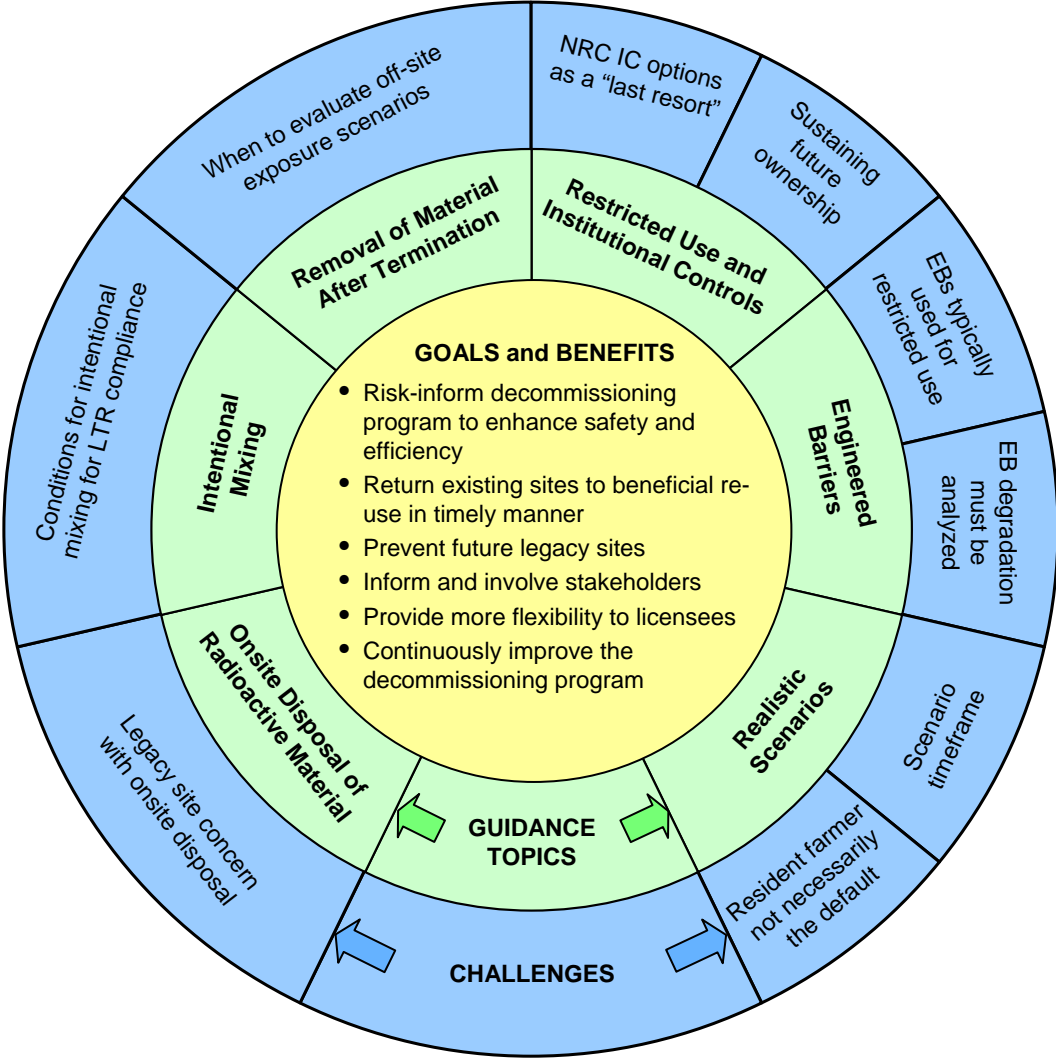




# Updates to NRC’s Consolidated NMSS Decommissioning Guidance

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<http://www.nrc.gov/what-we-do/regulatory/decommissioning/reg-guides-comm.html>



ACRONYMS			
LTR	License Termination Rule (10 CFR 20, Subpart E)	LA/RC	Legal Agreement with Restrictive Covenant
LTC	Long Term Control (license)	EB	Engineered Barrier
		IC	Institutional Control

