

REPORT ON CONTROLLING THE DISPOSITION OF SOLID MATERIALS
(NOVEMBER 2004 - APRIL 2005)

BACKGROUND

The material in this Semiannual Report is intended to provide information on the status of rulemaking efforts, draft generic environmental impact statement (DGEIS) progress, regulatory guidance development, and other related factors pertinent to decision-making during the past 6-month period.

Up-to-date information on documents prepared, opportunities for stakeholder input, and links to other related documents can be found at the U.S. Nuclear Regulatory Commission's (NRC's) website on controlling the disposition of solid materials [www.nrc.gov/materials.html] (under "Key Topics," link to "Controlling the Disposition of Solid Materials").

1. Actions Related to Rulemaking

In accordance with the direction in the October 25, 2002, Staff Requirements Memorandum, the staff is conducting an enhanced participatory rulemaking on disposition of solid materials. Activities, during the past 6 months, in support of this enhanced participatory rulemaking, include:

- On February 1, 2005, the staff held a public meeting with the Metals Industries Recycling Coalition (MIRC), at its request, to discuss the status and schedule for the rulemaking. MIRC representatives reiterated the Coalition's position that they had previously stated at the May 2003, public workshop and in their comment letter responding to a February 2003, *Federal Register* notice. MIRC's position is that radioactively contaminated scrap metal from impacted or restricted areas should not be released into the stream of commerce.
- Presentations on the status of NRC's efforts on "Controlling the Disposition of Solid Materials" were made by NRC staff at the Safety and Risk Management Workshop and Course in the Waste Management Symposium in Tucson, Arizona on February 27, 2005, and on March 14-15, 2005, at the Low-Level Radioactive Waste Forum meeting in Salt Lake City, Utah.
- On March 30-31, 2005, staff attended the annual National Council on Radiation Protection and Measurements (NCRP) meeting on "Managing the Disposition of Low-Activity Radioactive Materials." Participants in the meeting included representatives of Federal and State regulatory agencies, industries involved in the disposal and/or recycle of low-activity materials, public policy experts, and international organizations dealing with issues similar to those faced by the U.S. The meeting facilitated the sharing of experiences by various experts and provided insights into possible future regulatory approaches for the disposition of large quantities of low-activity materials. The general approach the meeting participants suggested was allowing limited disposition paths at a

dose near 10 $\mu\text{Sv}/\text{yr}$ (1 mrem/yr) based on the consideration of the range of technical issues and stakeholder views on this subject. Various stakeholders and organizational groups also presented specific viewpoints about the topic. These viewpoints are noted below.

NCRP Report No. 141, published in 2002, was summarized. The report discussed managing the disposition of potentially radioactive scrap metal and noted that the concept of “clearance” helps establish a regulatory process for certifying the eligibility of materials for unrestricted release from an existing regulatory control—much like controlling gaseous and liquid effluent releases. The report notes that a specific clearance criterion, set at 10 $\mu\text{Sv}/\text{yr}$ (1 mrem/yr) would correspond to the negligible individual dose established in NCRP Report No. 116. The report presents a phased approach for establishing a framework for solid material disposition in which regulations may initially prohibit the recycling of material into: (1) consumer products that are mainly used by children; (2) items that are to be used for food processing or preparation; (3) personal items; or (4) household items. In view of public concerns about release of solid material in general commerce, NCRP recommends that development of internally regulated recycling activities take precedence over clearance.

Representatives of the scrap metals industry noted that metals recyclers would refuse to melt cleared material, partially because of fear of problems with baghouse dust, and partially because of knowledge of the extensive costs of remediation, for which there is neither Federal nor State aid. The problem with radioactive material in steel mills is not one of cleared material that can scarcely be detected, using state-of-the-art radiation detectors, but, rather, one of losing detection capability of orphaned sources. The industry is not willing to take that risk and states that it has the right to demand absolute purity of the metals it purchases.

Metal processing industry representatives indicated that there is little economic incentive for recycling of potentially contaminated metal—and the relatively high perceived risk, both political and economic, of releasing potentially radioactive metals into the US metal recycling market, makes the decision not to recycle suspect metal an easy one for most licensed radioactive facility managers. However, it was noted that alternatives to recycling of this metal include the use of: (1) case-specific exemptions or other processes to dispose of material in industrial landfills; (2) the “beneficial reuse” option in which a dedicated, licensed radioactive metal melting facility converts radioactively contaminated metal into products for reuse in directed applications that ensure control of the licensed radioactive material; and (3) a centralized facility for the processing and disposition of “very low-activity” metals for “directed first use.”

International efforts were also summarized in the meeting. A summary of international standards in this area, including Safety Series 89 (1988); the Basic Safety Standards IAEA No. 115 (1996); and IAEA’s RS-G-1.7 (2004), were presented, and these standards focus on a clearance standard set at 10 $\mu\text{Sv}/\text{yr}$ (1 mrem/yr) level. The extent and nature of clearance regulations in European countries vary among countries, which reflects significant differences in national policies in this area. Some countries seek to allow unrestricted use, whereas others allow some conditional releases.

- On March 31, 2005, the Executive Director for Operations sent to the Commission SECY-05-0054, "Proposed Rule: Radiological Criteria for Controlling the Disposition of Solid Materials."
- On March 31, 2005, staff received multiple letters, from various public citizens and stakeholder groups, about the proposed rule, opposing the rulemaking on controlling the disposition of solid materials.
- On April 9, 2005, a letter of response was sent to Ms. Toni Hardesty, of the State of Idaho's Department of Environmental Quality. The letter clarified NRC's approach regarding case-specific reviews of issues such as alternate disposal of reactor decommissioning waste at US Ecology Idaho's facility, in concert with NRC's proposed rulemaking effort on controlling the disposition of solid materials, and the U.S. Environmental Protection Agency's Advance Notice of Public Rulemaking on low-activity radioactive waste.
- On April 18, 2005, the NRC staff's proposed rule package was released as publicly available in ADAMS and on NRC's website (see <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2005/secy2005-0054/2005-0054scy.html>). The draft proposed rule package consists of the Staff Requirements Memorandum dated October 25, 2002, the *Federal Register* notice, the DGEIS, the draft Regulatory Analysis, and letters received from the Agreement States and GEIS Cooperating Agencies.
- On April 20, 2005, the Office of State and Tribal Programs informed Agreement State Radiation Control Program Directors and State Liason Officers that the NRC staff's proposed rule package was publicly available on NRC's website.

2. Development of the GEIS

- The staff responded to Cooperating Agency comments and completed the DGEIS in support of the proposed rule.

3. Development of Regulatory Guidance

- The staff completed the draft regulatory guide in support of the proposed rule.

4. International Activities

- NRC staff recommended implementing, in the proposed rule, the nuclide concentrations from RS-G-1.7, "Application of the Concepts of Exclusion, Exemption, and Clearance." Use of RS-G-1.7 promotes consistency in numeric standards among nations.