



The Regulator Experience Cesium-137 Irradiator Replacement Program

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The Regulator Experience

Cesium-137 Irradiator Replacement Program

Our mission as public servants is to protect public health and the environment:

- Ensuring the safe use of radiologic equipment and materials within industry, medicine, and research
- Preventing radiological health hazards educating and enforcing applicable state and federal radiation laws and regulations

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Cesium-137 Irradiator Replacement Program

- Prevention and preparedness is a key priority of the California's Office of Emergency Services, the Governor and the CDPH
- CDPH has developed a Nuclear Detonation Operations Plan (NDOP)
- RHB has formed and exercised a Radiological Emergency Materials Technical Advisory Group (REMTAG)
- California has done much work in conducting training and drills for law enforcement, staff and other emergency services personnel and local law enforcement should consider working with NNSA's customized Alarm Response Training Program at Y-12.

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- December 2016 first notified by Nuclear Threat Initiative (NTI)
- California had more than 100 cesium devices – more than many countries.
- Governor Edmund G. Brown, Jr., Governor of California , Senator Sam Nunn, CEO, NTI
- NTI held two events (May and September 2017) with reps from:
 - California key hospitals and medical facilities
 - Federal Bureau of Investigations
 - Multiple invitations to all California irradiator licensees



Workshop on Radiological Security

Organized by the Nuclear Threat Initiative, the Office
of Governor Brown, and California Department of
Public Health

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- Discuss the creation of a new comprehensive Radiological Security Approach to further reduce the threat in California
- Raise awareness of the growing radiological threat;
- Raise awareness about the potential insurance and liability implications (Absence of Insurance Coverage) if radioactive material is stolen and maliciously used in a dirty bomb;
- Discuss NNSA's federal assistance programs to provide incentives to protect, remove, and replace radiological materials with x-ray technologies

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- Replace Cesium-137 blood irradiators with effective and equivalent FDA approved alternative technologies;
- Remove excess, unwanted, abandoned, or orphan radioactive sealed sources that pose a potential risk to health, safety, and national security;
- Conduct training (ART) for Law Enforcement that would be involved in responding to security incidents involving radiological materials; and
- Secure remaining high-activity radioactive sources in California that have not undergone additional security upgrades above and beyond the Nuclear Regulatory Commission and Agreement State regulations. (Part 37)

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- Ownership costs of cesium devices versus alternate technology in California averages over \$10,000 peryear)
- To obtain information on participating in NNSA's Cesium Irradiator Replacement Program (CIRP) and Off-Site Source Recovery Program (OSRP) send email to:

orsinfo@nnsa.doe.gov

- Need for additional security and threat awareness

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RHB EFFORTS IN SUPPORT OF INITIATIVE

- **ADDITIONAL STEPS** could be done to implement more security upgrades in California by increasing participation in the NNSA/ORS voluntary security upgrade program.

HOW?

- For existing cesium-137 irradiator licensees not able to convert to alternative x-ray technologies:
 - Educate licensees about the National Nuclear Security Administration (NNSA) and Office of Radiological Security (ORS) programs for site hardening and security upgrades project; and

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RHB EFFORTS IN SUPPORT OF INITIATIVE (Cont.)

- High level engagement with senior management and decision makers is useful in advancing radiological security efforts, including alternative technologies.
- Hospitals are liable due to the absence of insurance coverage. This gap should be highlighted to senior hospital management.
- Educate licensees on the Alarm Response Training course opportunity
- NNSA has completed voluntary security upgrades at 60 sites in California (more than 50% of our Part 37 licensees)

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RHB EFFORTS IN SUPPORT OF INITIATIVE (CONT.)

- For new cesium-137 irradiator applicants:
- Engage in discussion regarding alternative x-ray technologies
Eg: Radsource, Inc., www.radsource.com and Best Theratronics
<http://www.theratronics.ca/>
- For existing cesium-137 irradiator licensees interested in switching to alternative x-ray technologies:
- Expedited processing of requests for removal of irradiators from licenses

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Thus Far CA Licensees have disposed of:

2017 Two Irradiators total 1,400 Ci

2018 Ten Irradiators Total 10,720 Ci

2019 Four Irradiators 7,050 Ci

Total Activity Removed since inception of program is
19,170 Ci

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- The terrorism threat is dynamic and constantly evolving. We need to take the threat seriously and take prudent risk reduction steps.
- Cesium chloride is the isotope of greatest concern and should be our highest priority.
- This has become a public health priority for California.

How About You?



Questions?