



**COASTAL RADIATION SERVICES INC.,
WHAT YOU NEED TO KNOW ABOUT
CESIUM -137 AND YOUR HEALTH**

February 6, 2001



**Cesium-137
Sources**

The element, Cesium, was discovered in mineral water in 1860 by Bunsen and Kirchoff. The most well known isotope of Cesium, Cesium-137, is a fission product produced from weapons testing and nuclear reactors. The amounts found in the environment are small compared to amounts of natural uranium and thorium that exist. The shorter half-life associated with Cesium-137 and the halting of above ground testing of nuclear weapons contributes to the marked decrease of this radionuclide in nature.

Uses

Cesium is used commercially in nuclear medicine (radiation therapy), in the accurate atomic clock, as a radiography source, and as a check source in the calibration of radiation detection instrumentation.

Radioactive Properties

Cs-137

Half-life: 30.07 years

Mode of decay: mid-energy beta and gamma.

Health Effects

Cesium is a beta and gamma emitter. Most beta particles have an energy so low that they are unable to penetrate the skin. Eyes have the thinnest skin layer in the body and require extra shielding using glasses to avoid radiation exposure from beta particles. Beta particles are potentially dangerous if they are produced from ingested beta radioactivity-emitting material such as Cesium-137.

Gamma ray emissions from Cesium-137 are higher energy and can readily penetrate the skin and expose internal organs to ionizing radiation. However, in experiments, Cesium-137 has low toxicity. It can replace potassium in the body and therefore, be potentially harmful.

Public Involvement Opportunities:

Public involvement is an important part of the Superfund process. The individuals listed on the back of this information sheet are available to help you learn more about the Coastal Radiation Site and obtain answers to your questions.

If you have questions about the Coastal Radiation Services Inc., site or would like additional information about the site, please contact any of the following individuals:

EPA Region 6

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All news media inquiries should be directed to Dave Bary, EPA Region 6 Press Office, at (214)665-2208 or Jeff Simon, Ph.D., Louisiana Department of Environmental Quality, Communication Director at (225)763-5403.

On The Web.....Information about superfund sites can be found on the U.S. EPA Internet Homepage at:

U.S. EPA Headquarters: <http://www.epa.gov>

U.S. EPA Region 6: <http://www.epa.gov/earth1r6>

U.S. EPA Region 6 Superfund Division: <http://www.epa.gov/earth1r6/6sf/6sf.htm>

If you or someone you know would like to be placed on the mailing list to receive future information about the Coastal Radiation Services site, please call 1-800-533-3508. Leave your name and address and you will be added to the mailing list.



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