

NAWTEC10-1016

NAWTEC Speaker Abstract

Detecting Sources of Ionizing Radiation in the Waste Stream

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Why is the detection of radioactive sources important to the solid waste industry?: Radioactive material is used extensively in the United States in research, medicine, education, and industry for the benefit of society (e.g. smoke detectors, industrial process gauges, medical diagnosis/treatment). Generally speaking, the Nuclear Regulatory Commission and state governments regulate the use and disposal of radioactive materials. Licensed radioactive waste disposal facilities receive the bulk of the waste generated in the United States with exceptions for low-level waste (e.g. medical patient waste) that may be disposed of as municipal waste. According to the Conference of Radiation Control Program Directors, Inc (CRCPD), there has been an increasing number of incidence involving the detection of prohibited radioactive wastes at solid waste management facilities. While the CRCPD acknowledges that the increased incidence may be partially attributed to the growing number of solid waste facilities that have detection systems, undetected sources of ionizing radiation can harm the environment, have a negative impact on employee health and safety, and result in significant remedial actions. Implementing an effective detection/response plan can aid in the proper management of radioactive waste and serve to minimize the potential for negative outcomes.

Important Points of this Presentation:

- Solid waste management facilities should implement effective radiation detection and response protocols.
- There is technology available to the solid waste industry to assist in the detection of prohibited radioactive wastes.
- The CRCPD has created recommendations for the detection of, and response to, sources of ionizing radiation in the solid waste industry.

What does the industry need to do to advance in this area?:

- Each organization in the industry should assess the potential for stray sources of ionizing radiation to enter their facilities.
- Where potential exposure exists, organizations should install appropriate detection systems, provide operator training, and maintain a detailed response plan.
- To the degree possible, members of industry should install technology and implement response protocols that are consistent with the guidelines established by professional organizations that have expertise in the field of radiation safety (i.e. the CRCPD).

Michael Needham is the Corporate Health & Safety Manager for EnergyAnswers Corporation. Michael Needham is a safety engineer with over 15 years of experience in the public, private, and military sectors. Michael is a Certified Safety Professional in comprehensive practice, a Certified Fire Protection Specialist, and a Certified Environmental Trainer. Michael is a professional member of the American Society of Safety Engineers and a member of the American Industrial Hygiene Association. EnergyAnswers Corporation was formed in 1981 to develop integrated solid waste management solutions with environmentally sound resource recovery technologies. The operating subsidiaries include waste collection and transportation, transfer stations, composting facilities, and waste-to-energy facilities in New York and Massachusetts. New projects using EAC's proprietary technologies are under development in the Caribbean and Pacific Rim.