

(STP-05-010, February, Other, NURGE/BR-0108)

February 2, 2005

ALL AGREEMENT STATES, MINNESOTA, PENNSYLVANIA

**OPPORTUNITY TO COMMENT ON DRAFT REVISIONS TO NUREG/BR-0108
“HAZARDOUS SCRAP - BEWARE” AND DRAFT PUBLIC BROCHURE (STP- 05-010)**

The United States Nuclear Regulatory Commission (NRC) is in the process of revising NUREG/BR-0108 “Hazardous Scrap - Beware.” This poster was developed to promote awareness of radioactive materials and devices that may be disposed of improperly and end up in scrap yards and/or scrap shipments. The poster also provides information on what to do if radioactive materials or devices are discovered in a load of scrap.

Enclosed for your review and comment^{*} is the draft revision to NUREG/BR-0108. The poster is being revised to incorporate additional information on where to get help, additional examples of items that may be found, and a modernized look. Also enclosed is the draft revision to NUREG/BR-0108 translated into Spanish. When printed in final, the poster will be printed on both sides: one side in English and one side in Spanish.

The NRC is also currently developing a public brochure on what members of the public should do if they encounter lost, stolen, or abandoned radioactive materials or devices. Enclosed for your review and comment is the draft public brochure.

If you have any picture suggestions for either the scrap poster or the public brochure, please feel free to submit your suggested photos to the point of contact indicated below. We would appreciate picture suggestions of material or devices that may be more representative of how they may be discovered by scrap dealers or members of the public. Please do not submit copyrighted material. Digital images are preferred.

We would appreciate receiving your comments within 30 days from the date of this letter. Please direct comments to the point of contact indicated below. Thank you for your attention to this matter. If you have any questions regarding this communication, please contact me at 301-415-3340 or the individual named below.

POINT OF CONTACT: Aaron T. McCraw
TELEPHONE: (301) 415-1277

INTERNET: ATM@NRC.GOV
FAX: (301) 415-3502

/RA/

Paul H. Lohaus, Director
Office of State and Tribal Programs

Enclosure:
As stated

^{*} This information request has been approved by OMB 3150-0029, expiration 06/30/07. The estimated burden per response to comply with this voluntary collection is approximately 8 hours. Send comments regarding the burden estimate to the Records and FOIA/Privacy Services Branch (T-5F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0029), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.



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



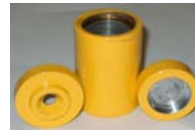
RADIOGRAPHY CAMERA



GAUGE WITH SADDLE CLAMP



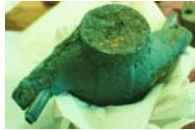
GAUGE WITH OXIDATION



CONTAMINATED LEAD VIAL SHIELD



TRANSPORTATION CONTAINER



DEPLETED URANIUM SHIELD



ELECTRON CAPTURE DETECTOR



X-RAY FLUORESCENCE ANALYZER



CONTAMINATED LEAD BRICKS



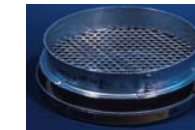
TRITIUM GUN SIGHT



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, NE, 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 (800) 424-8802

www.epa.gov

U.S. NUCLEAR REGULATORY COMMISSION CONTACT INFORMATION

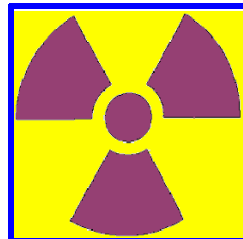
Region I (King of Prussia, PA)	(610) 337-5000
CT, DE, DC, MA, MD, ME, NH, NJ, NY, PA, RI, VT	
Region II (Atlanta, GA)	(404) 562-4400
AL, FL, GA, KY, MS, NC, SC, TN, VA, WV	
Region III (Lisle, IL)	(630) 829-9500
IA, IL, IN, MI, MN, MO, OH, WI	
Region IV (Arlington, TX)	(817) 860-8100
AK, AR, AZ, CA, CO,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

HEADQUARTERS OPERATIONS CENTER (Rockville, MD) (301) 816-5100

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

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/N/XXXX/B
USA/XXXXB



DESECHOS RADIOACTIVOS - ¡CUIDADO!

