




W14: Optimizing Waste Disposal for the New Millennium

Revisions to the Concentration Averaging and Encapsulation Branch Technical Position

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Outline

Suggestion: Regulators can help optimize waste disposal

- Significant stakeholder involvement
 - Staff open to evaluating different views
 - Decisions made independently
- Risk-informed, performance-based guidance
 - Alternative approaches for site-specific conditions
 - More risk-informed bases for generic look-up guidance
- Conclusions


2



Example: CA BTP Revision


- 10 CFR 61.55(a)(8) allows averaging over volume or weight of waste
- Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP) provides guidance to address potential "hot spots" in waste containers
- Originally part of another technical position in 1983, extensively revised in 1995 and 2015

3

Goals for Revision 


- Make positions more risk-informed and performance-based
- Reduce worker **dose** exposures from unnecessary waste characterization and surveys
- Provide better documentation of technical bases

4

Stakeholder Involvement 

- Public Meetings
 - Three workshops soliciting public input (2 on BTP, 1 on blending)
 - Commission meeting on blending
 - Three meetings with companies that expressed interest in blending
 - Meeting with a sub-committee and the full committee of the Advisory Committee on Reactor Safeguards (ACRS)
- Meetings with State Regulators and DOE counterparts
- Three drafts for comment with detailed comment responses
- Outcomes
 - Significant revisions of original positions
 - Substantial documentation of bases for positions
 - Positive feedback on consideration of comments
 - Process considered lengthy by some stakeholders

5

**Revised Positions:
Three Examples** 

- Alternative Approaches
- Revision to Factors of 1.5 and 10
- Revised sealed source activity limits

6

Alternative Approaches

- As in the past, revised CA BTP provides broadly applicable "look up" guidance
- Alternative approaches encourage consideration of site- and waste-specific factors
- Revision provides Licensees and Agreement States with specific guidance for factors to consider when developing or evaluating alternative approaches

Alternative Approaches (cont'd)

- Examples include
 - Site-specific intruder assessments
 - Encapsulation of sealed sources
 - Likelihood of intrusion
 - Large components
 - Time of intrusion into blendable waste
 - Legacy wastes

Factor of 1.5

Average concentration in each package is the same and meets the Class B limit

1995 Guidance **Revised Guidance**

Revised Exposure Scenario Sealed Sources

1995 BTP
50 mrem from sealed source
Encapsulation intact
2360 hours
Contact dose

Revised BTP
500 mrem from sealed source
No encapsulation
4 hours in pocket
720 hours at 2 m

10

Conclusions

- Stakeholder involvement
 - Thorough evaluation of technical positions
 - Better documentation of bases for positions
- Revised CA BTP provides
 - Generic guidance for majority of waste
 - Guidance on developing and evaluating alternative approaches to consider site- and waste-specific situations
- Revised BTP has potential to
 - Reduce worker exposures
 - Permit disposal of more LLW while maintaining public health and safety. Commission favors disposal of LLW over storage

11
