

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, D. C. 20555

March 30, 1989

NRC INFORMATION NOTICE NO. 89-34: DISPOSAL OF AMERICIUM WELL-LOGGING SOURCES

Addressees:

All holders of a U.S. Nuclear Regulatory Commission (NRC) specific license authorizing well-logging activities.

Purpose:

This information notice is provided to inform well-logging licensees of the potential problems and costs that may be incurred in disposing of americium sources, when they are no longer needed. Such disposal costs may be an unanticipated financial hardship for some well-logging companies. It is expected that licensees will review this information for applicability to their programs, distribute the notice to responsible licensee management, and radiation safety staff; and consider plans to ensure that special attention is paid to this area. However, suggestions contained in this notice do not constitute any new NRC requirements, and no written response is required.

Description of Circumstances:

Numerous licensees who provide well-logging services using americium sources are experiencing financial problems because of the depressed oil and gas industry. Many of these licensees have terminated licensed activities, and some have undergone bankruptcy proceedings. In addition, after July 14, 1989, certain sources will no longer be permitted to be used in well-logging, unless the sources conform to new performance criteria outlined in 10 CFR Section 39.41 (see 52 FR 8225, March 17, 1987). These factors may increase the number of non-usable sources, and, consequently, may increase source storage and disposal problems.

With respect to disposal, most americium well-logging sources contain americium in sufficient concentrations that they are not generally acceptable for disposal as waste at low-level waste disposal facilities. The U.S. Department of Energy (DOE) is responsible for disposal of such waste but a DOE disposal facility will not be available for several years. Thus, there are few choices available to a licensee who has no further need for americium sources.

Discussion:

Licensees are responsible for ensuring the health and safety of the public and workers with respect to nuclear materials in their possession, in accordance with NRC regulations and requirements of their licenses. Unsafe storage,

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abandonment, or unauthorized disposal of a radioactive source or any licensed material will result in enforcement action by NRC, and may constitute a criminal activity prosecutable by the U.S. Department of Justice.

The following summarizes the choices that may be available to licensees with surplus radioactive sources:

- (1) Transfer the source to another licensee (NRC or Agreement State) that is willing and authorized to take the source.
- (2) Return the source to the manufacturer. The licensee should determine if the manufacturer has provisions for accepting returned sources, and is willing to accept returns.
- (3) Transfer the source to a private contractor which is licensed to permanently store or reprocess the source. NRC staff is currently aware of only one contractor in this type of business, and understands that the fees for the service can be up to tens of thousands of dollars per source.
- (4) Continue licensee storage of the source.

If a well-logging licensee plans to remain in business, but will no longer use licensed material and cannot find an authorized recipient for licensed sources, the licensee may request that NRC amend the license to authorize "storage only" of sealed sources. The license status will result in reduced program responsibilities and associated NRC licensing and inspection fees. Licensees that need information about the storage of sources, or who are experiencing difficulty in maintaining safe storage of any radioactive source should immediately contact their NRC Regional Office by telephone.

No written response is required by this information notice. If you have any questions about this matter, please call a technical contact listed below or the appropriate NRC Regional Office.

*Richard E. Cunningham*

Richard E. Cunningham, Director  
Division of Industrial and  
Medical Nuclear Safety, NMSS

Technical Contacts: Jack R. Metzger, NMSS  
(301) 492-3424

Dale A. Powers, Region IV  
(817) 860-8195

Attachments:

1. List of Recently Issued NMSS Information Notices
2. List of Recently Issued NRC Information Notices

LIST OF RECENTLY ISSUED  
 NMSS INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
89-25	Unauthorized Transfer of Ownership or Control of Licensed Activities	03/07/89	All NRC source, byproduct, and special nuclear material licensees.
89-24	Nuclear Criticality Safety	03/06/89	All fuel cycle licensees and other licensees possessing more than critical mass quantities of special nuclear material.
89-13	Alternative Waste Management Procedures in Case of Denial of Access to Low-Level Waste Disposal Sites	02/08/89	All holders of NRC specific licenses.
89-12	Dose Calibrator Quality Control	02/09/89	All NRC medical licensees.
89-03	Potential Electrical Equipment Problems	01/11/89	All fuel cycle and major nuclear materials licensees.
89-02	Criminal Prosecution of Licensee's Former President for Intentional Safety Violations	01/09/89	All holders of NRC specific license.
88-100	Memorandum of Understanding Between NRC and OSHA Relating to NRC-Licensed Facilities (53 FR 43950, October 31, 1988)	12/23/88	All major nuclear materials licensees and utilities holding CPs and OLs.
88-93	Teletherapy Events	12/2/88	All NRC medical licensees.

OL = Operating License  
 CP = Construction Permit

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Information Notice No.	Subject	Date of Issuance	Issued to
89-33	Potential Failure of Westinghouse Steam Generator Tube Mechanical Plugs	3/23/89	All holders of OLs or CPs for PWRs.
89-32	Surveillance Testing of Low-Temperature Overpressure-Protection Systems	3/23/89	All holders of OLs or CPs for PWRs.
89-31	Swelling and Cracking of Hafnium Control Rods	3/22/89	All holders of OLs or CPs for PWRs with Hafnium control rods.
89-30	High Temperature Environments at Nuclear Power Plants	3/15/89	All holders of OLs or CPs for nuclear power reactors.
89-29	Potential Failure of ASEA Brown Boveri Circuit Breakers During Seismic Event	3/15/89	All holders of OLs or CPs for nuclear power reactors.
89-28	Weight and Center of Gravity Discrepancies for Copes-Vulcan Air-Operated Valves	3/14/89	All holders of OLs or CPs for nuclear power reactors.
89-27	Limitations on the Use of Waste Forms and High Integrity Containers for the Disposal of Low-Level Radioactive Waste	3/8/89	All holders of OLs or CPs for nuclear power reactors, fuel cycle licenses and certain by-product materials licensees.
89-26	Instrument Air Supply to Safety-Related Equipment	3/7/89	All holders of OLs or CPs for nuclear power reactors.
89-25	Unauthorized Transfer of Ownership or Control of Licensed Activities	3/7/89	All U.S. NRC source, byproduct, and special nuclear material licensees.

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The following summarizes the choices that may be available to licensees with surplus radioactive sources:

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If a well-logging licensee plans to remain in business, but will no longer use licensed material and cannot find an authorized recipient for licensed sources, the licensee may request that NRC amend the license to authorize "storage only" of sealed sources. The license status will result in reduced program responsibilities and associated NRC licensing and inspection fees. Licensees that need information about the storage of sources, or who are experiencing difficulty in maintaining safe storage of any radioactive source should immediately contact their NRC Regional Office by telephone.

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NAME:JMetzger/11:DCool :DPowers :MBell :JHickey :RFonner :GSjoblom :RECunningham  
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storage and disposal of unneeded well-logging sources. Unsafe storage, abandonment, or unauthorized disposal of a radioactive source or any licensed material will result in enforcement action by NRC, and may constitute a criminal activity prosecutable by the U.S. Department of Justice.

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