AVISO

Los artículos aquí ilustrados pueden contener material radioactivo. Si usted encuentra estos artículos, localice las marcas de peligro de radiación en algún pedazo del desecho de metal, o de usted pensar que el material es radioactivo, **NO LO PROCESE**. Siga las siguientes instrucciones:

- **NO TOQUE LA FUENTE DE RADIACIÓN.**
- **MANTENGA DISTANCIA ENTRE USTED Y LA FUENTE Y, SI ES POSIBLE, PONGA ALGO ENTRE USTED Y LA FUENTE.**
- **MUEVA LA CARGA O EL ARTÍCULO HACIA UN ÁREA SEGURA SOLAMENTE SI USTED TIENE LA HABILIDAD DE MEDIR LOS NIVELES DE RADIACIÓN.**
- **AVISE A OTROS Y ASEGURE EL ÁREA.**
- **CONTACTE INMEDIATAMENTE A SU OFICINA DE CONTROL DE RADIACIÓN DEL ESTADO, LA AGENCIA DE PROTECCIÓN AMBIENTAL DE LOS E.E.U.U. (U.S. EPA) O LA COMISIÓN REGULADORA NUCLEAR DE LOS E.E.U.U. (U.S. NRC) (VEA - "DÓNDE OBTENER AYUDA".)**



TRASFONDO

Desde 1983, muchas veces se han detectado materiales radioactivos en desechos de metales. La mayoría de estos incidentes involucran hierro o acero reciclado, pero también se han encontrado materiales radioactivos en procesos de reciclaje para otros metales, tales como aluminio, plomo, cinc, bronce y cobre. Países extranjeros han sufrido incidentes similares al descrito aquí.

En algunos casos, el material radioactivo estuvo contenido en artefactos protegidos que terminaron en facilidades de manejo de desechos. A pesar de que muchos de estos artefactos fueron detectados antes de ser procesados, algunos fueron procesados junto con los desechos normales en la fundición. Esto resultó en una dispersión de contaminación alrededor de las facilidades, productos radioactivos depositados en chimeneas y posible exposición de radiación a los trabajadores. Igualmente, estos productos contaminados pudieron haber sido peligrosos para los miembros del público.

La probabilidad de tales incidentes en este país es baja. La mayoría de los materiales radioactivos son regulados por los programas de control de radiación de los estados, o por la Comisión Reguladora Nuclear de los E.E.U.U. (U.S., NRC.)

Los usuarios están sujetos a los estrictos requisitos regulatorios para la responsabilidad y disposición de los materiales. Por lo tanto, las probabilidades de que se dispongan estos artefactos accidentalmente junto con los desechos son remotas. Aún así, la posibilidad existe cuando se procesan los desechos.

A pesar de que se puede controlar la llegada de los desechos con monitores de radiación, éstos no siempre pueden detectar el material radioactivo que se encuentra enterrado en una carga, o protegido o fuera del alcance del monitor de radiación. Usted debe estar alerta ante la presencia de artefactos que puedan contener material radioactivo. Familiarízese con los tipos de marcas que aparecen en los diferentes artefactos, tales como el símbolo de radiación y los términos utilizados para describir el tipo de material radioactivo que se utiliza mayormente en estos artefactos.

Este cartel ilustra artefactos típicos que pueden encontrarse junto con desechos y que pueden contener sustancias radioactivas. Basado en los dibujos, es evidente que el material radioactivo viene en diferentes formas, tipos y tamaños. Algunos materiales radioactivos puede que no estén propiamente marcados con el símbolo de peligro de radiación. En otros casos, el símbolo de peligro de radiación puede estar cubierto de sucio, aceite u oxidado. Además, tenga en mente que artículos que tradicionalmente no son radioactivos pueden activar los monitores de radiación si contienen contaminación radioactiva.

Por favor, note que algunos materiales radioactivos pueden ser dispuestos sin ningún requisito especial. El ejemplo más común de esto es el detector de humo.

