME	DWrona <i>DJW</i>	CJamerson <i>CJ</i>	MMasnik <i>MTM</i>
DATE	9/5/00	9/5/00	9/5/00

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