

Radioactivity Standards for Clearance," N13.12-1999, August 1999; it is noted that the National Technology Transfer and Advancement Act of 1995 requires Federal agencies to consider this type of technical standard in rulemakings in pertinent areas.

(2) *Summary of information received in public comments:*

Public comments generally fell into categories of issues related to (a) protection of public health and safety and (b) regulatory burden:

(a) *Issues related to public health and safety:*

Certain commenters agreed with use of the unrestricted use alternative for the reasons noted in the scientific studies. However, other commenters were concerned about an unrestricted use alternative, noting that risks associated with these solid materials are avoidable and involuntary; long term and cumulative impacts cannot be accurately modeled; there is a potential for exposures to multiple products; any dose increases cancer risk; even a small risk when spread over the U.S. population is too high; there is no justification for adding more dose to what we receive from background; releases would not be accurately measured and tracked; licensees and the government cannot be trusted to assure that any releases would be carefully monitored; and a contractor who participated in NRC's technical support analyses had a conflict of interest.

(b) *Issues related to regulatory burden:*

This alternative engendered strong comment on both sides of this issue. The metals and concrete industries opposed unrestricted use because it would result in a large negative economic impact on steel/concrete industries because consumers would not buy products made with recycled solid material; the amount of steel available from licensed facilities is small, and therefore the economic benefit of recycling is small; and generators of the solid material should handle their own problem and not pass it along to other stakeholders. Other commenters were in favor of unrestricted use because the alternative of disposal of all solid material with no, or very small amounts of, radioactivity in a licensed LLW disposal site is costly to licensees without an accompanying health and safety benefit; and would cause a severe economic impact for small licensees, e.g., medical facilities, universities.

(3) *Summary:* Scientific studies, including the National Academies report, indicate that unrestricted use at a level in the range of 10  $\mu$ Sv/yr (1

mrem/yr) presents negligible risk and is therefore protective of public health and safety, however there was also significant stakeholder comment related to health impact and economic burden issues which could make this alternative potentially difficult to implement.

C. Alternative 3—Conditional Use

Conditional use is an alternative in which solid material could be released but its further use would be restricted to only certain authorized uses.

(1) *Summary of information received in public comments:*

Public comments received generally fell into categories of issues related to (a) protection of public health and safety, (b) regulatory burden, and (c) concern over feasibility of conditional use.

(a) *Issues related to public health and safety:*

Some commenters noted that a benefit of this alternative is that it could limit radiation dose by permitting the solid material to be released for only certain authorized uses (e.g., industrial products, metal in sewer lines or bridges, concrete in construction fill) that have limited potential for public exposure.

(b) *Issues related to regulatory burden:*

A benefit cited with the conditional use alternative is that solid materials that have no, or very small amounts of, radioactivity could be used under certain authorized conditions rather than using the more costly licensed LLW disposal alternative.

(c) *Concerns about feasibility of conditional use:*

Some commenters expressed concern about the feasibility or viability of conditional use, noting: (a) It may not be viable economically to set up a recycling process dedicated only to the limited quantities of solid material from licensed facilities; (b) a regulatory system of restrictions to limit where solid material is used would be hard to establish and enforce; and (c) it is not clear that restrictions would work to limit where the material goes, i.e., solid material could wind up being released for unrestricted use. Commenters also noted that, even if a system of restrictions was set up, the authorized use would have some limited lifetime and the solid material might ultimately end up in an unrestricted use, and therefore that it makes more sense to focus on establishing criteria for unrestricted use. Some commenters indicated that the only viable conditional use would be to retain the

solid material within the NRC licensing arena or the DOE complex.

(2) *Summary:* Restricting the further use or disposition of solid materials from licensed facilities to only certain authorized uses can have merit in public health considerations in that exposure scenarios are minimized. However, based on the comments received in the NRC public comment process, it is not evident that conditional use is a technically viable way to make sure the material ends up in its authorized use or that it is an economically feasible approach that will work.

D. Alternatives 4 and 5—Disposal of Solid Materials in Either EPA-Regulated Landfills or NRC/AS-Licensed LLW Disposal Sites

In this alternative, solid material would be prohibited from general commerce. The solid material would be required to be disposed of at an EPA-regulated landfill (Alternative 4) or under NRC's existing regulations in 10 CFR Part 61 in an NRC/AS-licensed LLW disposal site (Alternative 5) (see Section II.7 above).

EPA regulates municipal and industrial solid waste under the Resource Conservation and Recovery Act (RCRA). Under RCRA Subtitle C, the hazardous waste program establishes a system for controlling hazardous waste from the time it is generated until its disposal. Under RCRA Subtitle D, the solid waste program encourages states to develop comprehensive plans for managing non-hazardous industrial solid waste and municipal solid waste and also sets criteria for municipal solid waste landfills and other solid waste disposal facilities. RCRA does not address radioactive material under NRC jurisdiction.

(1) *Summary of information on this alternative from scientific organizations:*

The National Academies report compared disposing of solid material in landfills and in licensed LLW disposal sites, and found that disposal of solid materials in EPA regulated Subtitle C or Subtitle D landfills would be substantially less costly than disposal in sites licensed by the NRC or Agreement States under 10 CFR Part 61.

(2) *Summary of information received in public comments:*

Public comments generally fell into the categories of issues related to (a) protection of public health and safety, (b) regulatory burden, and (c) feasibility of landfill disposal.

(a) *Issues related to public health and safety:*

A rationale for this approach is that it would prevent solid material from