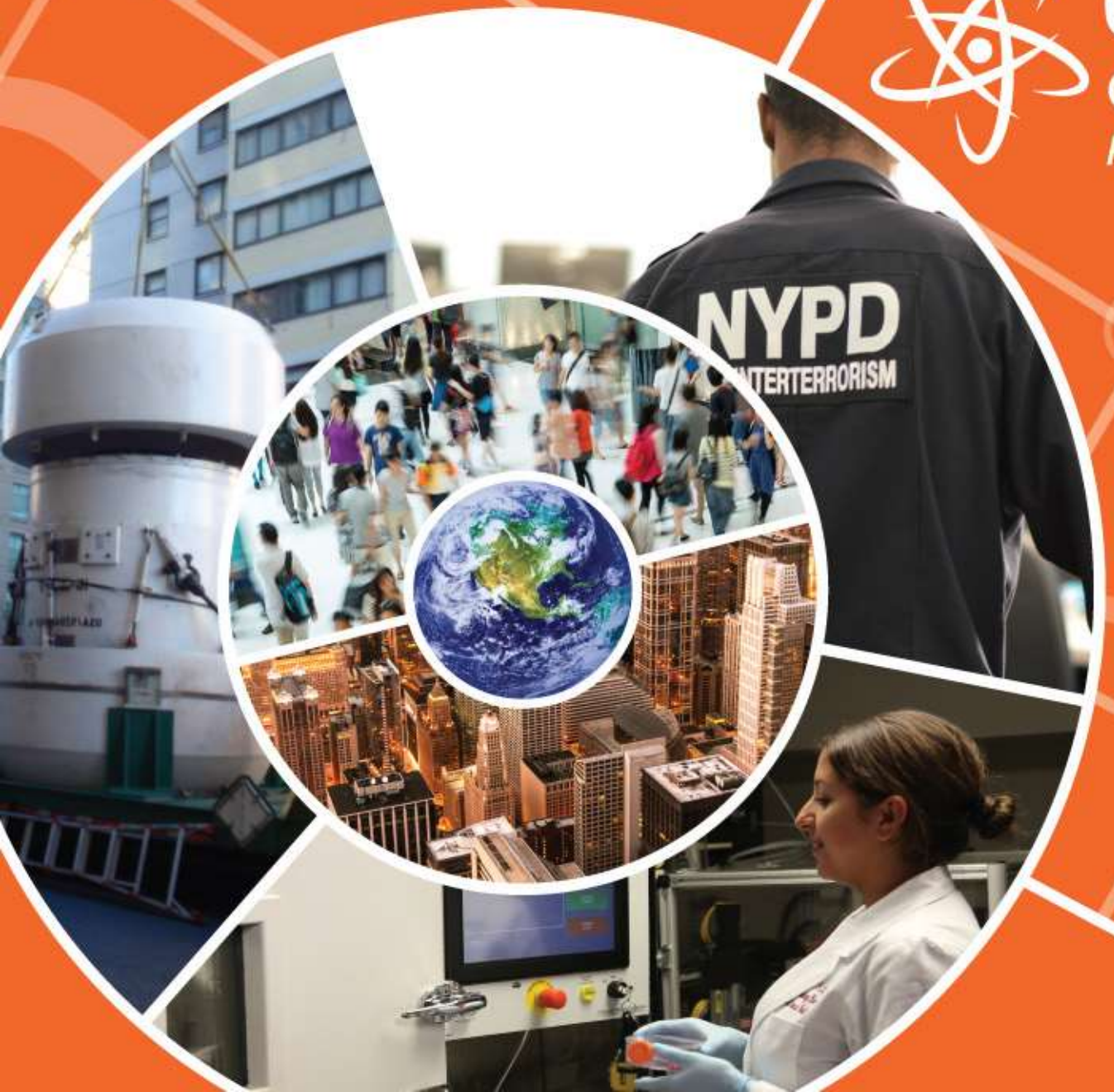

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2020 Cities Initiative Update

August 21, 2019

Presented by:
Cristen Ford, Domestic Program Acting Director

National Nuclear Security Administration

Global Material Security

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Mission: The Office of Radiological Security enhances global security by preventing high activity radioactive materials from being used in acts of terrorism.

PROTECT

Protect radioactive sources used for vital medical, research, and commercial purposes.