ARTÍCULOS TÍPICOS



METAL DESECHADO



MEDIDOR PORTÁTIL DE HUMEDAD/DENSIDAD



CAMPO DE MINAS Y MARCADORES PERSONALES



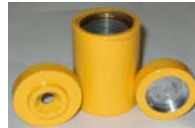
CÁMARA DE RADIOGRAFÍA



MEDIDOR CON ABRAZADERAS



MEDIDOR OXIDADO



PROTECTOR DE PLOMO PARA FRASCOS CONTAMINADO



EMPAQUE DE TRANSPORTACIÓN



PROTECTOR PARA URANIO AGOTADO



DETECTOR DE CAPTURA DE ELECTRONES



ANALIZADOR DE RAYOS X FLUORESCENTE



LADRILLOS DE PLOMO CONTAMINADOS



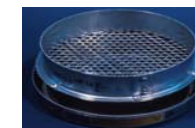
MIRILLA DE ARMA DE FUEGO CONTRITTO



ARTEFACTOS AUTO-LUMINOSOS



ELIMINADOR DE ESTÁTICA EN FORMA DE BARRA



ELIMINADOR DE ESTÁTICA EN FORMA DE VENTANA



DESPERDICIOS MÉDICOS RADIOACTIVOS



MEDIDOR RADIOLUMINISCENTE



VARIAS FUENTES DE RADIACIÓN



FUENTES DE RADIACIÓN PARA POZO DE EXPLOTACIÓN

DÓNDE OBTENER AYUDA

SUS CONTACTOS LOCALES/ESTATALES/COMPAÑÍA
(ej. Agencia Estatal de Control de Radiación, Consultor de Salud y Radiación de su compañía, etc.)

Usted puede obtener información acerca de la agencia de control de radiación de su estado accediendo el url:
www.nrc.gov/what-we-do/state-tribal.html

AGENCIA DE PROTECCIÓN AMBIENTAL DE LOS E.E.U.U. (U.S. EPA) - INFORMACIÓN DE CORRESPONDENCIA

Región 1 (Boston, MA)	(617) 918-1111	Región 6 (Dallas, TX)	(214) 665-6444
CT, MA, ME, NH, RI, VT		AR, LA, NM, OK, TX	
Región 2 (New York, NY)	(732) 548-8730	Región 7 (Kansas City, KS)	(913) 261-0991
NJ, NY, Puerto Rico, Islas Virgenes		IA, KS, MO, NE	
Región 3 (Philadelphia, PA)	(215) 814-5000	Región 8 (Denver, CO)	(303) 312-6312
DC, DE, MD, PA, VA, WV		CO, MT, ND, SD, UT, WY	
Región 4 (Atlanta, GA)	(404) 562-9800	Región 9 (San Francisco, CA)	(415) 947-8000
AL, FL, GA, KY, MS, NC, SC, TN		AZ, CA, HI, NV, American Samoa, Guam	
Región 5 (Chicago, IL)	(312) 353-2000	Región 10 (Seattle, WA)	(206) 553-1200
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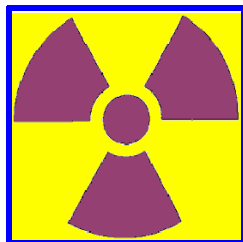
CENTRO DE AYUDA NACIONAL (800) 424-8802
www.epa.gov

COMISIÓN REGULADORA NUCLEAR DE LOS E.E.U.U. (U.S. NRC) - INFORMACIÓN DE CORRESPONDENCIA

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CENTRO DE OPERACIONES - CUARTELES GENERALES (301) 816-5100
www.nrc.gov

SÍMBOLO DE PELIGRO DE RADIACIÓN



Este símbolo debe aparecer en envases y artefactos que contengan sustancias radioactivas. Su color y tamaño pueden variar; sin embargo, los colores son usualmente magenta sobre amarillo, o negro sobre amarillo. Por favor, note que no todos los envases y artefactos que requieren el símbolo de peligro de radiación estarán propiamente rotulados con el símbolo.

TIPOS Y CANTIDADES DE MATERIAL RADIOACTIVO

Los siguientes ejemplos incluyen términos que se utilizan regularmente en compañía del símbolo de peligro de radiación para indicar el tipo de material radioactivo presente y su cantidad. También pueden aparecer otras marcas describiendo el tipo de empaque.

