



**CONFERENCE OF RADIATION CONTROL PROGRAM DIRECTORS, INC.  
EXECUTIVE BOARD**

**POSITION**

**A Strategy for Uniform Regulation and Control of  
Naturally occurring and Accelerator produced Radioactive Materials (NARM)**

The Conference of Radiation Control Program Directors, Inc. (CRCPD) has long viewed the need for uniform regulation and control of NARM as a very significant issue. Several CRCPD working groups have been charged with addressing various aspects of the NARM issue over the last several years. These working groups and other CRCPD efforts have resulted in several major initiatives being advanced to resolve various aspects of the NARM issue. These attempts have been met with varying degrees of success due in part to the lack of the necessary coordination and direction. The purpose of this document is to provide the necessary direction. Since most of the working groups with NARM responsibilities are in the Environmental Council of CRCPD, the Environmental Council Chairperson is the logical and already existing focal point that should provide the necessary coordination.

It is intended that this strategy be a living document. The Environmental Council Chairperson should report to the Executive Board on the status and success of the strategy at each scheduled meeting and consider the need for change.

First, there is a need to separate the NARM issue into the two distinct issues of discrete and diffuse sources. (Diffuse NARM is more commonly called NORM). This distinction is recommended due to the fact that the regulatory control issues (especially those relating to disposal) may be very different based on this distinction. It should be recognized that proximity to, the production of, and use and distribution of NARM sources are likely to present a greater risk to workers and the public than disposal situations.

Lower limits for defining discrete NARM have been suggested and are currently in use. Recognizing such a need, USEPA requested a recommendation for a lower limit for discrete NARM sources from the LLRW Management Committee (E-5) in 1987 for their draft low level radioactive waste (LLRW) standards. E-5 recommended a generally applicable lower limit for discrete NARM sources of 2 nanocuries per gram Ra-226. E-5 also recommended that for individual radium sources, each having an activity less than 1 microcurie per source, the appropriate total activity for all of these sources together would be 0.1 millicuries. (This lower limit should also be valid for most other naturally occurring radionuclides but must be confirmed. Accelerator produced radionuclides are typically used or created as discrete sources and, therefore, a lower limit is probably not necessary). These recommendations were provided to USEPA and were embodied in its draft LLRW standards, and have therefore been endorsed by CRCPD. This limit is currently used by some licensed disposal sites in defining what they will accept, and it is also a practical upper limit based on a review of typical diffuse NARM sources.

The overall suggested strategy for both discrete and diffuse NARM is simple and contains the same basic principles. These are: (1) Identify the various NARM sources and the relative risks of each and assess the problems and regulatory concerns associated with the possession, use, transfer and disposal of each. This information must then be documented in a report readily understandable to the non-technical person; (2) Develop an appropriate assessment methodology (risk or dose) that can be uniformly applied to all sources; (3) Evaluate existing and develop new standards or guidance as necessary to insure consistent, CRCPD-endorsed, nationwide regulatory control over the use, distribution, decontamination, and disposal of these materials; (4) Set up a nationwide enforcement program which will overcome current jurisdictional and institutional barriers; and (5) Develop a methodology, including incentives and penalties, to insure that a consistent regulatory control program is instituted at both the state and federal level.

### Discrete NARM

There is first a need to identify and characterize all discrete NARM sources and assess their relative risk. The regulatory control problems of each must also be assessed. This information should then be documented in a report understandable to the non-technical person.

It must be determined whether uniform standards have been developed to regulate possession, use, distribution, and disposal of these sources (Have appropriate SSR's and state or federal guidance been already developed that can be endorsed?). If standards do not exist, each source must be evaluated to determine the need for standards; and where necessary, they should be developed.

The Committee on Use of Radionuclides in the Healing Arts (SR-6) and the Committee on Radiation Safety Requirements for Particle Accelerators (SR-3) should take the lead on these issues. SR-3 also needs to identify all accelerator-produced waste and explore the need for additional regulation of the interface between the accelerator, its ancillary equipment, and the isotopes produced.

CRCPD should endorse these standards in some manner in order to enhance their acceptability.

It will likely be determined that most, if not all, discrete NARM sources should be disposed of in licensed facilities which will be developed as part of the current state/compact system. This

will create some future institutional problems due to the current limits and uncertain future of existing disposal sites and the fact that most new compact sites may not be authorized to accept discrete NARM.

E-5 should:

- (1) Followup with USDOE and Committee on Interagency Radiation Research and Policy Coordination (CIRRPC), and maybe EPA if the Toxic Substance Control Act (TOSCA) authority is needed, to ensure that high specific activity (greater than class C) discrete NARM sources are included as a federal disposal responsibility.
- (2) Determine which compacts/states are currently authorized to accept discrete NARM.
- (3) Develop a recommended letter to officially inform those entities not accepting discrete NARM that they have a problem and need to do something (enter agreements or change law).

Without a doubt, the most difficult problem will be implementing a uniform national system for regulating discrete NARM. Although the CRCPD still believes, and it is our approved position, that discrete NARM should be regulated under the Atomic Energy Act; based on previous efforts, it is evident that a federal agency does not want to take the lead in assuming responsibility for the regulation of discrete NARM. The states, through CRCPD, should and must take the lead. This should not diminish our efforts to work with the various federal agencies to achieve our common goal of protecting health and safety and the need for assuming additional responsibilities as appropriate.

CRCPD should continue to support the licensing state concept and should continue to aggressively encourage states to participate. There needs to be additional incentives and penalties to facilitate and encourage participation. Encouraging licensing states to set up reciprocity restrictions may be one of the more effective.

The Committee on Licensing State Designation (G-20) should aggressively pursue the new limited licensing state concept while at the same time brainstorming other possible options, including the development of incentives and penalties that will encourage better participation.

CRCPD should identify this issue as a priority to CIRRPC, National Governors' Association (NGA) and National Conference of State Legislators (NCSL), and followup with these groups to insure it receives consideration.

All working groups should identify those current practices or lack of consistent regulatory control that are creating the greatest health and safety problems and CRCPD should consider petitioning for nationwide uniform control using TOSCA or other appropriate mechanisms if CRCPD efforts to deal with these problems are not successful.

CRCPD needs to specifically followup with CIRRPC to assure its recommendations, based on previous CRCPD efforts, are appropriate.

## Diffuse NARM (NORM)

There is first a need to develop and agree upon a common methodology for assessing risks and thereby defining standards and guidance for all NARM sources. The NORM Committee (E-4) should take the lead on this effort with input and agreement by all working groups.

There is a need to better identify and catalog the various types of NORM sources and the risks and regulatory control problems which they present. This effort should categorize NORM sources by relative volumes, relative risks to the public, and relative ease of instituting better regulatory controls. All types of NORM, regardless of source, must be evaluated on a consistent basis using the same risk assessment methodology. The information must be presented in a manner readily understandable to a non-technical person.

E-4 needs to review existing reports and develop a single comprehensive risk assessment document. This document should be edited by G-39 so that it can be understood by non-technical types.

It should be determined whether appropriate, uniform standards or guidance exist for each category of NORM. Issues concerning potential reuse/recycle, appropriate worker protection standards, decontamination/decommissioning limits, appropriate disposal, and those NORM sources that may require licensing, must be considered separately. A consensus must be reached through the CRCPD to establish an appropriate lower limit for control/regulation of all NORM radionuclides. These lower limits must take into consideration existing decontamination/decommissioning standards and must address other radionuclides besides Radium-226.

E-4 should develop appropriate standards for each category of NORM, with help from SR-6 on licensing/reuse issues and E-5 for disposal issues.

CRCPD must endorse these final recommended standards/guidance in some manner if we are to expect acceptance and implementation.

As with NARM, implementation of a uniform, nationwide regulatory control system for NORM will be the most difficult problem. In this case; however, if the states do not implement a better system on their own, it is likely that NORM disposal will eventually be regulated by USEPA under RCRA. If this were to include all the RCRA requirements, it could have ominous implications. (The originally proposed RCRA regulations included greater than 5 pc/gm Ra-226 as a hazardous characteristic.)

E-4, with input from other working groups and resources, needs to brainstorm the various options and the development of incentives and penalties which will encourage states to address the various aspects of the NORM problem in a more uniform manner.

CRCPD needs to consider a program similar to the licensing state concept for NORM to better institutionalize the issue.

CRCPD should identify this issue to the CIRRPC, NGA and NCSL as a priority issue.

E-4 should determine if the magnitude of the health and safety problem for any NORM source requires consideration of petitioning for control under TOSCA.

Generation, use, storage, and disposal of both discrete and diffuse NARM at federal facilities present both common and unique problems for the states. Since it does not appear that states have the authority to regulate federal facilities under state law (except possibly disposal under RCRA or CERLA), these facilities must be more consistently and adequately regulated under federal authority.

CRCPD should notify CIRRPC of this discrepancy and request that the various federal agencies evaluate and report on the magnitude of their NARM/NORM control problems.

The Federal Facilities Committee (E-20) should provide recommendations on how-best-to deal with this issue.

If there are considerable federal NARM/NORM problems, consideration-should be given to the development of USEPA standards that are consistent with the CRCPD-endorsed standards or guidance that will eventually be developed. Regulation under TOSCA is also a possibility for those federal NARM issues that are presenting severe health and safety problems.

All comments incorporated February 27, 1992  
William P. Dornsife