



HEALTH
PHYSICS
SOCIETY

STATE AND FEDERAL ACTION IS NEEDED FOR BETTER CONTROL OF ORPHAN SOURCES

POSITION STATEMENT OF THE HEALTH PHYSICS SOCIETY*

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Contact: Richard J. Burk, Jr.
Executive Secretary
Health Physics Society
Telephone: 703-790-1745
Fax: 703-790-2672
Email: HPS@BurkInc.com
<http://www.hps.org>

Orphan sources are radioactive sources that have escaped institutional control, i.e., sources that have been lost, stolen, or abandoned. The Health Physics Society believes that the orphan source problem is a radiation safety issue of high priority needing national and international attention. The Society makes the following recommendations regarding orphan sources:

1. A restructuring of the present system for the retention, transfer, and disposal of unwanted radioactive sources is needed so that it encourages prompt and proper transfer, storage, or disposal of such sources. So long as disposal options remain limited, there should be provisions for the prompt collection of unwanted sources and their storage at centralized secure facilities pending final decisions on their disposition. We recommend that this be the responsibility of a single federal agency. Federal agencies and the States, together with other radiation safety organizations, should work with safety and trade organizations to disseminate information on source disposition options to licensees. In particular, this educational effort should be directed toward licensees who have had little contact with federal and state regulators and have minimal radiation safety programs.
2. The previous and successive recommendations are prospective and will take several years to implement. We recommend that actions be taken by Federal and State regulatory agencies to prevent existing radioactive sources from becoming orphaned as well as to correct the problem with vulnerable sources.

Such actions should include the following:

- Developing procedures for recovery and safe transport of orphan sources.
- Creating temporary repositories where orphan sources may be stored safely and securely until disposition occurs.
- Developing national transport interception levels for these purposes.
- Developing a confidential national tracking system for licensed sources.
- Requiring financial surety for licensed sources.
- Enforcing license conditions on all licensed sources.
- Overhauling the radioactive materials licensing process for sources that could become orphaned consistent with the paragraphs above and below.
- Working to have these measures adopted internationally.

3. Federal and State regulatory agencies should fully implement the ICRP and NCRP principle of *justification*. They should examine the practicality of adopting as licensing policy the principles of *justification*, whereby: (1) there is documentation of the net benefit from the use of the radiation/radioactivity being licensed; and, (2) potential users examine alternative technologies that are technically and economically feasible and whose alternative use would result in an equal or greater net benefit than from the use of the radiation/radioactivity.

4. Federal funding for these new initiatives as well as for existing ones should be a high priority. Congress should emphasize this through budget resolution statements that specifically support and direct Federal agency programs to address the orphan source problem.

* The Health Physics Society is a non profit scientific professional organization whose mission is to promote the practice of radiation safety. Since its formation in 1956, the Society has grown to approximately 6,000 scientists, physicians, engineers, lawyers, and other professionals representing academia, industry, government, national laboratories, the department of defense, and other organizations. Society activities include encouraging research in radiation science, developing standards, and disseminating radiation safety information. Society members are involved in understanding, evaluating, and controlling the potential risks from radiation relative to the benefits. Official position statements are prepared and adopted in accordance with standard policies and procedures of the Society. The Society may be contacted at: 1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101; phone: 703-790-1745; FAX: 703-790-2672; email: HPS@BurkInc.com.