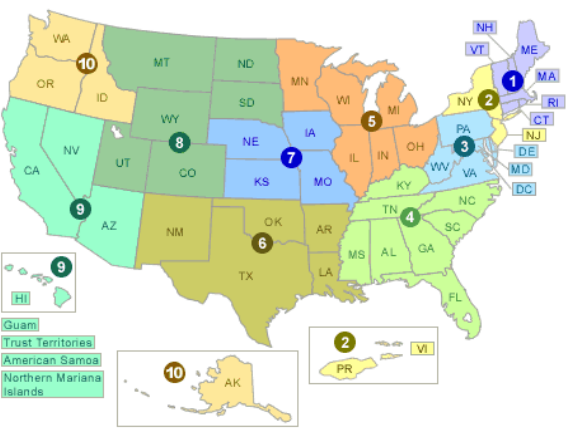
Ejemplos: Tipo de Material Radioactivo
Cobalto-60, Cobalt-60 (Co-60 or ⁶⁰Co)
Iridio-192, Iridium-192 (Ir-192 or ¹⁹²Ir)
Cesio-137, Cesium-137 (Cs-137 or ¹³⁷Cs)
Radio-226, Radium-226 (Ra-226 or ²²⁶Ra)

Ejemplos: Cantidades de Material Radioactivo
Curie - Curie (Ci)
Millicurie - Millicurie (mCi)
Becquerel (Bq)
Gigabecquerel (GBq)

Ejemplos: Otras Marcas
DOT
Type A or B
CDN/XXX/B
USA/XXX/B

WHERE TO GET HELP

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.hsrdo.ornl.gov/nrc/asdirectr.htm

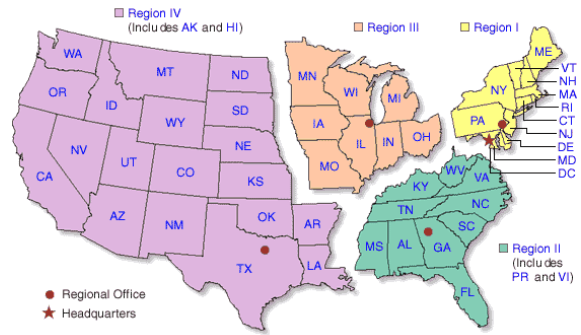


U.S. ENVIRONMENTAL PROTECTION AGENCY CONTACT INFORMATION

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NATIONAL RESPONSE CENTER			(800) 424-8802

www.epa.gov

WHERE TO GET HELP



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Region IV (Arlington, TX) AK, AR, AZ, CA, CO, HI, ID, KS, LA, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA, WY	(817) 860-8100
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

WHAT SHOULD I DO

IF I ENCOUNTER



RADIOACTIVE MATERIALS?



U.S. NUCLEAR REGULATORY COMMISSION

THIS IS WHAT YOU SHOULD DO...



RECOGNIZE RADIOACTIVE ITEM, IF UNSURE OF RADIOACTIVE NATURE OF ITEM, TREAT AS RADIOACTIVE.



DO NOT TOUCH THE SOURCE.



PUT DISTANCE BETWEEN YOU AND THE SOURCE AND IF POSSIBLE, PUT SOMETHING BETWEEN YOU AND THE SOURCE.



WARN OTHERS AND SECURE THE AREA.



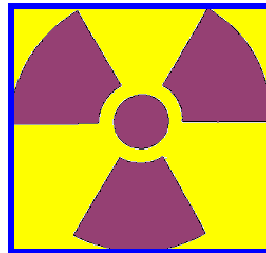
CONTACT YOUR STATE RADIATION CONTROL OFFICE, THE U.S. ENVIRONMENTAL PROTECTION AGENCY, OR THE U.S. NUCLEAR REGULATORY COMMISSION IMMEDIATELY.

BACKGROUND

Each year, a number of radioactive items are lost, stolen, or abandoned. Some of these items are recovered by law enforcement personnel or members of the public. Please familiarize yourself with the information contained in this brochure to better prepare yourself in the case that you should find radioactive material.

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
CDN/XXXX/B
USA/XXXX/B

TYPICAL ITEMS



PORTABLE MOISTURE/DENSITY GAUGE



INDUSTRIAL RADIOGRAPHY CAMERA



RADIOACTIVE MEDICAL WASTE



SELF-LUMINOUS DEVICES



RUSTED GAUGE



VARIOUS SOURCES



WELL-LOGGING SOURCES