

information packet which discusses ways in which stakeholders can review the alternatives and issues involved, provide comments to the NRC, and link to other documents (Go to <http://www.nrc.gov/materials.html> and select "Controlling the Disposition of Solid Materials.").

II. Background

The information below in Sections II.1–II.7 has been discussed in various NRC documents and public meetings.¹ It is provided here in summary form as background information on the issues involved and on alternatives for controlling the disposition of solid materials.

1. Solid Materials Being Considered

Just as is the case for many industrial operations (or in a home), there are "solid materials" that are no longer needed or useful at facilities licensed by NRC. This can occur, for example, during normal facility operations when: (a) Metal equipment and tools become surplus, obsolete or worn; (b) glass, plastic, paper, or other trash-like materials are no longer useful; or (c) concrete from a building being renovated or soil being excavated from a site is no longer needed. This can also occur at the end of facility operations when a licensee seeks to terminate its NRC license. At such times, NRC's licensees seek disposition alternatives for solid material that are protective of public health and safety and are economical.

NRC licensees fall into broad categories that include: (a) Academic—university laboratories and small reactors that use radioactivity for research and teaching purposes; (b) medical—hospitals and clinics that use radioactivity for diagnostic and therapeutic medical purposes; (c) manufacturing—facilities and labs that manufacture products that use radioactivity, e.g., smoke detectors, certain types of gauges; and (d) power production—reactor facilities and fuel cycle facilities that handle radioactivity as part of the generation of electricity.

2. The Nature of These Solid Materials

This effort is focused on controlling the disposition of solid materials that are present in areas in NRC-licensed facilities where radioactive materials are used or stored. These areas of the facilities are generally referred to as

either "restricted²" or "impacted³" areas. Despite their location in these restricted or impacted areas, much of this solid material has no, or very small amounts of, radioactivity resulting from licensed operations either because the material was exposed to radioactivity in the facility to only a limited extent or because it has been cleaned. These solid materials can include furniture and ventilation ducts in buildings; metal equipment and pipes; wood, paper, and glass; laboratory materials (gloves, beakers, etc); routine trash; site fences; concrete; soil; or other similar materials.

Other solid materials in these restricted or impacted areas can contain more appreciable levels of radioactivity. However, these are separated from those materials with no, or very small amounts of, radioactivity at the licensed facility and are required to be disposed of at licensed low-level waste (LLW) disposal sites under NRC's existing regulations in 10 CFR part 61. Solid materials containing appreciable levels of radioactivity are not the subject of this NRC rulemaking.

Solid materials not located in restricted or impacted areas, and considered to be free of radioactivity resulting from licensed operations, are not currently required to be part of a disposition radiological survey program. Such materials can include furniture, glass bottles, paper, equipment, or trash in administrative buildings or office areas. This rulemaking does not propose to alter this approach, and therefore, these materials are also not the subject of this NRC effort.

The remainder of this FRN discusses those solid materials from restricted or impacted areas of an NRC-licensed facility that have no, or very small amounts of, radioactivity resulting from licensed operations. For ease of reference, these are referred to as "solid materials."

3. The NRC's Current Approach for Controlling the Disposition of Solid Materials

Currently, the NRC has requirements in its regulations in 10 CFR part 20 that require that solid materials that have been in restricted or impacted areas be surveyed before leaving the site. Solid materials can currently be released for

any unrestricted use if the survey does not detect radioactivity from licensed operations on the material or, if it does detect radioactivity, the amount is below a level that is considered to be protective of public health and safety and the environment.

However, 10 CFR part 20 does not currently specify the level below which the material can be released. Decisions on disposition of solid materials are currently made using levels contained in a set of existing guidelines that are based primarily on the ability of survey meters to measure the radioactivity level on, or in, the solid material.⁴

4. Why NRC Is Examining This "Current Approach"

A report by the National Academies indicates that NRC's current approach for controlling the disposition of solid materials protects public health and does not need immediate revamping.

However, the National Academies report also indicates that the current approach is incomplete and inconsistent and that NRC's approach should be based more directly on a risk basis. As a result, the National Academies study states that NRC should conduct a process to evaluate alternatives to provide clear risk-informed direction on controlling the disposition of solid materials.

5. Why NRC Is Conducting a Rulemaking to Potentially Revise its Current Approach

The NRC agrees with the findings in the National Academies report regarding the need to consider modifying its current approach to provide specific direction on controlling the disposition of solid materials.

The generally accepted process that Federal Agencies use to examine or replace an approach that needs improvement is to conduct a rulemaking to amend the Code of Federal Regulations (CFR). A rulemaking is an open process that evaluates the advantages and disadvantages of a range of alternatives and that invites public input on the alternatives early on and throughout the process.

6. NRC's Guiding Policy in Conducting a Rulemaking To Develop a Regulation

NRC's overall policy, as discussed in NUREG-1614 entitled "U.S. Nuclear Regulatory Commission Strategic Plan, Fiscal Year 2000–2005," is that the nation's use of radioactive material be conducted in a manner that protects

² A restricted area is defined in the NRC's regulations in 10 CFR 20.1003.

³ An impacted area is defined in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) which was jointly prepared by the U.S. Environmental Protection Agency, the U.S. Department of Energy, the U.S. Department of Defense, and the NRC. An impacted area is defined in MARSSIM as an area with a possibility of containing residual radioactivity in excess of natural background or fallout levels.

¹ Many of the documents, as well as summaries of public meetings and other background information, discussed in this paper are available via the NRC's web page at <http://nrc.gov/materials.html>.

⁴ These guidelines are discussed in the June 1999 Issues Paper and in an All-Agreement States letter (STP-00-070), dated August 22, 2000.