United States Nuclear Regulatory Commission
Office of Public Affairs
Washington, DC 20555
Phone 301-415-8200 Fax 301-415-2234
Internet:opa@nrc.gov

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

The Nuclear Regulatory Commission is developing 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 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 the industrial device or its radioactive material. Although many steel producers have installed radiation monitors to scan incoming shipments, the monitors cannot 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 considering issuing would establish the bases under which the NRC or an Agreement State could permit, with the agreement of 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 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.

Details of the NRC draft guidance for disposal, known as the "Proposed Staff Technical Position," are contained in a Federal Register notice issued on January 22. Interested persons are invited to submit comments by March 22. Written comments should be submitted to the Chief, Rules Review and Directives Branch, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

In addition to developing this guidance for the disposal of the incident-generated material, the NRC is focusing on approaches for improving licensee control over radioactive material to reduce the likelihood of its uncontrolled entry into the public domain, and specifically 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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