REMOVE

Remove and dispose of disused radioactive sources.

REDUCE

Reduce the global reliance on high-activity radioactive sources by promoting the adoption and development of non-radioisotopic alternative technologies.

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Radiological Material in the U.S.

- Cesium-137
- Cobalt-60
- Americium-241
- Iridium-192

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A few hundred curies of radioactive material, such as high-activity cesium-137, could result in a significant RDD. A salt shaker could hold a couple thousand curies of material.

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2020 Cities Initiative Goals

- Goal 1 / Site Security: Improve security through protect, reduce, remove at cesium-137 and cobalt-60 sites that have not yet partnered with ORS.
- Goal 2 / Response Integration: Integrate law enforcement into radiological security planning, training, and alarm monitoring.
- Goal 3 / Permanent Risk Reduction: Launch city, county, state, and corporate-wide campaigns to reduce the number of cesium-137 devices through the Cesium Irradiator Replacement Project.
- Goal 4 / Stakeholder Collaboration: Develop and expand forums for sharing best practices and lessons learned amongst program stakeholders.

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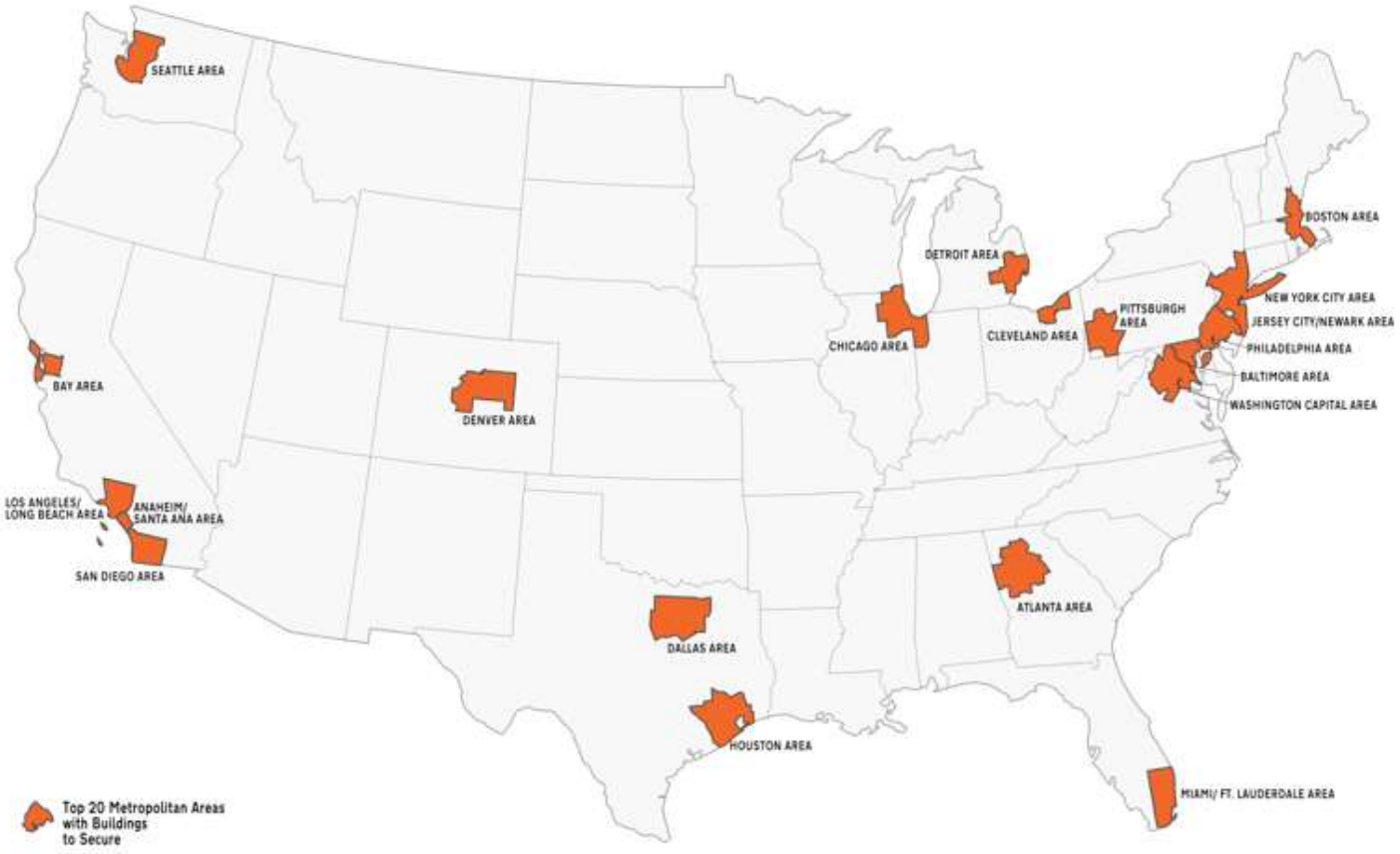
Goal 1: Site Security / 2020 High-Priority Cities

