



CONFERENCE OF RADIATION CONTROL PROGRAM DIRECTORS, INC.

POSITION

Relating to: Paper on NRC Regulatory Control of NARM

Introduction:

The Atomic Energy Act of 1954, as amended, authorizes the U.S. Nuclear Regulatory Commission to control the manufacture, transfer, import, export, use and disposal of specifically identified radioactive materials. These radioactive materials are Byproduct, Source, and Special Nuclear Materials in quantities not sufficient to form a critical mass. The Act does not provide for the regulatory control of Naturally Occurring and Accelerator-Produced Radioactive Material (NARM).

NARM has the same type radiation emissions as the radioactive materials identified in the Atomic Energy Act, and poses a similar threat to the public health and safety. Due to these similar radiation characteristics and the potential threat to the public health and safety, NARM should be controlled in a similar manner as radioactive materials regulated by the Atomic Energy Act.

Characteristics of NARM:

For clarification, the radioactive materials under consideration by this paper, and the materials proposed to be added to the Atomic Energy Act, are discreet sources, and are not intended to include diffuse sources of NARM, such as phosphate residues and slag.

One example of a radioactive material in the category called "NARM" includes radium, which has a relatively long, half-life (1600 years), and because of its radiation emissions and deposition in the bone of the body, represents one of the largest potential public health impacts due to its use and biological effects.

NARM is used in every state in the U.S. in the areas of medicine (diagnostic nuclear medicine imaging where the NARM radionuclide is injected into a patient and in therapeutic applications in the treatment of cancerous tumors where NARM sealed sources are used to treat the tumor). NARM is used in industry (incorporated as an integral part of gauges which are used as level indicators and measuring devices) and in the academic fields (used in University teaching programs in such fields as physics, biology and medicine).

Radioactive waste disposal is associated with the use of NARM. Radioactive wastes generated from the use of radioactive materials identified in the Atomic Energy Act are controlled by this same Act. However, wastes generated by use of NARM are not controlled by the Act.

New low-level radioactive waste burial sites will be opened in the future. Some of these sites may be in states not regulated by the Nuclear Regulatory Commission. It is imperative that the proper disposal of NARM be ensured in order that the public be protected.

Present Control of NARM:

Several states have established programs for the control of NARM. These programs vary in their degree of regulatory responsibility and control.

The Atomic Energy Act provides for states to assume certain regulatory control of radioactive materials specified in the Act. Twenty-seven states have Agreements with the NRC for the control of certain radioactive materials, as allowed under the Act. The NUREG-0976 document, dated 10/84, and prepared by the staff of the Office of State Programs, NRC, concludes that these NRC Agreement States regulate and control NARM in the same manner as materials identified in the Atomic Energy Act.

However, NUREG-0976 concludes that states which have not entered into an Agreement with the NRC, have differing regulatory authority and control over NARM. Of the twenty-three non-NRC Agreement States, the NUREG document states that five states have a NARM licensing program, two states have voluntary or partial licensing programs, and sixteen states have at least an initial registration requirement for NARM.

In addition, NUREG-0976 indicates that fourteen non-NRC Agreement States have inspection programs, four states conduct partial inspections, and five states do not conduct NARM inspections.

The NUREG document further states, "fragmentary controls, or in some jurisdictions a total lack of control over NARM, pose a potential threat to public health and safety."

NARM and RCRA:

The EPA, under The Resource Conservation and Recovery Act (RCRA) exempts material covered under the Atomic Energy Act. However, the EPA's control over NARM, since it is not covered in the Atomic Energy Act is uncertain. EPA has not developed standards relative to NARM for waste burial sites. Unless a clear agreement or Memoranda of Understanding is developed between NRC and EPA, a dual Federal regulatory authority of low-level radioactive waste sites would arise. The radioactive material covered in the Atomic Energy Act would fall under the NRC authority and NARM would fall under EPA authority.

Since NRC and EPA have different regulatory approaches to the design of burial sites, site operators and waste generators would be faced with the potential of having to meet the regulatory standards of two different Federal agencies. As the situation now exists, it is uncertain how the two federal agencies will deal with the potential dual regulation in non-NRC Agreement States.

