

U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

Intentional Mixing -- A Solution for B & C Waste? A Regulatory Perspective

The Second Annual Radwaste Summit

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TOPICS

- **Drivers**
- **Safety considerations**
- **Definitions**
- **Current guidance**
- **Issues**
- **Stakeholder views**
- **Next steps**

DRIVERS

- **Strategic Assessment of LLRW Program (SECY-07-180)**
- **Closure of Barnwell for disposal of B/C waste**
- **NEI/EPRI initiative**
- **Licensee requests for approval to blend**

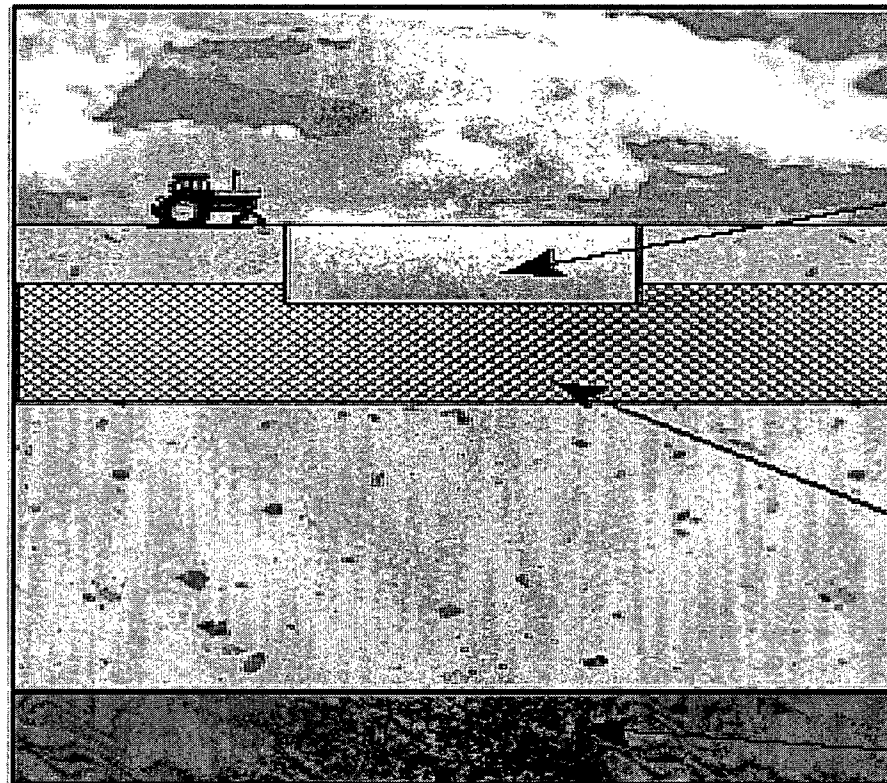
DEFINITIONS

- **Blending--mixing of higher and lower concentrations into a homogeneous final waste form**
- **Not clean or untainted material**
- **Distinguished from *averaging* of waste**

SAFETY CONSIDERATIONS

- **Protection of inadvertent intruder into disposal site—10 CFR 61.42**
- **Protection through various measures, including concentration limits**
- **“Averaging” to meet limits**
- ***Final* waste form, not “upstream” forms**

Part 61 Intruder Construction Scenario



Excavation

Waste

Groundwater

CURRENT GUIDANCE

- **1995 Branch Technical Position on Concentration Averaging and Encapsulation**
- **Mixing of homogeneous waste types or streams**
- **“Factor of 10” rule**
- **Exceptions**
- **Waste classification**

SOME ISSUES

- **Previous Commission statements on mixing**
- **Disposal preferred over storage**
- **Currently allowed exceptions to BTP**
- **Degree of homogeneity required after mixing of homogeneous wastes**
- **Range of stakeholder views**

NEXT STEPS

- **Consideration of whether to revise guidance, and, if so, how**
- **Advise Commission**
- **Seek additional stakeholder views**