By **2020**, secure all **highest priority** materials (cesium and cobalt)...
...in **all 200** buildings in **major metropolitan areas….**
...and conduct integrated security initiatives (city response integration and large scale material cleanout) in the **top 20** major US metropolitan areas.



18 of 20 Top Cities Located in OAS Regions

Anaheim/Santa Ana
Atlanta
Baltimore
Boston
Chicago
Cleveland
Dallas/Ft Worth/Arlington
Denver
Detroit
Jersey City/Newark
Houston
Los Angeles/Long Beach
Miami/Ft. Lauderdale
National Capital Region (DC/MD/VA)
New York City
Philadelphia
Pittsburgh
San Diego
San Fran/Oakland Bay Area
Seattle

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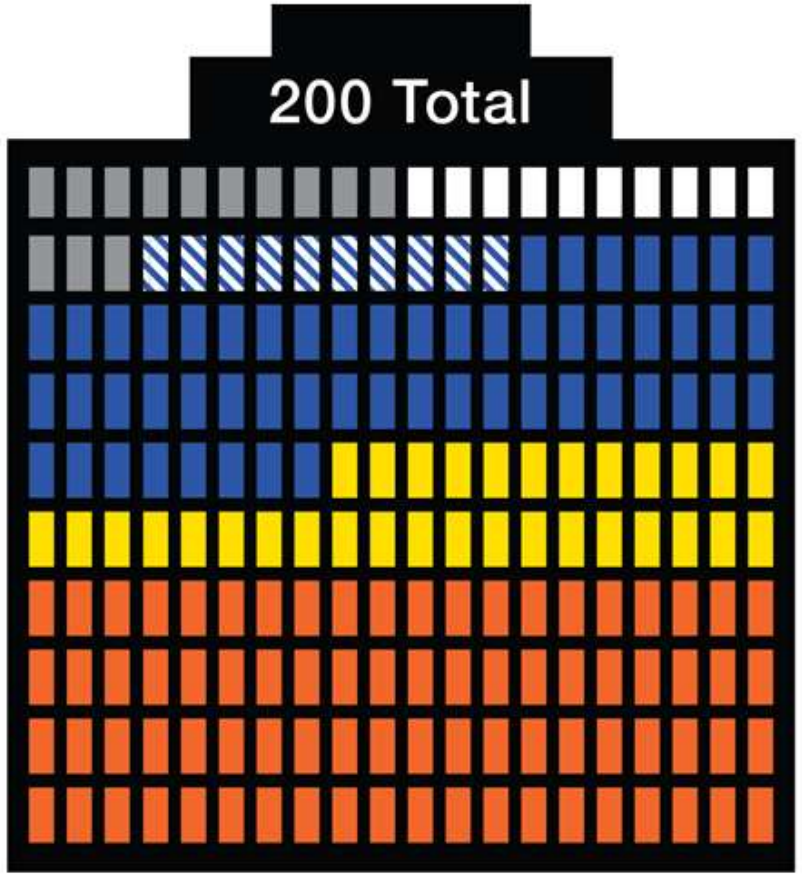
Goal 1: 2020 U.S. Cities Building Status



Buildings Secured	80	Replace/Remove Interest	10
Buildings In Progress	32	Declined Sites/No Response	13
Security Upgrade Interest	55	Buildings Not In Scope	10

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Goal 2: Response Integration Status

Response Activities Completed / Sustainment Ongoing

- Atlanta
- Baltimore
- Boston
- Denver
- Los Angeles / Long Beach
- National Capital Region (DC, MD, VA)
- New York City
- Philadelphia
- San Diego
- San Francisco Bay Area