NARM and CERCLA:

The Congress has provided authorization to the U.S. Environmental Protection Agency to "clean-up" areas contaminated by hazardous substance. This authority is provided under the Hazardous Substance Response Trust Fund, established under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980. Some areas and facilities which have been contaminated with NARM have received funding for "cleanup" under this Act.

A question has been raised, that if the Atomic Energy Act is amended to include NARM, would such amendment affect or restrict the use of CERCLA funds for NARM contaminated areas or facilities. Therefore, to clarify this question, a new section is proposed to the Act which would allow the continuation of such funding for NARM contaminated areas and facilities.

Other Studies and Opinions:

In addition to the position of NRC staff regarding the need for better regulation of NARM, as referenced above, other organizations and groups have taken similar positions.

- (1) The NRC Agreement States, following their October 1974 meeting recommended that NRC should bring NARM under its regulatory authority.
- (2) The Conference of Radiation Control Program Directors, Inc. (CRCPD), in a May 8, 1975 letter to then Commissioner Kennedy, stressed the need for NARM to be regulated at the Federal level.
- (3) A Task Force established by NRC in 1976 to study the NARM issue, recommended that NRC seek legislative authority to regulate NARM.
- (4) The National Governors' Association, in its publication, The Agreement State Program: A State Perspective, dated January 1983, states, "The Atomic Energy Act should be amended to authorize the regulation of radioactive materials not presently affected by the act, that is, naturally occurring and accelerator-produced radioactive material (NARM)."
- (5) A Survey of the states by the NRC (NUREG-0976) showed that all twenty-seven Agreement States, and sixteen of the twenty-three Non-Agreement States, supported the regulation of NARM by NRC. Of the remaining seven, only four were opposed to NRC regulating NARM, with two undecided, and one with no reply.
- (6) At the October 1984 meeting of the NRC Agreement States, a resolution was adopted which called upon the NRC to include NARM under the Atomic Energy Act (see attached for copy of resolution).

CRCPD POSITION

The CRCPD has evaluated the NARM situation in the United States and has concluded that the use of NARM is commonplace and widespread throughout the country, and that the degree of control over NARM is quite varied and fragmented. This fragmentary control of NARM creates confusion on the part of the users and waste generators, and creates a real potential for excessive radiation exposure to both the radiation worker and the general public.

Based on the information contained in this paper, the members of the CRCPD, recommend that the Congress of the United States amend the Atomic Energy Act of 1954 to authorize the Nuclear Regulatory Commission to regulate and control discrete sources of Naturally Occurring and Accelerator-Produced Radioactive Material (NARM) in a similar manner as other radioactive material identified in the Act.

The members of the CRCPD further conclude that there are some non-NRC Agreement state radiation control programs for the regulation and control of NARM that are adequately protecting the public.

Based on this conclusion, we recommend that should the Act be amended to authorize NRC to regulate NARM, NRC must establish procedures to maintain the continuation of a NARM regulatory program in a non-NRC Agreement State that has demonstrated compatible regulatory authority and control of NARM.

In addition, since the twenty-seven NRC Agreement states control and regulate NARM in the same manner as material currently identified in the Atomic Energy Act, the NRC Agreement State members request NRC to establish procedures to maintain the continuation of regulatory authority and control immediately following amendment of the Act.

Finally, the members of the CRCPD recommend a proposed amendment to the Atomic Energy Act, and further recommend that the Executive Board transmit this proposed amendment to the National Governors' Association (NGA), with the request that the NGA adopt this proposed amendment.

It is further recommended that the NGA take the necessary action to have Congress consider the proposed amendment, and that the CRCPD provide assistance where necessary to provide sponsorship.

Adopted: May 20, 1985
Original signed by Charles M. Hardin, Executive Secretary

**SUGGESTED AMENDMENT for
The ATOMIC ENERGY ACT of 1954
to AUTHORIZE the U.S. NUCLEAR REGULATORY COMMISSION
to REGULATE NATURALLY-OCCURRING & ACCELERATOR-PRODUCED
RADIOACTIVE MATERIAL (NARM)**

The following suggested changes in the Atomic Energy Act would authorize the U.S. Nuclear Regulatory Commission to regulate and control Naturally Occurring & Accelerator-Produced Radioactive Material (NARM) in a similar manner as radioactive material currently authorized by the Act.

