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Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555
Attention: Rulemaking and Adjudications staff.
December 21, 1999

SUBJECT: Control of Solid Materials at Licensed Facilities

INTRODUCTION

The Conference of Radiation Control Program Directors' (CRCPD) E-23 Committee on Resource Recovery and Radioactivity wishes to express its appreciation to the US Nuclear Regulatory Commission (NRC) for including us in the exchange of ideas on issues and considerations pertaining to the control of solid materials at licensed facilities. CRCPD is an organization of individuals in state and local government with responsibility for the adequate protection of human health and the environment through regulating and controlling the use of radiation sources, and of individuals who have expressed an interest in radiation protection. The E-23 Committee welcomes the opportunity to participate in the evolution of decisions on complex issues and alternatives associated with this subject, and we respectfully submit our comments for your consideration.

CURRENT POLICIES

We agree with NRC's assessment that current regulations and existent guidance lead to inconsistencies in the release of contaminated solid materials from nuclear facilities, and application of current regulations and existent guidance is not uniform in protecting human health and the environment. Consequently, we do not consider it an advisable long-term alternative to continue using current regulations and existent guidance for handling licensee requests for release of solid materials on a case-by-case basis. We also do not consider the development of new dose based guidance alone to be sufficient in reducing inconsistencies in its interpretation and application. Nor would dose based guidance, in the absence of rulemaking, adequately address impacts on businesses and industries, information collection burdens, burdens on state governments, and exposure of critical groups to multiple sources of radiation. Additionally, in the absence of administrative procedures for rulemaking, Congress has prohibited important NRC decision-making authority by disallowing the continuance of using policy initiatives for unrestricted release criteria through its enactment of the Energy Policy Act of 1992. Therefore, it appears to be an obligation and responsibility for NRC to pursue public participatory rulemaking for setting specific requirements that will limit the release of solid materials from nuclear facilities.

RULEMAKING

While we fully support NRC's direction for engaging in the rulemaking process, we nevertheless express our concern that NRC's exposure pathway modeling for members of critical groups apply dose constraints based upon restrictions on surface and volumetric contamination of solid materials released from NRC licensed facilities. These models may not include sufficient allowances for exposure of critical groups to more than one source. For example, materials released from multiple NRC licensed facilities may potentially be combined with materials released from other federal, state and internationally

regulated entities. If this "combining" is likely to occur at single industrial process points, or at a limited number of facilities or locations "downstream" from the initial release points, the cumulative impacts will need to be taken into consideration in setting uniform requirements.

For the development and application of adequate requirements uniformly protective of human health and the environment, the Department of Energy, Department of Defense, Environmental Protection Agency, Superfund Authority, Department of Labor, Department of State, Department of the Interior, and States will need to be willing and committed collaborators with NRC, and with each other, for establishing a coherent system of practical restrictions on sources of exposure. Until this occurs, or an act of Congress unites responsibilities for radiation protection under one umbrella agency, it is not likely that businesses, industry and the public will gain the confidence necessary for these efforts to be effective.

Notwithstanding the anticipated difficulties NRC will encounter in resolving the complex issues identified with its current inquiry into a Rulemaking Process and the Scoping Process for an Environmental Impact Statement, we urge NRC to continue to move forward and to dedicate sufficient time and resources for completing these processes. We consider it of primary importance for NRC to address the issues already identified, and additional issues raised in their request for written and electronic comments, and engage in a rulemaking process that will result in dose based regulations for limiting the release of solid materials from nuclear facilities.

CONCERNS AND CONSIDERATIONS

Reluctance by the public to accept risks, no matter how trivial, from nuclear activities from which they perceive no direct benefit.

Public's trust is low as a result of recently publicized health concerns at nuclear facilities.

Business and Industry involvement is critical:

In recycle of steel, the mass of slag produced per mass of scrap is not well documented in literature, and not readily available from industry.

Radionuclide concentrations of recovered metal have a large degree of uncertainty.

Steel making slag is not currently considered a hazardous waste, and therefore can be reprocessed or disposed of. Is this possibly going to change?

Assumptions concerning radionuclide concentrations in scrap metal are based on limited information to date, and are therefore subject to uncertainty. As a result, estimates of risk could change significantly due to only small changes in corresponding radionuclide concentrations. Industry's involvement and participation in a rulemaking process is necessary to ensure parameters used for risk estimates are reasonable, reproducible, and comprehensive.

Approximately 33 percent of slag is estimated to go to uses such as soil conditioning (addition to acidic soil) and ice control (cover to icy roads). Could this possibly result in localized contributions to exposure pathways that may underestimate the dose to critical groups if pathway models are used with individual inputs. For example, it may be necessary to examine if there is a potential for processed sewer sludge from licensed facilities to be combined with slag used as a

fertilizer additive, and further combined with additional slag used for soil conditioning in a single farmer's field. Or, if slag may be used as ice control on roads that already contain slag in the roadbed.

"Not in my back-yard" (NIMBY) concerns by state regulated sanitary landfill authorities.

Development of interventional strategies to ensure prompt action if dose based standard, or limit, is exceeded, with concurrent mechanisms for reporting.

"No fault insurance" provisions for businesses, industries and the public if they are adversely affected socially or economically.

Requirements for improved control and accountability of general license (GL) sources have not been implemented, and GL sources may inadvertently be included with increased volumes of scrap released from licensed facilities. It may not be appropriate to exclude consideration of this potential contribution, and the potential contribution from "orphan sources," in the issues affecting rulemaking until established mechanisms for their control are in place.

Refining calculations for meeting a low dose based standard.

Variability in models and equations used for determining regional background count rate parameters.

SUMMARY

In light of the above, and in lieu of the adequate resolution of issues and considerations identified, the E-23 Committee respectfully submits the following observations and recommendations:

- The public's participation is critical to NRC's process for evaluating issues pertaining to the release of solid materials from nuclear facilities. Not only is public input necessary for characterizing legitimate concerns, it is also crucial to narrowing and focusing unnecessary concerns to those that are relevant to the adequacy of a dose based limit.

- NRC should engage in a rulemaking process, and stick with the process until final rules are adopted for all materials released from nuclear facilities.

- Clearance limits for unrestricted use are more conservative than those for restricted use would be, but they would be more efficient and universal in their application. The rule should have provisions for case-by-case evaluation and exception for unique circumstances that vary from the dose limit, but provide an equivalent level of protection for human health and the environment.

- Restricted release would incur tracking and control mechanisms that would decrease the regulatory resources conserved through rulemaking. Nevertheless, options for restricted use of some materials should be included in deliberations of the issues at this time.

- For a rule to be sufficiently low to allow free release of materials with no restriction, we recommend a 1 mrem annual radiation dose limit.

- Rule needs to be specific in addressing material types and their management, with exposure pathway

modeling specific to individual radionuclides with typical industry processes and assessments of cumulative impacts included.

- Coordination and harmonization between federal, state, and international agencies is necessary.

- Protection of human health and the environment needs to be the foremost priority, with economic considerations important, but secondary.

- Licensees' monitoring capabilities will need to be evaluated and upgraded, with appropriate sampling, monitoring and evaluation procedures for demonstrating compliance with dose based regulations included in rule and guidance for all materials subject to release or clearance. This may be offset by savings from efficiency of processes and standardization, and by reducing amounts of radioactive material disposed of through waste brokers.

Respectfully submitted,

Kathleen McAllister (MA), Chair
CRCPD's E-23 Committee on Resource Recovery and Radioactivity

Cc: Bruce Busby (WA)
Bob Gallaghar (MA)
Steve Collins (IL)