Response Activities In Process

- Chicago
- Dallas
- Houston
- Miami
- Pittsburgh
- Seattle

Response Activities Scheduled in FY20

- Anaheim / Santa Ana
- Cleveland
- Detroit
- Jersey City / Newark

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Goal 3: Permanent Risk Reduction

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Goal 3: Remove = Permanent Risk Reduction

Cesium Irradiator Replacement Project: A voluntary ORS initiative offering financial incentives to licensees who choose to replace Cs-137 or Co-60 irradiators with alternative, radioactive source-free technologies.

Benefits of Alternative Technologies:

- **Reduced or eliminated security hassle and costs**
- **Potentially increased throughput**
- **No source decay**
- **Elimination of terrorism (and potential liability) risk**
- **Some devices have additional capabilities**

Qualified selected sites receive:

1. NO COST PRIORITY removal of Cs-137 device.

2. Financial incentive towards purchase price of an X-ray machine (typically 50%)

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Goal 3: Remove = Permanent Risk Reduction

Many users are switching to x-ray!

- For blood AND research uses
- More than **125** irradiators will be replaced through CIRP by Dec 2019
- Approximately 20% of the U.S. Cs-137 irradiator inventory is currently being replaced through CIRP

- **University of California** – 90% of irradiators (most for research) to be replaced/removed
- **New York City** – 75% of irradiators to be replaced/removed
- **Atlanta** – 66% of irradiators to be replaced/removed
- **American Red Cross** – 100% of (blood) irradiators to be replaced/removed
- **Vitalant** – 100% of (blood) irradiators to be replaced/removed

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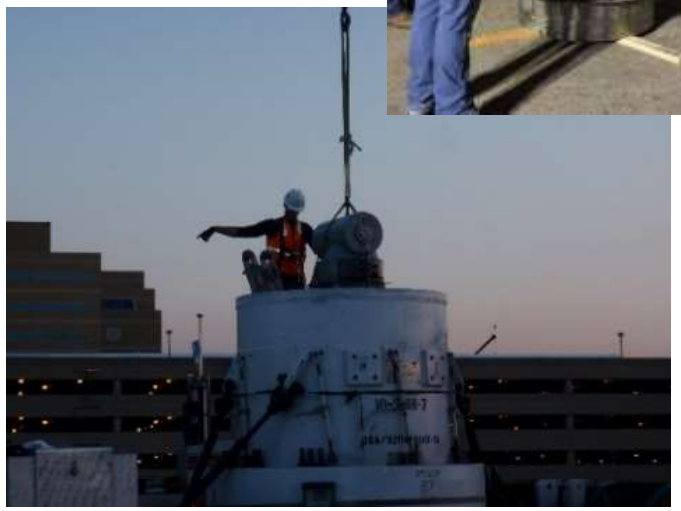
Goal 3: Remove = Permanent Risk Reduction

U.S. Off-Site Source Recovery Program (OSRP) & Source Collection & Threat Reduction (SCATR)

- **OSRP**: Recover NRC Category I and II and Transuranic disused and unwanted radioactive sealed sources
- **Conference of Radiation Control Program Directors (managed by SCATR)**: Recover and dispose of radioactive sealed sources not eligible for assistance by another Federal or national program. SCATR program subsidizes 20% of the recovery cost. https://www.crcpd.org/page/SCATR
- **Self Ship**: Licensee arranges and pays for shipment of Category I and II sources/devices to a ORS consolidation facility. ~$75k source/device
- **Registration**: http://osrp.lanl.gov/PickUpSources.aspx or (505) 667-7920. Register each individual sealed source even if they are still in use and site wishes to keep them for now.



