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NRC ISSUES FINAL TECHNICAL POSITION ON DISPOSAL
OF RADIOACTIVELY CONTAMINATED BAGHOUSE DUST

The Nuclear Regulatory Commission is issuing guidance for the disposal of furnace dust and other related wastes at steel mills that have accidentally been contaminated with cesium-137, a radioactive material.

Over the past decade, several incidents have occurred in which radioactive material used in industrial devices has been inadvertently mixed with scrap metal that was being recycled as part of the steel production process. If this radioactive material is not removed before the melting process, it can contaminate the steel facility's emission control system and the dust, which is collected in bag-type filters.

The mixture of radioactive cesium with scrap material is caused by improper disposal of an industrial device containing radioactive material. Although many steel producers have installed radiation monitors to scan incoming shipments, the monitors do not always detect the cesium because of the shielding provided by its container or by the scrap metal.

If the radioactive cesium slips through to the steel production process, some of it is converted to a gaseous form which, as it condenses, becomes part of the emission control dust.

Altogether, steel producers across the country currently are storing more than 10,000 tons of contaminated dust and other incident-related materials. In most cases, this material is classified as mixed waste because it contains radioactive and other hazardous materials such as lead, cadmium and chromium that are common to the recycle metal supply.

Disposal options for the incident-related materials have been limited, principally because of their mixed-waste classification and the costs associated with the disposal of large volumes of mixed or radioactive waste. The NRC believes that appropriate disposal of the existing waste is preferable to indefinite storage on site.

The guidance that the NRC is issuing has been coordinated with the Environmental Protection Agency. It establishes the bases under which the NRC or a so-called Agreement State could permit, in conjunction with other applicable regulatory authorities and the disposal facility operator, disposal of this waste in a hazardous waste disposal facility. (Agreement States are states that have assumed, by mutual agreement, part of the NRC's regulatory authority.)

Because of higher concentrations of radioactive cesium, some incident-related material may not be suitable for disposal at a hazardous waste facility. Such material could be disposed of at a licensed low-level radioactive waste disposal facility, after appropriate treatment of its hazardous constituents, or at a mixed waste disposal facility, if certain criteria are met.

A draft version of the NRC staff technical position was issued for public comment on January 22, 1996. The final position reflects consideration of those comments.

In addition, the NRC is studying ways to prevent the inadvertent entry of radioactive material into the country's scrap metal supply. The agency is also cooperating with steel manufacturers to identify the magnitude and nature of the problem and improve the capability to detect radioactive material before it is melted with the scrap metal.

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