



RADIOACTIVE SCRAP - BEWARE!

NOTICE

The items pictured may contain radioactive material. If you see such items, notice radioactive warning markings on a piece of scrap metal, or if you otherwise think the material is radioactive, **DO NOT PROCESS**. Take the following actions:

- **DO NOT TOUCH THE SOURCE.**
- **PUT DISTANCE BETWEEN YOU AND THE SOURCE AND IF POSSIBLE, PUT SOMETHING BETWEEN YOU AND THE SOURCE.**
- **MOVE THE LOAD OR ITEM TO A SAFE AREA ONLY IF YOU HAVE THE ABILITY TO MEASURE THE RADIATION LEVEL.**
- **WARN OTHERS AND SECURE THE AREA.**
- **CONTACT YOUR STATE RADIATION CONTROL OFFICE, THE U.S. ENVIRONMENTAL PROTECTION AGENCY, OR THE U.S. NUCLEAR REGULATORY COMMISSION IMMEDIATELY.**



BACKGROUND

Since 1983, radioactive material has been detected in scrap metal numerous times. Most of these incidents have involved iron or steel recycling, but radioactive materials have been found in recycling processes for other metals such as aluminum, lead, zinc, bronze, and copper. Similar incidents have occurred in foreign countries also.

In some cases, the radioactive material was contained in shielded devices that found their way into scrap handling facilities. Although many were detected before processing, a few were processed with normal scrap at foundries. This resulted in widespread contamination of the facilities, radioactive products in flue dust, and the possibility of radiation exposure to the workers. The contaminated products could have been hazardous to members of the public as well.

The chances of such incidents in this country are small. Most radioactive materials are regulated by State radiation control programs or the U.S. Nuclear Regulatory Commission.

Users are subject to strict regulatory requirements for accountability and proper disposal. Therefore, the chances of accidental disposal of such a device in scrap is remote. Yet the possibility still exists when scrap is processed.

Although radiation monitors can be used to check incoming scrap, they cannot always detect radioactive material that may be buried in a load or otherwise shielded from the radiation monitor. You should be alert to the presence of devices that may contain radioactive material. Familiarize yourself with the types of markings that appear on the various devices such as the three-bladed radiation warning symbol, and the terms used to describe the radioactive materials most commonly used in these devices.

This poster illustrates typical devices that could turn up in scrap material and which could contain radioactive substances. Based on the pictures, it is evident that radioactive material comes in different forms, shapes, and sizes. Some radioactive material may not be properly marked with the radiation warning symbol. In other cases, the radiation warning symbol may be covered by dirt, oil, or rust. Also keep in mind that items that are traditionally not radioactive can set off radiation monitors if radioactive contamination is present in or on the items.

Please note that some radioactive material is permitted to be disposed of without special requirements. The most common example of this is a smoke detector.

TYPICAL ITEMS



SCRAP METAL



PORTABLE MOISTURE/DENSITY GAUGE



MINE FIELD AND PERSONNEL MARKERS



RADIOGRAPHY CAMERA



GAUGE WITH SADDLE CLAMP



GAUGE WITH OXIDATION



CONTAMINATED LEAD VIAL SHIELD



TRANSPORTATION CONTAINER



DEPLETED URANIUM SHIELD



ELECTRON CAPTURE DETECTOR



X-RAY FLUORESCENCE ANALYZER



CONTAMINATED LEAD BRICKS



TRITIUM GUN SIGHT



SELF-LUMINOUS DEVICES



BAR-TYPE STATIC ELIMINATOR



VENT-TYPE STATIC ELIMINATOR



RADIOACTIVE MEDICAL WASTE



RADIOLUMINESCENT GAUGE



VARIOUS SOURCES



WELL-LOGGING SOURCES

WHERE TO GET HELP

YOUR STATE/LOCAL/COMPANY CONTACTS

(ex. State Radiation Control Agency, Company Radiation Health Consultant, etc.)

You can find information regarding your State radiation control agency at the following site:

www.nrc.gov/what-we-do/state-tribal.html

or

www.hrsd.ornl.gov/nrc/asdirectr.htm

U.S. ENVIRONMENTAL PROTECTION AGENCY CONTACT INFORMATION

Region 1 (Boston, MA)	(617) 918-1111	Region 6 (Dallas, TX)	(214) 665-6444
CT, MA, ME, NH, RI, VT		AR, LA, NM, OK, TX	
Region 2 (New York, NY)	(732) 548-8730	Region 7 (Kansas City, KS)	(913) 281-0991
NJ, NY, Puerto Rico, Virgin Islands		IA, KS, MO, NE	
Region 3 (Philadelphia, PA)	(215) 814-5000	Region 8 (Denver, CO)	(303) 312-6312
DC, DE, MD, PA, VA, WV		CO, MT, ND, SD, UT, WY	
Region 4 (Atlanta, GA)	(404) 562-9900	Region 9 (San Francisco, CA)	(415) 947-8000
AL, FL, GA, KY, MS, NC, SC, TN		AZ, CA, HI, NV, American Samoa, Guam	
Region 5 (Chicago, IL)	(312) 353-2000	Region 10 (Seattle, WA)	(206) 553-1200
IL, IN, MI, MN, OH, WI		AK, ID, OR, WA	

NATIONAL RESPONSE CENTER

www.epa.gov

(800) 424-8802

U.S. NUCLEAR REGULATORY COMMISSION CONTACT INFORMATION

Region I (King of Prussia, PA)	(610) 337-5000
CT, DE, DC, MA, MD, ME, NH, NJ, NY, PA, RI, VT	
Region II (Atlanta, GA)	(404) 562-4400
AL, FL, GA, KY, MS, NC, SC, TN, VA, WV	
Region III (Lisle, IL)	(630) 829-9500
IA, IL, IN, MI, MN, MO, OH, WI	
Region IV (Arlington, TX)	(817) 860-8100
AK, AR, AZ, CA, CO, HI, ID, KS, LA, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA, WY	

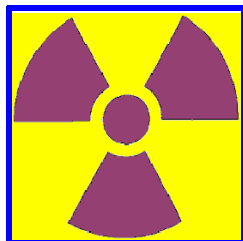
HEADQUARTERS OPERATIONS CENTER (Rockville, MD)

The NRC Operations Center is staffed 24 hours a day and accepts collect calls.

(301) 816-5100

www.nrc.gov

RADIATION WARNING SYMBOL



This symbol should appear on containers and devices which hold radioactive substances. Its color and size may vary; however, its color is usually magenta or black on yellow. Please note that not all containers and devices requiring the radiation warning symbol will be properly marked with the symbol.

NATURE AND QUANTITY OF RADIOACTIVE MATERIAL

The following are examples of terms normally used in association with the radiation warning symbol to indicate the nature of the radioactive material and its quantity. Certain other markings describing the type of container may also appear.

Examples: Nature of Radioactive Material

Cobalt-60 (Co-60 or ⁶⁰Co)
Iridium-192 (Ir-192 or ¹⁹²Ir)
Cesium-137 (Cs-137 or ¹³⁷Cs)
Radium-226 (Ra-226 or ²²⁶Ra)

Examples: Quantity of Radioactive Material

Curie (Ci)
Millicurie (mCi)
Becquerel (Bq)
Gigabecquerel (GBq)

Examples: Other Markings

DOT
Type A or B
C/NXXXXX/B
USAXXXXX/B