

Emergency Response Radiation Preparedness Worksheet

Audit of Radiation Safety Needs

How much protection does your district require? Check each known source or threat relevant to your circumstances.

Potential sources

INTERNAL: Facilities within your response area

- Nuclear pharmacies (e.g. Cardinal Health)
- Radiopharmaceutical manufacturers (e.g. Lantheus)
- Nuclear medicine clinics
- Radiation oncology clinics
- Blood bank irradiators
- Research irradiators
 - College/university
 - Private laboratories
- Industrial sources
 - Industrial radiography
 - Industrial process control gauges
 - Soil density (“nuclear”) gauges
 - Sterilization facilities (food, surgical instruments, etc.)
- Nuclear reactors
 - Power
 - Military
 - Research/isotope production

EXTERNAL: Facilities close to your response area

- Nearby nuclear reactors
- Nearby large radiological facilities (reference Internal list above)
- Proximity to a potential target
- Access to transportation hubs and routes
 - Port
 - Major air hub
 - Number of interstate highways

Potential for a terrorist attack

- Is your city or location widely known in the US and overseas?
- Do you have high-profile events (e.g. major sporting or cultural events)?
 - If so, how frequently?
- Has your city been a terrorism target in the past?
- Are you close to any major radiological and/or nuclear facilities?
- Are you home to any major military facilities?
- Are there any other major governmental facilities in the area?

SCORING

Score one point for each source or threat noted above.

- **< 3 POINTS** — low risk
- **3-10 POINTS** — moderate risk; recommend minor interdiction and response capability, including training and CONOPS for hazardous materials, Emergency Services, or other designated response units; recommend a small number of dosimeters (e.g. Instadose® dosimeter or MBD-2™ dosimeter) and a small number of AccuRad™ PRDs
- **> 10 POINTS** — highest risk; recommend highest level of instrumentation, training, and other aspects of interdiction/response capabilities

Building Your Radiation Safety Program

Use the checklists below to set up — or step up — your radiation safety program.

For a General Radiation Safety Program

Equip your team for baseline radiation safety.

- Radiation Safety Officer (properly trained and approved by regulators)
- Radioactive materials license (if you intend to have sources for training, or to sometimes take custody of an abandoned or “found” source)
- Designated source storage area
- Radiation-generating device registration (if you intend to have X-ray machines — including backscatter units)
- Radiation worker training (and refresher training) program
- Appropriate instruments for the type(s) of radiation training and threats
- Radiation dosimetry program (for personnel as well as fixed badges for area monitoring)
- SOPs for instruments, monitoring procedures, dosimetry, package receipt, etc.

For an Interdiction Program

Stop an attack before it happens.

- Fixed instruments at major chokepoints (e.g. toll booths, bridges, tunnels, marinas, storage areas, etc.)
- Mobile instruments (on police, vehicles, boats, helicopters, etc.)
- Central monitoring location (e.g. Incident Command Post)
- Tier III personnel (police with less training and meters with minimal training required, such as the AccuRad PRD)
- Tier II personnel (better-trained police with RIIDs such as the SPIR-Ace™ device, SPIR-Pack™ system, and SpirVIEW Mobile™ software)
- Reachback capability
- Training and CONOPS for above items

For a Response Program

Be ready for radiological threats of any size.

All of the above, plus:

- High-range instruments for responder health and safety
- Plans, policies, procedures — preferably multi-agency
- Coordination plans with state and/or federal government
- Community Reception Center plan and equipment (e.g. portal monitors, handheld meters, decon facilities, etc.)
- Recovery and reoccupancy plans and area release criteria
- Public information portal
- Coordination with medical facilities and caregivers

The experts at Mirion Technologies are here to help you take your radiation safety program to the next level. Visit [accurad.mirion.com](https://www accurad.mirion.com) and reach out using the contact form to discuss your unique scenario.