



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

15

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September 11, 2006 (1:33pm)

OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

PR 20,30,31,32,33,35,50,61,62,72,110,150,170, and 171
(71FR42952)

September 11, 2006

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

Dear U.S. Nuclear Regulatory Commission Secretary:

This is in response to the U.S. Nuclear Regulatory Commission's (NRC) request for comments on the proposed NRC rule "Requirements for Expanded Definition of Byproduct Material," RIN 3150-AH84. The New Jersey Department of Environmental Protection (DEP) welcomes the opportunity to provide commentary to NRC as it takes over jurisdiction of additional radioactive materials as dictated by the Energy Policy Act of 2005. In order to assist NRC in its task, the DEP offers the following comments:

1. On p. 42957 of the *Federal Register* notice, under "Particle Accelerators," the NRC has requested comments on the decommissioning of accelerator facilities. Decommissioning of accelerator facilities can result in the removal of building materials and accelerator parts that are activated. Recycling and disposal of material that meet the NRC's materials contamination limits may still trigger detectors at landfill and scrap facility checkpoints. The NRC should consider exposure criteria for release of these materials.
2. On p. 42963 of the *Federal Register* notice, under "New General License for Certain Items and Self-Luminous Products Containing Radium-226," the NRC has requested comment on its general license approach towards these types of materials. The DEP agrees that this may be a viable approach for certain sources. However, there are several concerns that need to be addressed:
 - The holders of such sources would have no idea they possessed a generally licensed device. The items they currently have in their possession would likely not have any labeling/markings identifying the item as generally licensed.

Template = SECY-067

SECY-02

Consequently, the holder would not know the item required special disposal and could not simply be thrown in the trash. The DEP has responded to numerous incidents over the years where loads of municipal waste or scrap metal have been rejected due to elevated radiation levels. The cause of many of the rejections was improperly discarded radium dials, "buttons," static eliminators and other miscellaneous items. Some type of outreach effort would need to be instituted to educate the general public on the new general license status for these sources that may have been in their possession for years.

- There is also the additional concern that these sources may be on display in various private residences or in locations where the general public has access to them. This could potentially lead to exposure and/or contamination issues. The DEP did address the concern of a private citizen who visited a store where the owner had arranged a collection of radium watch dials into a design and placed it on display at their facility. Once again, some type of effort would need to be made to make the public (i.e. the owners of these sources) aware of this issue.
3. On p. 42961 of the *Federal Register* notice, under "Smoke Detectors," the NRC has proposed including smoke detectors that contain up to 74 kBq (2 uCi) under the exemption at 10 CFR 30.20. The DEP disagrees with this proposal. Radiation detection equipment at landfills and scrap facilities are very sensitive and are often set at thresholds less than twice background. Even a low activity source will trigger these detectors (due to the higher energy radiations from radium as compared to americium) and cause the load to be rejected. This would increase the number of incidents that would require a response from the States, with the subsequent expenditure of time, human resources and money. These sources should not be allowed to be simply thrown out and enter the general waste stream. At a minimum, facilities with devices containing these levels of activity should also be classified as being generally licensed and be required to properly dispose of these sources.
 4. On p. 42957 of the *Federal Register* notice, the NRC states that it will not regulate "the incidental radioactive material produced by accelerators that are operated to produce only particle beams..." The DEP does not agree with this proposal. The NRC has not presented sufficient justification for treating incidental material made radioactive from an accelerator used only to produce particle beams differently than incidental material made radioactive from an accelerator used to produce both radioactive material and particle beams. Incidental material from an accelerator is radioactive material regardless of the purpose for which the accelerator is being used. No legitimate argument supporting this differentiation between these incidental materials is provided in the proposal. In certain situations, an accelerator itself cannot be refurbished for re-sale and would be disposed. This would result in activated internal components of the accelerator entering the waste stream. It is incorrect to think that all of the activation products are short-lived. The DEP has encountered a facility where accelerator parts removed for more than a month were still radioactive. All incidental radioactive material should be regulated.

