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OFFICE OF GENERAL COUNSEL
PUBLIC AFFAIRS
ADJUTANT GENERAL

U.S. Nuclear Regulatory Commission
Attention: Rulemaking and Adjudications Staff
Washington, DC 20555

DOCKET NUMBER
PROPOSED RULE PR 20
(64FR35090)

Dear Sirs:

I am writing to urge you to continue your efforts to consider your rulemaking to set requirements on the release of solid materials containing low levels of radioactivity, referred to as clearance of materials. I further urge you to support the adoption of American National Standards Institute (ANSI) Standard N13.12, which establishes dose-based clearance criteria consistent with international commerce. Adoption of National Consensus Standards is in keeping with the intent of Public Law 104-113, National Technology and Transfer Act of 1995 and OMB Circular A-119 Federal Participation in the Development and Use of Voluntary Consensus Standards. As explained below, this issue has implications for consumer affairs, foreign commerce, energy, and natural resources.

I understand that emotions are running high on this subject and that there is a lot of misinformation being provided by some groups and individuals. I would like to provide you with my views on this subject, as a board certified health physicist with over twenty-five years of experience.

International dose criteria for clearance have been defined by the International Atomic Energy Agency (IAEA). These criteria have been adopted by most nations and they state that the dose rate to a member of a critical group should not exceed 1 mrem/year. This dose rate is the primary criterion contained in ANSI N13.12. This dose rate is about 0.3% of the dose rate that Americans typically receive from natural background sources, including radon in their homes. This dose is also that level which is considered a 'Negligible Individual Dose' by the Congressionally Chartered National Council on Radiation Protection and Measurements. Materials that meet the ANSI N13.12 criteria are only slightly contaminated and should not be confused with low-level radioactive waste. Part of the reason for selecting a dose rate so small is to ensure that individuals who may be exposed to multiple sources of radiation will receive only a fraction of the doses permitted by Federal regulations and a smaller fraction of the doses they receive from background sources. Attempts to estimate risks at low levels of radiation dose are likely conservative since there is no human health evidence that low levels of radiation exposure actually induce cancer. However, for comparison only, using risk conversion factors from the International Commission on Radiological Protection (ICRP), a dose rate of 1 mrem/year has a hypothetical risk of fatal cancer of about 1 in 2 million. This level of risk is below the lower end of the risk range (i.e., a risk of cancer death of one in one million) established by the U.S. Environmental Protection Agency (EPA) for protecting the public following the cleanup of land contaminated with hazardous materials under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). It should also be noted that the EPA rarely enforces the one in a million risk for environmental cleanup, and often regulates near the higher end of their established risk range (i.e., a risk of cancer death of one in ten thousand). For example, environmental cleanup of the Hanford Site (and most U.S. Department of Energy Nuclear Sites) is typically being controlled to a dose of 15 mrem/y to a member of the public, with an associated risk 15 times higher the proposed clearance levels. Further, the 1 mrem/y criterion is far lower than the decommissioning regulations adopted by the Commission, at 25 mrem/y.

Although the focus of the current debate is the recycle of contaminated metals, and fears that consumer products will become contaminated to unacceptable levels, the subject of clearance covers much more, including establishing uniform, dose-based, radiation survey criteria. In the current situation, many facilities release materials if no radiation can be detected using field instruments. This practice does not imply that no radioactive contamination exists since the lower limit of detection for a radiation survey is a function of the selected field instrumentation and the training of the individual conducting the survey. As a result, the determination of what can be detected can vary from facility to facility. By establishing clearance in the regulations, and by adopting the criteria in ANSI N13.12, there will finally be uniform guidance in the U.S. on acceptable detection levels that are consistent with those recommended by the IAEA and accepted by the international community. The existence and application of

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uniform monitoring and survey criteria should reduce the potential for the unintentional release of radioactive materials.

Recycle of cleared metals would not mean the dilution of highly contaminated metal with other metal in the industry. Rather, it would mean the careful sorting of metals, using standard criteria, such that no metals above the 1-mrem/year clearance criteria would find their way into commerce. Metals containing levels above the standard could be further decontaminated or sent to low-level radioactive waste disposal if decontamination to the clearance criteria could not be achieved. The credibility of the United States' radiation protection framework is at stake since many other countries have already adopted clearance criteria and the U.S. currently does not have uniform criteria.

The completion of the rulemaking and adoption of ANSI N13.12 will not mean the transfer of large quantities of radioactive metals and materials from low-level radioactive waste disposal into commerce. It will mean the establishment of safe practices and controls to prevent the distribution of unnecessary sources of radiation using criteria that are consistent with those found in international commerce.

In closing, I strongly urge you support continue your rulemaking process to modify 10 CFR 20 to include clearance at a level of 1 mrem/y, and endorse the adoption of ANSI Standard N13.12.

Sincerely,



B. Scott Davidson, CHP
Manager