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(71FR42952)

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OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

Secretary, U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555-0001  
ATTN: Rulemakings and Adjudications Staff

Subject: Comments on Proposed Requirements for Expanded Definition of Byproduct  
Material (RIN 3150-AH84)

Dear Sir:

The following comments on the subject proposed rule are offered for your consideration:

1. We recommend that the proposed definition of "Discrete source" be revised. The proposed definition of Discrete source includes, among others, the two phrases "with physical boundaries" and "which is separate and distinct from the radioactivity present in nature." These two phrases may cause confusion.

The requirement for physical boundaries without further description or characterization or statement of the purpose of the physical boundaries, leaves much to the imagination of the regulated party and the whim of the regulator.

The requirement that the source is separate and distinct from radioactivity in nature seems to create an impossible situation. A radioactive source must have the property of radioactivity which (according to our ancient Radiological Health Handbook published by the U.S. Department of Health, Education and Welfare) is a process whereby certain nuclides undergo spontaneous disintegration in which energy is liberated, generally resulting in the formation of new nuclides. This process is accompanied by the emission of one or more types of radiation such as alpha particles, and gamma photons. Radioactivity is a process. This process for a radioactive material occurs without regard to whether the radioactive material is present in nature or whether the radioactive material has been refined and is used for its radiological properties.

Perhaps the NRC's objective could be met, with less confusion, by the following or a similar definition: "Discrete source means a quantity of radioactive material which has been removed from its place in nature and

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processed so the concentration of radioactive material, relative to the accompanying nonradioactive material when found in nature, has been increased with the intent that the concentrated radioactive material will be used for its radiological properties.”

2. At page 42971 of the Federal Register notice, under Section 30.18 Exempt quantities, of the Section by Section Analysis of Substantive Changes, it is stated that Paragraph (b) would be revised to include accelerator-produced radioactive material that had been received or acquired under the general license in 10 CFR 31.4. Is this an incorrect reading of the proposed rule? We do not believe that 10 CFR 31.4 ever provided coverage of accelerator-produced radioactive material.

In review of present Section 30.18(b) and the proposed Section 30.18 we note a case where the use of byproduct material apparently is not covered. Assume a person in an Agreement State, prior to September 25, 1971, received byproduct material for use under an Agreement State's general license similar to the general license then provided in Section 31.4. Can that person possess the radioactive material under Section 30.18(b)? Should not the new Section 30.18(b) cover the “old” byproduct material as well as the accelerator-produced radioactive material?

Sincerely,

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Rockville, MD 20851-1319

**SECY - COMMENTS ON PROPOSED REQUIREMENTS FOR EXPANDED DEFINITION OF  
BYPRODUCT MATERIAL (RIN 3150-AH84)**

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**From:** "Jack Bell" <jackmbell@verizon.net>  
**To:** <SECY@nrc.gov>  
**Date:** 09/08/2006 9:17 PM  
**Subject:** COMMENTS ON PROPOSED REQUIREMENTS FOR EXPANDED DEFINITION OF BYPRODUCT  
MATERIAL (RIN 3150-AH84)

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**From:** "Jack Bell" <[jackmbell@verizon.net](mailto:jackmbell@verizon.net)>

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