

OVERVIEW OF NRC'S LICENSE TERMINATION RULE

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REGULATIONS AND GUIDANCE

- Regulations: 10 CFR 20 Subpart E (License Termination Rule (LTR))
- Statements of Consideration (SOC) for LTR
- Guidance: Consolidated Decommissioning Guidance, NUREG-1757, Vol. 1, 2, and 3
- Commission's West Valley Policy Statement (WVPS)
- Commissions' Orders regarding Shieldalloy
 - CLI-11-12 and CLI-13-06
 - Only for 10 CFR 20.1403(a)

LTR STATEMENT OF CONSIDERATIONS (SOC)

- Source of extensive information—rationale for provisions, responses to comments
- Commission preference for unrestricted release
- Recognition that there may be cases where achieving unrestricted release would not be reasonable (e.g., where cost would be excessive)
- Flexibility
 - Consistent set of criteria for the range of facilities and site conditions
 - License termination approaches available: unrestricted release, restricted release, alternate criteria
 - Licensee proposes decommissioning methods for meeting dose criteria
 - NUREG-1757, Vol. 2, Rev.1, Section 2

GENERAL PROVISIONS, UNRESTRICTED RELEASE

- General provisions
 - 10 CFR 20.1401
 - 1000 year compliance period
 - DOE/NYSERDA EIS should analyze beyond 1000 yr (WVPS SOC)
- Unrestricted release license termination
 - 10 CFR 20.1402
 - 25 mrem/yr and ALARA
- Licensee could propose both unrestricted and restricted release for different portions of the site

RESTRICTED RELEASE ELIGIBILITY

- 10 CFR 20.1403(a)
- Purpose
 - Initial eligibility for restricted release—not approval
 - Screen out sites that should be removing contamination to achieve unrestricted release
- A site would be eligible if “... further reductions in residual radioactivity necessary to comply with the provisions of 20.1402
 - would result in net public or environmental harm or
 - were not being made because the residual levels associated with restricted conditions are ALARA.”

RESTRICTED RELEASE ELIGIBILITY (CONT.)

- Commissions' Orders regarding Shieldalloy
 - Series of Shieldalloy lawsuits with associated Court and Commission actions
 - Explain original meaning of provision and clarifies the analysis is limited to further removal of residual radioactivity
 - Not a comparison of individual doses of restricted and unrestricted release and selection of the lowest dose
 - Cost benefit analyses following NUREG-1757, Appendix N
 - Costs/benefits of further removal of residual radioactive material from levels proposed to remain onsite to the unrestricted release level
 - Net public harm analysis (costs of harm to people and environment compared to benefits, e.g., collective dose averted dollar value)
 - ALARA (total costs compared to benefits, e.g., collective dose averted dollar value)

RESTRICTED RELEASE INSTITUTIONAL CONTROLS (ICs)

- 10 CFR 20.1403 (b)
- Guidance in NUREG-1757, Vol. 1, Rev. 2
- Legally enforceable ICs to restrict future site use
- Durable ICs
 - For “higher risk” sites (100-500 mrem/yr or > 100 yr half life
 - State or Federal government ownership/control
- Five-year reviews
- Independent third party/government entity backup
- NRC retains authority to take action if ICs fail (SOC)

RESTRICTED RELEASE ENGINEERED BARRIERS (EBs)

- EBs to mitigate
 - Human intrusion
 - Adverse natural processes (e.g., erosion)
 - Release and transport of radionuclides
- Contribute to meeting dose criteria; no prescriptive LTR requirements
- EBs are not ICs and are assumed to degrade rather than immediately and totally fail for the IC fail dose criteria

RESTRICTED RELEASE FINANCIAL ASSURANCE

- 10 CFR 20.1403(c)
- NUREG-1757, Vol. 3
- Purpose: enables independent third party, including a government custodian, to assume and carryout responsibilities for controls and maintenance
- Requirements for amounts and mechanisms (e.g., government entity statement of intent)

RESTRICTED RELEASE ADVICE FROM AFFECTED PARTIES

- 10 CFR 20.1403 (d)
- NUREG- 1757 Vol. 1
- Seek advice from affected parties on specific questions
- “incorporate as appropriate”,
- Provide a publicly available summary of discussions, and document advice in the decommissioning plan

RESTRICTED RELEASE DOSE CRITERIA

- 10 CFR 20.1403 (b) and (e)
- NUREG-1757, Vol. 2
- ICs in effect: 25 mrem/yr plus ALARA
- If ICs no longer in effect (“dose caps”)
 - Assumption of immediate and total failure
 - ALARA
 - 100 mrem/yr or
 - 500 mrem/yr
 - Further reductions in residual radioactivity necessary to comply with 100 mrem/yr are “not technically achievable”, prohibitively expensive, or would result in net public or environmental harm
 - If ICs fail NRC retains authority to take action (SOC)

RESTRICTED RELEASE ALTERNATE CRITERIA

- Alternate criteria license termination
 - 10 CFR 20.1404
 - NUREG-1757, Vol. 1; Rev. 2
 - Alleviates the need for exemptions for exceeding doses listed below (SOC)
 - Exceed 25 mrem/yr (1402, 1403(b), 1403(d)(1)(i)(A))
 - Not to exceed 100 mrem/yr from all man-made sources
 - Restrictions required per 1403; reduce doses to ALARA
 - Commission approval after considering public and EPA comments
- Exemptions
 - Consider granting exemptions
 - WVPS: if LTR compliance is technically impractical or prohibitively expensive, but maintain protection

NO LICENSE TERMINATION

- Keep under license
 - SOC: Alternative to license termination if requirements cannot be met
 - WVPS: long-term or perpetual license where LTR requirements are technical impractical or prohibitively expensive
 - NUREG-1757, Vol. 1; Rev. 2, Section 17.7 and Appendix M
 - Possession only license for long-term control approved by Commission
 - Last resort (e.g., if independent third party requirement is not met)

RESTRICTED RELEASE CONCLUSION

- A system of controls to ensure safety
 - 25 mrem/yr with restrictions
 - Legally enforceable and durable ICs
 - EBs designed for site
 - Monitoring and maintenance; 5-year rechecks
 - Independent third party/government backup to site owner/custodian
 - Financial assurance for third party
 - Dose “caps” if ICs fail: “safety net”
 - Remain licensed, if needed