

Comments on Proposed Rule
Regarding Low Level Radioactive
Waste Disposal

June 25, 2015

Daniel B. Shrum
Senior Vice President,
Energy Solutions

Summary of Issues

- Addition of performance assessment derived waste acceptance criteria
- Defense in depth
- Proposed rule is overly complicated
- Complications and inconsistencies
- Stability at 10,000 years
- Grandfathering provision
- Unintended consequences motivating unlicensed disposal

Performance assessment derived waste acceptance criteria

- Using waste acceptance criteria in lieu of tables in 10 CFR 61.55 is technological advancement
- Superior to the limits in the tables
 - Based on site-specific conditions
 - Incorporate most recent ICRP guidance
 - Account for volumes and activity of waste disposed
- No revision to generic tables could improve on a site-specific approach

Defense in Depth

- Appreciate the inclusion of a safety basis and the emphasis on defense in depth
- Proposed rule misapplies the concept of defense in depth
- Requirements for an “analysis” should be removed, e.g., 61.13(f)
- Analysis suggests quantitatively demonstrating the value of redundant systems
- Defense in depth comes from layers of protection
 - Suitable site geology + stability + proper package + activity limits = defense in depth

Proposed rule is overly complicated

- Revision of Part 61 initiated as a “limited scope rulemaking” (SRM-SECY-08-0147)
- As proposed, it is not limited nor readily understandable
- Amount of detail in §61.7 and §61.13 is excessive
- Significant volume of detail in §61.7 not related to intent of limited scope
- Most additions to §61.13 belong in guidance
- These additions don’t strengthen rule or contribute to health and safety

Complications and Inconsistencies

- From NUREG-1275
- Other Disruptive Processes (§5.1.1.3) – No reference to this term in the rule
- “Licensees should examine plausible scenarios for site evolution and characteristics in the site stability analysis” – directly conflicts with the SRM-SECY-13-0075 “only if scientific information compelling such changes from the compliance period is available”
- “Defense-in-depth analysis” – conflicts with SRM-SECY-13-0075 “clear statement that licensing decisions are based on DID protections”

Stability at 10,000 years

- The rule requires demonstrating site stability at 10,000 years
- §61.44 – “disposal facility must ... achieve long-term stability of the disposal site for the compliance and protective assurance periods...”
- Inconsistent with Commission direction, which explicitly refers to a “reasonable analysis”
- Technically infeasible – stability cannot be demonstrated to be stable for 10,000 years

Grandfathering provision

- It is not reasonable to apply new rule to all existing and future LLW disposal sites – criteria should be fit for purpose
- The “limited scope” rulemaking was intended to address waste streams not previously analyzed for disposal
- Sites not disposing of such waste streams should be grandfathered
- Propose a standard similar to that used in Utah
 - Based on volume of depleted waste disposed
 - >1 tonne total depleted uranium

Unintended consequences

- Complexity and cost of proposed rule will lead to unlicensed disposal of radioactive waste
- The Commission should include provisions for the disposal of low activity waste streams
- Absent that, more waste streams can be expected to go to disposal under 20.2002
- Waste streams allowed under 20.2002 are not adequately regulated
 - No regulatory control
 - No formal guidance