



## Radiation and Shipping Port Security

Cargo comes into the U.S. from all over the world. Ports can ensure safety by:

- Screening cargo for radiation before it gets here.
- Safely handling any radioactive material that needs to pass through a port.

### About Radiation and Shipping Port Security

Cargo comes into the U.S. from all over the world. This cargo sometimes contains hazardous materials such as chemicals or radioactive materials. U.S. shipping ports make sure that the transport of hazardous material is done safely and securely. Port security also blocks radioactive material from illegally entering the U.S.

Cargo containers are checked for radioactive material that could pose a threat to national security or public safety. Security measures include:

- Licensing requirements for the import and export of radioactive material.
- Prescreening all cargo.
- Further inspection of any potentially threatening shipments with radiation detectors.

Several different types of radiation detectors are used by shipping port security officials. Examples include:

- **Personal Radiation Detectors:** Small, highly sensitive devices that sound an alarm when radiation is detected. More than 10,500 are in use by federal officers and agents at U.S. ports and highway checkpoints.
- **Radiation Portal Monitors:** Monitoring stations scan a range of vehicles and their cargo as they drive through the portals. Portal monitors can detect radiation hidden inside shipping containers.
- **Radiation Isotope Identifiers:** These hand-held instruments can identify specific radionuclides, including nuclear weapons, medical and industrial isotopes. Security officers use these devices to identify the type of radionuclide that triggered an alarm.
- **Large-Scale Gamma-Ray/X-Ray Imaging Systems:** These systems use radiation to make images of the contents of cargo containers, rail cars, vehicles or trailer trucks.



Grapple fitted with radiation detector transferring scrap metal



Portal monitors detect radiation in batches of scrap metal.

## Rules and Guidance

### U.S. NUCLEAR REGULATORY COMMISSION (NRC)

NRC establishes regulations for the licensing of the sale, use and disposal of radioactive material. Only NRC can grant a license for the import and export of radioactive materials.

### U.S. DEPARTMENT OF HOMELAND SECURITY (DHS), U.S. CUSTOMS AND BORDER PROTECTION (CBP) AND U.S. COAST GUARD

As a component of DHS, U.S. Customs and Border Protection monitors U.S. ports of entry for radioactive material that could pose a threat to national security. The U.S. Coast Guard, which is also part of DHS, is responsible for investigating any ship at sea that could pose a potential radiation threat.

### U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA has developed training for workers who could inadvertently come into contact with radioactive sources. Though the training was developed based on sources found in scrap metal, it could still be valuable to port workers. Training is available to help them learn to recognize sealed sources and equipment that may contain them<sup>i</sup>.

### U.S. DEPARTMENT OF TRANSPORTATION (DOT)

DOT's Maritime Administration is responsible for U.S. port, ship and cargo security.

## What you can do

If radionuclides are found unexpectedly at a shipping port, safety officials may set up a safety zone around the port. These zones limit public access to protect public health from potentially hazardous materials. In the rare case that you encounter this situation, it's important to follow posted guidance and perimeter warnings.

## Where to learn more

You can learn more about radiation and shipping port security by visiting the resources available on the following webpage: <http://www3.epa.gov/radtown/shipping-port-security.html#learn-more>.

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<sup>i</sup> <http://www.epa.gov/radiation/source-reduction-management/training.html>