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Goal 4: Stakeholder Collaboration Status

- West Coast Radiological Security Leadership Workshop – *scheduled September 2019*
- Dallas Radiological Security Workshop – *August 2019*
- San Diego Radiological Security Workshop – *February 2019*
- Pittsburg Radiological Security Workshop – *November 2018*
- New York – *ORS met with the city's senior officials October 2018*
- Boston – East Coast Radiological Security Leadership Workshop – *September 2018*
- Atlanta NTI Workshop – *February 2018*
- UCLA & UCSF NTI Workshops – *January 2018*
- Denver – *ORS met with the city's senior officials January 2018*
- Jersey City / Newark Workshop – *December 2017*
- California Nuclear Threat Initiative (NTI) Workshop – *May 2017*
- Seattle Radiological Workshop – *TBD*
- City response engagements ongoing

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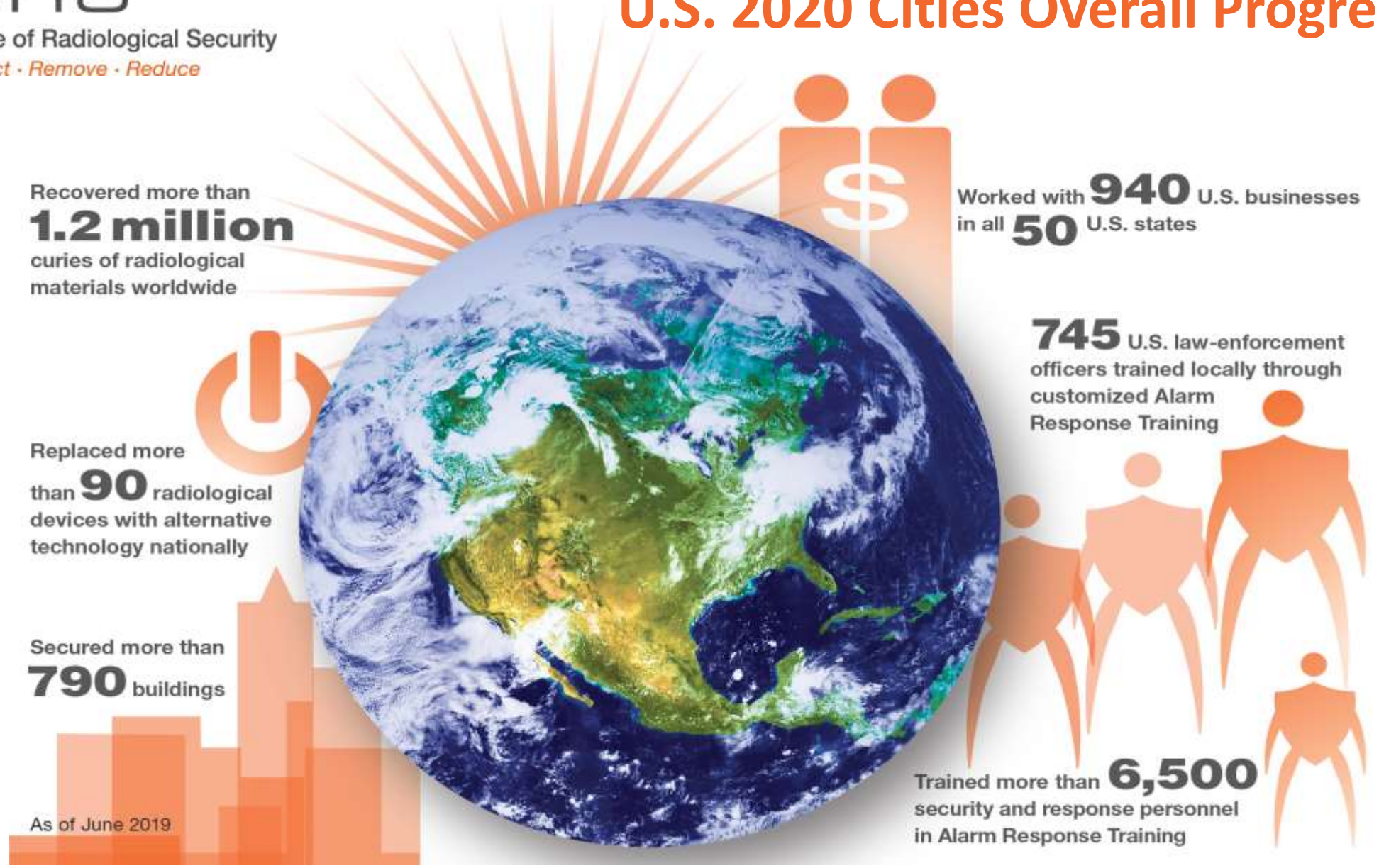
U.S. 2020 Cities Overall Progress



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