

EXECUTIVE SUMMARY (U)

BACKGROUND (U)

The terrorist attacks of September 11, 2001, heightened the Nation's concerns that the loss or theft of radioactive material could lead to malicious use in a radiological dispersal device (RDD). An RDD, also known as a dirty bomb, is a conventional explosive that incorporates radioactive material and releases it on detonation. The major purpose for a dirty bomb is to create terror and disruption, not to cause death by radiation. (U)

The U.S. Nuclear Regulatory Commission's (NRC) mandate to protect public health and safety and the environment, and to provide for the common defense and security, includes regulation of radioactive byproduct material used in medical, academic, and industrial applications. Byproduct material is radioactive material generated by or from a nuclear reactor. Examples of byproduct material include substances containing radioactive isotopes such as cobalt-60, cesium-137, and iridium-192. (U)

The Atomic Energy Act of 1954, as amended, (AEA) authorizes NRC to issue licenses to applicants seeking to use byproduct material. The AEA also authorizes NRC to require applicants to provide, in writing, information that the NRC Commission determines is necessary to decide the technical and financial qualifications of the applicant, the character and citizenship of the applicant, or any other qualifications of the applicant that the Commission may deem appropriate for the license, even after a license is granted. Each year, the agency issues approximately 4,200 new licenses, license renewals, and license amendments for nuclear materials licenses. (U)

There are approximately 21,800 materials licenses in the United States, and NRC administers about 4,500 of them. The remaining licenses are administered by regulatory authorities in 33 States, called Agreement States. The States must first demonstrate that their regulatory programs are compatible with NRC's program and are adequate to protect public health and safety. (U)

PURPOSE (U)

The purpose of this report is to convey our assessment of selected aspects of NRC's materials license application and review process. We conducted this work as part of a larger effort to determine whether NRC's oversight of byproduct material provides reasonable

assurance that licensees account for and control the materials. Our specific objective for this report was to determine if NRC ensures, through its license application and review process, that only legitimate entities receive NRC byproduct material licenses. See Appendix A for details on the scope and methodology for this audit. (U)

RESULTS IN BRIEF (U)

Although the events of September 11 emphasized the importance of identifying the vulnerabilities in Government-regulated programs and the agency has taken steps to address some vulnerabilities, NRC officials are not aware of the full spectrum of vulnerabilities in the byproduct material license application and review process. This awareness is lacking because NRC has not looked inwards at its own business and regulatory processes. Specifically, the agency has not conducted vulnerability assessments of all aspects of the materials program, including the license application and review process. Consequently, individuals with malevolent intentions could exploit vulnerabilities in the license application and review process to obtain byproduct material for use in a dirty bomb. (U)

RECOMMENDATIONS (U)

This report makes two recommendations to the Executive Director for Operations to (1) conduct a complete vulnerability assessment of NRC's materials program, including the license application and review process and the methods used by licensees to purchase byproduct material from sellers; and (2) modify the license application and review process to mitigate the risks identified in the vulnerability assessment. (U)

AGENCY COMMENTS (U)

On February 7, 2006, the Deputy Executive Director for Materials, Research, State and Compliance Programs provided comments concerning the draft audit report. The agency's comments focused on NRC's ongoing and planned security efforts for byproduct material, but did not substantially address OIG's finding that the agency does not have full awareness of the vulnerabilities in its materials license application and review process. Furthermore, the Deputy Executive Director did not state whether the agency concurred with the recommendations, but rather proposed alternative recommendations that OIG believes would not correct the identified deficiencies. Appendix B contains a facsimile

reproduction of NRC's formal comments and Appendix C contains
OIG's specific response to each comment. (U)