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NRC SEEKS PUBLIC COMMENTS ON RADIOLOGICAL CLEANUP CRITERIA
R URANIUM MILLS

The Nuclear Regulatory Commission is seeking public comments on permissible radiation levels when a uranium or thorium mill or in-situ leach facility shuts down permanently and the license is terminated.

Uranium mills use uranium ore extracted by either open pit or deep mining. The rock is then crushed and sent through a mill, where extraction processes concentrate the uranium into a yellowcake. The remainder of the crushed rock is placed in a tailings pile.

With the in-situ leach mining process, wells are drilled into rock formations containing uranium ore. Water, with added oxygen and sodium bicarbonate, is injected down the wells to mobilize the uranium in the rock so that it is picked up and pumped to the surface, where a processing plant separates the uranium.

Mills are not subject to recently approved radiological cleanup criteria for license termination for other NRC-licensed facilities. This is because there are unique complexities associated with decommissioning of the mills and leach facilities that could cause practical problems in applying the criteria of the overall cleanup rule.

Specifically, applicable cleanup standards issued by the Environmental Protection Agency (EPA) already exist for soil cleanup of radium at uranium and thorium mills and in situ leach facilities. The EPA standards would result in about a 60-millirems-per-year radiation dose from radium, excluding radon (a radioactive gas formed by radioactive decay of radium). Applying the NRC overall rule's 25-millirems-per-year cleanup criteria for unrestricted release of a facility would result in some small areas of the site (places where other radioactive materials, such as uranium or thorium, are of more concern than radium) being cleaned up to a dose lower than that from the rest of the site.

The Commission is considering various regulatory approaches regarding the cleanup standard for mills and in situ leach facilities. One approach would be to develop a separate standard for other radioactive materials that is consistent with the dose resulting from the radium standard already in place. Another would be to develop a separate standard for all radioactive materials, including radium, that would be different from either the NRC overall cleanup rule or the EPA radium standard.

Interested persons are invited to submit comments on these and any other appropriate options by October 6. They may be mailed to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff, or submitted electronically as described in a Federal Register notice published today.

The overall cleanup criteria for license termination for NRC-licensed facilities other than uranium and thorium mills and in situ leach facilities were announced in an NRC press release on May 21 and were published in the Federal Register today in final form.

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