5. On page 42958 of the Federal Register notice under "Other Naturally Occurring Radioactive Material with Similar Risk as Radium-226," the NRC used the IAEA Code of Conduct Categories 1 and 2 to determine if there are any other nuclides that would pose a threat similar to the threat posed by a discrete source of radium-226. Does the NRC mean that it should regulate only those materials that could be fatal or cause permanent injury to a person, who handled them or was otherwise in contact with them, for a short time if not safely managed or securely protected? Since when are regulations for radioactive materials based solely on acute effects? Does that mean the NRC doesn't need to regulate discrete sources of Radium-226 if it doesn't fit the IAEA definition of Category 1 or 2?
6. On p.42960 of the Federal Register notice, under "Definition of Discrete Sources," the NRC defines discrete as "a radioactive source with physical boundaries, which is separate and distinct from the radioactivity present in nature, and in which the radionuclide concentration has been increased by human processes with the intent that the concentrated radioactive material will be used for its radiological properties." The DEP has encountered situations where discrete sources of radium-226 were deposited over a large area of land. Soil sorting and subsequent hand scanning reveal discrete nuggets. There is no way to tell whether this material was produced for its radiological properties or not. How would the NRC handle this situation?

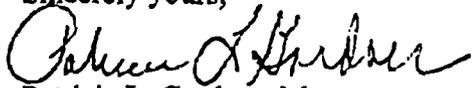
The Department believes that the last phrase "with the intent that the concentrated radioactive material will be used for its radiological properties" should be deleted. If the concentrations of materials are the same, what does it matter whether the material was produced for its radiological properties or not? If the NRC is being mandated to take care of NARM, then they should accept the responsibility regardless of why it was produced.

7. On p. 42969 of the *Federal Register* notice, under "Termination of Waiver," the NRC discusses "a special arrangement" that would need to be made between a state and NRC, if the state could not establish an agreement with NRC by August 7, 2009. The DEP requests that additional information be provided on what exactly is a "special arrangement" for regulatory authority and how this arrangement would be obtained.
8. Page 42974 of the *Federal Register* notice, under "V. Agreement State Compatibility," discusses compatibility. The DEP's understanding is that those elements that do not need to be adopted by an Agreement State are designated as Compatibility Category D. Compatibility Category Health and Safety (H & S) would designate those elements that should incorporate the objectives of the NRC program elements, but would not have to be identical. As long as the objectives were met, the element would be considered "adequate" by the NRC. The NRC should provide additional clarification and justification for their decision if this interpretation is not correct.

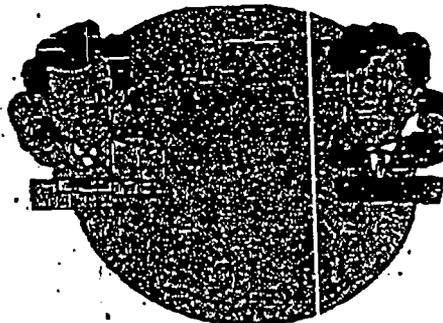
The DEP appreciates the chance to comment on this proposal and looks forward to providing any additional information as the proposal proceeds towards adoption. If you have any questions

on any of our comments, please contact William P. Csaszar of the Radioactive Materials Section at (609) 984-5462.

Sincerely yours,



Patricia L. Gardner, Manager
Bureau of Environmental Radiation



New Jersey Department of Environmental Protection
Division of Environmental Safety and Health
Bureau of Environmental Radiation

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FAX

TO: ^{USNRC} Secretary - Rulemaking Adjudication Staff FROM: Pat Gardner

FAX: 301-413-1101 PAGES (INCLUDING COVER) 5

RE: Response - RIN 3150-AH84

URGENT FOR REVIEW PLEASE COMMENT PLEASE REPLY PER YOUR REQUEST

PERSON TO CONTACT IN REFERENCE TO THIS COMMUNICATION:
NAME: _____ TELEPHONE #: _____

COMMENTS:

