National Materials Program

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U.S. Material Licenses

There are approximately 22,400 licenses issued for medical, academic, industrial, and general uses of radioactive materials in the United States. The United States Nuclear Regulatory Commission (NRC) and State radiation safety regulatory programs are responsible for ensuring protection of public health and safety and the environment. Currently, there are approximately 3,450 licenses issued by the NRC and 18,950 licenses issued by the 36 Agreement States. An Agreement State is any state with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an Agreement under subsection 274b of the Atomic Energy Act of 1954 (as amended).

Definition of the National Materials Program

The National Materials Program (NMP) is a term that has been used for many years, to define the broad collective framework within which both NRC and the Agreement States function in carrying out their respective radiation safety regulatory programs. This framework also includes the Organization of Agreement States (OAS) and the Conference of Radiation Control Program Directors, Inc. (CRCPD).

Coordinating Organizations

The OAS is a nonprofit, voluntary, scientific and professional society incorporated in the District of Columbia. The membership of OAS consists of state radiation control directors and staff from the 36 Agreement States who are responsible for implementation of their respective Agreement State programs. The purpose of the OAS is to provide a mechanism for these Agreement States to work with each other and with the NRC on regulatory issues associated with their respective agreements.

The CRCPD is a 501(c)(3) nonprofit non-governmental professional organization dedicated to radiation protection. CRCPD's mission is "to promote consistency in addressing and resolving radiation protection issues, to encourage high standards of quality in radiation protection programs, and to provide leadership in radiation safety and education." CRCPD's primary goal is to assure that radiation exposure to individuals is kept to the lowest practical level, while not restricting its beneficial uses. CRCPD's primary membership is made up of radiation professionals in State and local government that regulate the use of radiation sources, but anyone with an interest in radiation protection is eligible to join.

Historical Aspect of the National Materials Program

Although the term “NMP” has only been around for about the last decade, the Agreement State program has been in existence since 1959 with the adoption of Section 274 of the Atomic Energy Act (AEA). The Agreement State program is unique in that it involves a discontinuance of NRC regulatory authority over certain radioactive materials and assumption of that authority

by the State government.

Kentucky became the first Agreement State in 1962. By the end of 1970, there were 22 Agreement States regulating approximately 50% of radioactive material licenses. To date, there are 36 Agreement States regulating approximately 85% of radioactive material licenses.

NRC's Oversight Responsibility of Agreement State Programs

Under Section 274 of the AEA, NRC has programmatic responsibility to periodically review the actions of the Agreement States to comply with the requirements of the AEA to continue to maintain adequate and compatible programs. While this authority is reserved to the NRC, the current review process under the Integrated Materials Performance Evaluation Program (IMPEP) is conducted with State staff participation under the National Materials Program. The IMPEP process employs a team of NRC and Agreement State staff to assess both Agreement State, and NRC Regional and certain NRC Headquarters radioactive materials programs.

Evolution of the National Materials Program

The NMP also reflects the evolving relationship between NRC and the Agreement States. This relationship has been evolving as more States become Agreement States. For example, in the past, NRC drafted rule or guidance documents with little or no Agreement State involvement before they were shared with Agreement States for review and comment. Today, Agreement States have been actively involved in drafting rule making and guidance documents with NRC staff before they are made available for review and comment. Due to the continuing increase of Agreement State expertise and experience in certain areas, it is envisioned that Agreement States will continue to assume greater input in shaping regulations and certain guidance documents to be used by both NRC and Agreement States.

Another example is the IMPEP program. In the past, NRC's review of Agreement States programs was solely conducted by NRC staff members and NRC management made a final determination on adequacy and compatibility of an Agreement State program. Currently, under IMPEP, the review is conducted by a team that includes Agreement State staff. An NRC Management Review Board, which includes an Agreement State management liaison representative, makes the final determination.

Also, more recent NRC initiatives routinely involve the States early in the process. (e.g., Task Force on the Energy Policy Act of 2005 and Increased Controls, Radiation Source Protection and Security Task Force (Chairman's Task Force), National Source Tracking System, Hurricane Lessons-learned Task Force; and development of "Pre-licensing" guidance for use by NRC and States)

The National Materials Program will continue to evolve as more States become Agreement States.

National Materials Program Activities

The National Materials Program covers activities solely carried out by NRC and 36 Agreement State programs, such as licensing, inspection, response to incidents, staffing and training, and enforcement and investigation. It also covers activities that can be shared by each program such as rule and guidance development, development of orders to enhance security of radioactive materials, event evaluation for generic implication and issues, and program evaluation.

The focus of the NMP is the shared program activities between NRC and Agreement States and

ability of Agreement States to assume a greater proportional responsibility for the shared program activities. The scope of the NMP covers AEA materials, which are currently regulated by NRC and Agreement States. It has been expanded to cover accelerator-produced material and discrete sources of Radium-226 due to the implementation of the Energy Policy Act of 2005.

The National Materials Program Pilot Projects

In March 2000, NRC formed a working group to address the impacts of the increased number of Agreement States and to provide advice to the NRC on the NMP. The working group completed its final report (Ref 7) in May 2001 and recommended that NRC adopt a cooperative process (Alliance option) between the Agreement States and NRC that identifies, prioritizes, and addresses the regulatory needs of the materials program.

Subsequently, NRC, OAS and CRCPD collaborated in the development of five pilot projects to provide additional information to help understand the feasibility and viability of the Alliance Option. In 2002, NRC initiated five pilot projects under the framework of the current NRC Agreement State program (Blended option).

In November 2004, five pilot project working groups completed their final reports (Ref 2). Based on the results of the pilot projects, NRC, OAS and CRCPD staff identified three options for Commission consideration. Subsequently, the Commission approved NRC staff's recommendation to continue the NMP activities under the Blended option. NRC has continued to implement the NMP under the Blended option and is currently working with OAS and CRCPD to examine the pilot project products (such as guidance documents and review procedures) and evaluate the effectiveness of implementation of these products.

Challenges of the National Materials Program

Major challenges are identified as follows:

- Ability of NRC and Agreement States to deal with the NMP environment that is constantly evolving such as changes in priorities for regulatory needs and fiscal conditions.
- Ability of individual Agreement State programs to consistently commit resources to the support the shared program activities.
- Ability of Agreement States to share a greater proportional responsibility for development and maintenance of guidance documents and the ability of NRC to accept such documents without the need for major change.
- Ability of NRC to share establishment of priorities for work supporting the NMP with States early on in its planning process.

References

1. Staff Requirements - SECY 04-0215 - Final Report on Results of the National Materials Program Pilot Projects -SRM SECY-04-0215, January 2005

2. Final Report on Results of the National Materials Program Pilot Projects -SECY-04-0215, November 2004

3. Progress Report for the National Materials Program Pilot Projects -SECY-04-0059, April 2004

4. Staff Requirements - SECY-02-0107 - Addendum to SECY-02-0074: National Materials Program: Pilot Projects and SECY-01-0112 - National Materials Program: Transmittal of the Final Working Group Report Presenting Options for a National Materials Program -SRM for SECY-02-0107 and SECY-01-0112, August 2002

5. Addendum to SECY-02-0074: “National Materials Program: Pilot Projects -SECY-02-0107, June 2002

6. National Materials Program: Pilot Projects -SECY-02-0074, May 2002

7. NMP: Transmittal of the Final Working Report presenting Options for a National Materials Programs -SECY-01-0112, June 2001

8. Staff Requirements - SECY-99-250 - National Materials Program: Request Approval of the Formation of a Working Group on the Increase in the Number of Agreement States and Impact on NRC's Materials Program -SRM SECY-99-250, November 1999

9. National Materials Program: Request Approval of the Formation of a Working Group on the Increase in the Number of Agreement States and Impact on NRC's Materials Program -SECY-99-250, October 1999