Note: Bracketed word or words indicate the word(s) are to be deleted. Underlined word or words, indicate new word(s) are to be added.

1. Ref: Chapter 2, Section 11 e.

Add a new (3) with the following wording:

- e. The term "byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, [and] (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, and (3) naturally occurring or accelerator-produced radioactive material (NARM) that is produced, or concentrated for the use of its radioactive properties.

2. Ref: Chapter 2, Section II

Add a new definition to read as follows, then re-alphabetize appropriately:

The term "naturally occurring radioactive material" means a material or substance that is radioactive as it exists in nature.

3. Ref: Chapter 2, Section II

Add a new definition to read as follows, then re-alphabetize appropriately:

The term "accelerator-produced radioactive material" means a material or substance made radioactive by exposure to the radiation of a particle accelerator.

4. Ref: Chapter 2, Section II

Add a new definition to read as follows, the realphabetize appropriately:

The term "particle accelerator" means any machine capable of accelerating electrons, protons, deuterons, or other charges particles in a vacuum, and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 MeV.

5. Ref: Chapter 14

Add a new Section to read as follows, then re-number appropriately:

The Commission shall, on January 1, 1992, assume regulatory responsibility for the regulation and control of byproduct materials as defined in Section II e (3) and shall by this date have established rules, regulations, and standards to govern the possession and use of byproduct materials as defined in Section II e (3).

Prior to January 1, 1992 any reference made to byproduct materials, when a specific type of byproduct materials is not mentioned, shall mean byproduct materials as defined in Section II e (1) and (2). On January 1, 1992 and thereafter, any references made to byproduct materials, when a specific type of byproduct materials is not mentioned, shall mean byproduct materials as defined in Section II e (1), (2) and (3).

6. Ref: Chapter 19, Section 274b

Add a new sub-item (3) with the following wording, and re-numbering as appropriate.

b. Except as provided in subsection c., the Commission is authorized to enter into agreements with the Governor of any State providing for discontinuance of the regulatory authority of the Commission under chapters 6, 7, and 8, and section 161 of this Act, with respect to any one or more of the following materials within the State-

(1) byproduct materials as defined in Section II e (1);

(2) byproduct materials as defined in Section II e (2);

(3) byproduct materials as defined in Section II e (3);

~~[(3)](4)~~ source materials;

~~[(4)](5)~~ special nuclear materials in quantities not sufficient to form a critical mass.

7. Ref: Chapter 19, Section 274

Add a new subsection to read as follows, and realphabetize as appropriate:

The Commission shall on January 1, 1992 assume responsibility for the regulation and control of byproduct materials as identified in subsection b (3) of Section 274. No agreement pursuant to byproduct materials as identified in subsection b (3) of Section 274 shall become effective prior to January 1, 1992.

Agreements entered into prior to January 1, 1992 pursuant to byproduct materials as identified in subsection b (1) of Section 274 shall as of January 1, 1992 be deemed to also include byproduct materials as identified in subsection b (3) of Section 274 unless the Commission determines to the contrary based on public health and safety considerations, or unless the State which has entered into such an agreement prior to January 1, 1992 determines that it does not desire regulatory authority over byproduct materials as identified in subsection b (3) of section 274.

The Commission shall establish a procedure to maintain the continuation of regulatory authority for those materials identified in subsection b (3) of section 274 in a state which has not entered into an agreement prior to January 1, 1992.

8. Ref: Chapter 19, Section 274

Add a new subsection to read as follows, and realphabetize as appropriate:

Agreements entered into pursuant to subsection b shall not exclude states from being eligible for the assertion of claims against the Hazardous Substance Response Trust Fund established under the Comprehensive Environmental Response Compensation and Liability Act of 1980 when such claims relate to any of the materials included in the agreements.