**GUIDANCE TOPICS IN DRAFT SUPPLEMENT 1 TO NUREG-1757**

**Restricted Use and Institutional Controls:**

- LTR's risk-informed, graded approach for ICs
- Two new IC options, with NRC long-term oversight:
  - LTC license: possession-only license, license conditions note restrictions on site use and necessary monitoring, maintenance, or reporting
  - LA/RC: legal agreement between NRC and licensee, LA requires licensee to record restrictive covenant, describing restrictions on site use, with legal recordation body
- Total system approach to sustain site protection at restricted use sites

**Engineered Barriers:**

- Risk-informed graded approach to EBs
- EB analysis process and technical basis for EB performance
- Potential performance and degradation mechanisms
- Example of erosion protection

**Realistic Scenarios:**

- Selection and justification of exposure scenarios based on reasonably foreseeable future land use - land uses likely within the next 100 years, considering land use trends and plans
- Unlikely scenarios are evaluated to risk-inform the decision

**Onsite Disposal of Radioactive Material:**

- Onsite disposal under 10 CFR 20.2002 acceptable if resulting dose:
  - "few millirem" per year
  - 100 mrem/yr with additional financial assurance to decommission disposal
  - 25 mrem/yr for short-lived materials, license termination not imminent

**Intentional Mixing:**

- Acceptable to meet waste acceptance criteria of off-site disposal facilities (current practice)
- Acceptable to meet LTR criteria if:
  - Part of an overall approach that is ALARA
  - Area containing mixed soil is no greater than original contamination footprint
  - No uncontaminated soil from outside footprint, except in cases where it is the only viable alternative to meeting LTR criteria

**Removal of Material After License Termination:**

- Clarifies what building-related materials *may remain onsite* at license termination
- Acceptable approaches:
  - Materials meet previously approved (*offsite*) release criteria
  - For volumetric contamination: potential dose from off-site uses is less than "few millirem" per year
  - Bare building structures result in dose that meets LTR criteria

**CHALLENGES**

**NRC IC options as a "last resort"**

NRC IC options are "last resort of last resort" for decommissioning; licensees must meet eligibility criteria for restricted use and must demonstrate failure to establish other legally enforceable ICs or independent third party

**Sustaining future ownership**

Sustaining future ownership of private restricted use sites will be challenging

**EBs typically used for restricted use**

EBs typically used for restricted use; LTR requirement for dose caps assuming ICs fail warrants analysis of EB degradation without active maintenance and with inadvertent intruder

**EB degradation must be analyzed**

If EBs are used as part of compliance with LTR criteria, degradation must be analyzed, including analysis of uncertainty in long-term performance without active maintenance

**Scenario timeframe**

Realistic scenarios — reasonably foreseeable future land use (likely within 100 years) used to determine exposure scenarios for 1000-year dose assessment for LTR compliance

**Resident farmer not necessarily the default**

In evaluating reasonably foreseeable future land uses, licensees do not have to default to a resident farmer scenario

**Legacy site concern with onsite disposal**

For the 100 mrem/yr plus additional financial assurance option, there are concerns that onsite disposals under this option may result in legacy sites

**Conditions for intentional mixing for LTR compliance**

Must be part of an overall ALARA approach to cleanup, no clean soil from outside footprint

**When to evaluate off-site exposure scenarios**

For residual radioactivity in materials that may be removed from a site after license termination, the dose assessment must evaluate or bound doses from potential off-site uses

**PROCESS FOR UPDATING DECOMMISSIONING GUIDANCE**

**LTR Analysis Commission Papers [May 2003 and March 2004]**

Staff analysis to address several LTR implementation issues

**Regulatory Issue Summary 2004-08 [May 2004]**

Informed stakeholders of LTR Analysis, Commission direction, and preliminary guidance

**Decommissioning Workshop [April 2005]**

Provided opportunity for early stakeholder involvement in development of guidance on LTR Analysis issues

**NUREG-1757, Draft Supplement 1 [September 2005]**

Contained draft guidance on LTR Analysis issues; published for public comment

**Commission Consultation [planned May 2006]**

Staff shares results of stakeholder comments and input on guidance with Commission

**Finalize Guidance [planned September 2006]**

Staff finalizes guidance in NUREG-1757, Draft Supplement 1