

*Lessons Learned in the
Decommissioning of Fuel Cycle
Facilities*

***ACNW Decommissioning Lessons Learned Working
Group Meeting***

November 14, 2006

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Fuel Cycle Facilities Forum

Topics

- Introduction – The Fuel Cycle Facilities Forum
- Successes Achieved
- Decommissioning Cost Issues
- Environmental Impact Issues
- Design & Construction Issues
- Technical Issues

Introduction to the FCFF

- Voluntary industry organization established in 1987
- Represents Source and Special Nuclear Material licensees
- Primary focus is on decommissioning
- Membership represents licensees requiring special NRC consideration
- Provides industry voice on decommissioning issues
- Provides feedback and recommendations to NRC staff

Successes Already Achieved

- Intentional Mixing
- Use of Reasonable Exposure Scenarios
- “Layering” of Institutional Controls
- Integrated Decommissioning Improvement Program (IDIP)

Decommissioning Costs

- Transportation and Disposal of Contaminated Material
- In-process Measurement and Removal of “Migrated” Material
- Decontamination or Removal of “Inaccessible” Components
- Characterization and Final Status Surveys
- Health Physics Monitoring of Decommissioning Activities

Environmental Issues

- Concentration of Effluents Causing Unanticipated Exceedences of DCGLs
- DCGL Derivation not Accounting for Inter-Media Impact
- Penetration of Liquids Into or Through Porous Material
- Migration of Liquids Through Penetrations

Design & Construction Issues - I

- Minimize Embedded Piping or Design for Access to Embedded Piping in Future
- Use Stainless Steel or Plastic when Possible; Corrosion is Problematic
- Provide Secondary Containment of Liquids when Possible
- Avoid Floor Penetrations or Design Seals for Penetrations

Design & Construction Issues - II

- Apply Coatings to Porous Surfaces or Make Porous Surfaces Non-Porous in Acid Areas
- Use Dry Processes when Possible
- Consider a Rail Line to the Site

Other Issues – Regulatory - I

- Address Inconsistency Between NRC-HQ, NRC Regions, and States via Technical Documents
- Multi-Agency Jurisdiction Requires Proactive Involvement by NRC to Avoid Delays (and Cost Impact)
- Provide Clarification to 10 CFR 70.38 re: Alternate Schedule for Decommissioning
- Address Regulatory Issues Through IDIP Position Statements

Other Issues – Regulatory II

- Provide for Periodic Site Surveys During Operating Years to Justify Area Classification
- Maximize In-Process Inspection to Minimize Confirmatory Survey & Inspection

Other Issues – Technical - I

- Design the Decommissioning Plan to Minimize Health Physics Monitoring and Surveys
- Consider Requiring Characterization Data to Meet Final Status Survey Quality Requirements
- Streamline Data Collection & Import; Link Data to Location
- Minimize Paper and Maximize Electronic Data Entry
- Establish Electronic Vehicle (e.g., Website) to Enhance Access to Data

Other Issues – Technical - II

- Maximize Licensee's Ability to Decommission Under Operating License
- Develop DCGLs During Licensing Process
- Provide for Volumetric Averaging for Groundwater and Subsurface Soil
- Allow Reduced Characterization under Specified Conditions

Questions??

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