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United States Nuclear Regulatory Commission
Rulemaking and Adjudications Staff
Washington, DC 20555

Subject: Public Comments on Proposed Changes to 10 CFR 20, "Release of Solid Materials at Licensed Facilities), Federal Register Volume 64, Number 125, Page 35090

Ladies and Gentlemen:

The FirstEnergy Nuclear Operating Company (FENOC) staff would like to commend the NRC for the development and initiation of the rulemaking process for a dose based national standard for the release of solid materials at licensed facilities. The FENOC staff has reviewed the initiating documents including draft NUREG 1640, "Radiological Assessments for Clearance of Equipment and Materials from Nuclear Facilities", which was described within the Supplementary Information section of the Federal Register Notice for the proposed rulemaking. The FENOC Staff supports the initiation of this rulemaking process. However, after reviewing the draft NUREG, the FENOC staff feels that the derived screening values calculated for compliance with "clearance" values are excessively conservative. FENOC staff comments regarding NUREG 1640 are contained in Attachment 1.

If you have questions or require additional information, please contact Mr. Gregory A. Dunn, Manager - Regulatory Affairs, at (440) 280-5305.

Very truly yours,

cc: Chief, Rules and Directives Branch

E-RIDS = ADM-03

Template = ADM-013

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FirstEnergy Nuclear Operating Company Comments on Draft NUREG 1640

Summary

A dose based national standard for release of solid materials from licensed facilities has been eagerly anticipated. The vagaries of the current "detectability" guidance were expected to be replaced with more definitive dose based "clearance" values. However, after reviewing the draft NUREG 1640, the FENOC staff feels the proposed guidance in its current form is unreasonable.

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The assumptions used to determine the clearance values are overly conservative instead of reasonable. As a result, the clearance screening values are too low and cannot be implemented. Adoption of the proposed screening values will cause a significant increase in the generation of radioactive waste for disposal to limited burial space, incurring greater expense to the rate-paying public and to nuclear generating utilities, and denying society the benefits of recycling.

The staff should revise clearance values by incorporating more reasonable assumptions. Clearance values consistent with the recommendations of other recognized international radiation safety organizations, such as the European Commission and the soon to be published American National Standards Institute (ANSI) N13.12,"Surface and Volume Radioactivity Standards for Clearance", would be acceptable, and provide an adequate margin of safety for the public. Alternatively, the NRC could adopt ANSI N13.12, which uses a technically sound approach to determine clearance screening values.

Discussion

NUREG 1640 states that the regulatory guidance is to be comprehensive for equipment and materials. Therefore, it impacts not only items stored for disposition, but items used in the day-to-day operation and maintenance of licensed facilities. Equipment and materials are routinely brought into and released from Radiologically Controlled Areas (RCAs). The proposed guidance in its current form challenges the ability of licensees to be able to move material and equipment out of RCAs. Without the ability to free release material and equipment, the space within the RCA could soon become filled or each item used in the RCA would require disposition as radioactive material.

NUREG 1640, Table 2.3, "Comparison of Derived NRC Surficial Clearance Levels with Regulatory Guide 1.86 Acceptable Contamination Levels", establishes a clearance value for Co-60 of 280 dpm/100 cm^2. By comparison, Regulatory Guide (RG) 1.86 provides a value of 5000 dpm/100 cm^2. RG 1.86 was based principally on the detection capabilities of readily available instrumentation at the time the guide was developed, and not on the potential dose to an individual that may result from coming in contact with the released materials. Therefore, to ensure protection of the public, the establishment of a dose based standard is in the best interest of the public and licensees.

In promulgating the national standard, it must be recognized that the conditions under which RG 1.86 were written remains essentially the same. Although more sophisticated laboratory instrumentation has been developed, field instrumentation has remained basically the same. A high percentage of items requiring free release are too large to be measured by lab instruments. Guidance provided by RG 1.86 and Inspection and Enforcement Notice (IEN) 81-07 have been adopted by the licensed community to produce a free release standard based upon detectability for field instrumentation at 5000 dpm/100 cm^2. The type of field instruments utilized when these documents were produced remains an essential part of the radiological survey programs at many licensed facilities. These field

instruments are not capable of measurement to the proposed clearance values. Additionally, in order to safely control and contain contamination at the source, field instruments must be used to perform surveys near contaminated area boundaries. The European Commission and the soon to be published ANSI N13.12 establish that for the nuclides of interest to commercial nuclear power licensees, Regulatory Guide 1.86 criteria provides for protection for the public.

As stated in the Issues Paper released by the NRC to initiate the scoping process, "Public Law 104-113 (passed by Congress in 1995) requires Federal agencies to use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical." ANSI N13.12 has been approved and is scheduled for publishing early in 2000. Because it has not yet been published, it is not followed by licensees at this time. However, the FENOC staff has reviewed the standard in detail. The values in the standard are consistent with RG 1.86, IEN 81-07, and the European Commission. The ANSI N13.12 values are consistent with dose optimization (ALARA) principles. Furthermore, the ANSI N13.12 values provide assurance that dose to critical members of the public due to the release of materials within the clearance guidelines will be trivial, that is, less than 1 mrem in a year. This provides an adequate margin of safety for members of the public and assures that the potential additive affects from multiple pathways will not exceed 100 mrem from all licensed activities. These values ensure that the health and safety of the public is maintained.