Hot Topics and Emerging Issues in US Commercial Low-Level Radioactive Waste Management --An NRC Perspective

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Topics

- Unique waste streams rulemaking
- Blending
- Concentration Averaging Branch Technical Position
- Comprehensive revisions to 10 CFR Part 61
Unique Waste Streams Rulemaking

- Significant quantities of DU from commercial enrichment
- Not considered in 10 CFR Part 61
- “Unique waste stream”
- Commission direction in Memorandum and Order CLI-05-20
- NRC staff evaluation in SECY-08-0147
4 options for Commission consideration
– Generic communication on need for site-specific evaluation
– Rulemaking to specify site-specific analysis
– Determine DU classification within existing framework
– Re-examine waste classification framework

Commission decision
– Limited rulemaking and guidance
– Budget to re-examine waste classification in long-term

Technical basis for rule
Rulemaking working group
Unique Waste Streams Rulemaking

• Require site-specific analysis
• Conduct stylized human intrusion analysis
• Reduce ambiguity and facilitate implementation
• Provide guidance
Unique Waste Rulemaking (cont.)

• “As a longer term action, in a future budget request the staff should propose the necessary resources for a comprehensive revision to risk-inform the 10 CFR Part 61 waste classification framework . . .”

• Staff currently addressing (March 4, 2011, DOE/NRC workshop)

• Impact of comprehensive Part 61 SECY (Information Paper)
Blending

- SECY-10-0043 LLW Blending Commission paper

- Staff recommended blending position be risk-informed, performance-based
  - Add blended waste to unique waste streams rulemaking
  - Revise blending position in Concentration Averaging BTP
  - Revise Volume Reduction Policy Statement
  - Issue Interim Guidance to Agreement States
Blending Class A & B/C Waste (cont.)

Class A

Class B, C

Concentration Averaging

Homogeneity Criteria

Site-Specific Analysis

Off-Site Public

Inadvertent Intruder

Disposal Site

Class A Waste
Concentration Averaging Branch Technical Position (BTP)

- Strategic Assessment of NRC LLW Program (SECY-07-0180)
- RI/PB the CA BTP--high priority ranking
- Sandia effort –RI/PB positions and improve clarity
- Chairman request on blending issue
- Commission decision on blending
Scope

- Improve clarify, make user-friendly
- RI/PB all BTP provisions
- RI/PB blending, consistent with Commission direction
BTP Components

• Mixing of homogeneous waste streams
• Solidified and absorbed liquids
• Mixing of activated materials
• Contaminated materials
• Mixing of cartridge filters
• Waste in high-integrity containers
• Encapsulation of solid material
• Mixing of dissimilar waste streams
Recent Public Workshop

- Federal Register Notice
- Panel members and participants
- Outcome
- Path forward
## Maximizing Stakeholder Input

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
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<tr>
<td>Conduct public workshop on CA BTP</td>
<td>Feb. 24, 2011</td>
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<tr>
<td>DOE/NRC workshop on Part 61</td>
<td>March 4, 2011</td>
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<td>Issue blending Interim Guidance</td>
<td>March 31, 2011</td>
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<td>Close comment period on CA BTP</td>
<td>April 15, 2011</td>
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<td>Brief ACRS on CA BTP</td>
<td>June 2011</td>
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<td>Complete Commission paper on VRPS</td>
<td>August 2011</td>
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<td>Complete Commission paper on UWS proposed rule</td>
<td>October 2011</td>
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<td>Issue draft VRPS for public comment</td>
<td>October 2011</td>
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<tr>
<td>Issue draft CA BTP for public comment</td>
<td>October 2011</td>
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<tr>
<td>Conduct public workshop on CA BTP (New Mexico)</td>
<td>October 2011</td>
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<tr>
<td>Issue Commission paper with proposed final VRPS</td>
<td>December 2011</td>
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<tr>
<td>Issue Final CA BTP</td>
<td>June 2012</td>
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<tr>
<td>Issue Commission paper with proposed final UWS rule</td>
<td>October 2012</td>
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<tr>
<td>Commission paper on Part 61 revisions</td>
<td>December 2012</td>
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Risk-Informing 10 CFR Part 61

• SECY-08-0147 Commission direction

• Additional Commission direction
  – June 17, 2010, meeting with staff and stakeholders on blending
  – “the staff should provide the Commission with the staff’s approach to initiate activities related to a risk-informed, performance-based comprehensive revision to Part 61, including the resources and the timeline for completing the rulemaking”

• SECY-10-0165, Comprehensive Revisions to 10 CFR Part 61
SECY-10-0165 Options

- Risk-inform the current Part 61 waste classification framework
- Comprehensive revision
- Site-specific waste acceptance criteria
- International alignment
- Supersede Direction in SECY-08-0147
Staff Recommendation

• Solicit stakeholder views
• DOE/NRC joint workshop, March 4
• Subsequent workshops in 2011 and 2012
• Results and recommendation to Commission after public input
• Goal is to maximize public input
Conclusions

• Significant changes to Part 61 underway

• Update RI/PB operational guidance (BTP)

• Maximize stakeholder input

• Further changes per Commission direction?