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# DHS Science and Technology Directorate

## Scientific Support for RDD Response & Recovery: Planning Guidance for the First 100 Minutes

### Using Scientific Research and Findings to Fill Critical Gaps in the Interagency Radiological Response and Recovery Architecture

Through scientific research conducted by the Department of Energy's Brookhaven National Laboratory and Sandia National Laboratories the realistic consequences of an outdoor explosive RDD can be predicted with confidence. However, actionable local and state plans based on this sound research and realistic incident impacts are limited. DHS Science and Technology's First Responders Group is working to fill this gap in local response planning by developing tactical, action-orientated tools and guidance for the first 100 minutes of an outdoor explosive RDD detonation. This work will allow cities, counties, and states to match their tactical operations to expected impacts, significantly improving the immediate response and allowing for prompt and effective coordination between agencies and levels of government.

### Focusing on Local Operational Missions and Emergency Phase Tactical Response Planning

The first 100 minutes of a response to an RDD detonation are critical as this period sets the stage for how the overall response will be executed. First responders will be tasked with multiple activities, such as confirming a radiological release, conducting lifesaving rescue operations, issuing protective actions, and characterizing the initial scene for public health decision making. These activities must take place within the first few minutes of responders arriving on scene and the effectiveness and coordination of these early actions will define how well the response will go in the emergency phase and beyond, as other state and federal assets and specialized teams arrive on scene to support the response and recovery.

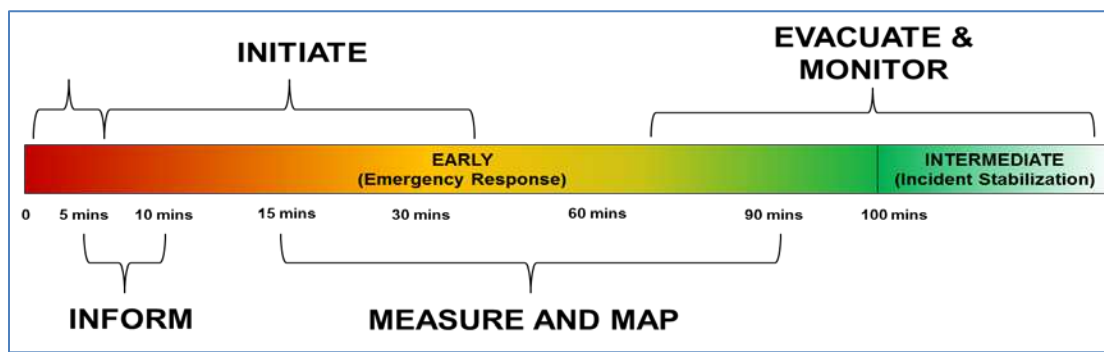
The Planning Guidance provides actionable guidance, sample text for an RDD response protocol, and annexed tools that can be used for local planning of an effective response to an RDD, to protect first responders and the general public, establish interagency coordination and integration of state and federal assets.

### Why Guidance for the First 100 Minutes?

The Planning Guidance uses a notional 100 minute timeframe to highlight dependencies and timing of overlapping field tactical operations, public messaging, and decision making. Local agencies should use the 100 minute timeframe presented as a starting point, and adjust the timeframe as needed during their planning discussions. Two critical assumptions are made by placing the guidance on a timeline:

- In the first minutes and hours of an RDD response, it is unlikely that federal and state support will be on scene, this means that local agencies must rely on their own plans, tactical assets, technical equipment, and training.
- Many of the public safety recommendations presented in the guidance are time sensitive and it is important for local agencies to plan for both how the operation is achieved and when it must be completed to have the desired impact. A complete local RDD response protocol will include an achievable timeline of how tactics and decisions are both executed and coordinated.

If a tactic or technical objective described in the Planning Guidance is not achievable by a local agency it can be identified as an operational gap, and can be discussed with state and federal partners to document immediate support requirements during a radiological response and plan for the required assistance requests.



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To learn more about DHS S&T's Radiological/Nuclear Response and Recovery R&D Program at NUSTL, please contact Ben Stevenson at [benjamin.stevenson@hq.dhs.gov](mailto:benjamin.stevenson@hq.dhs.gov) or [NUSTL@hq.dhs.gov](mailto:NUSTL@hq.dhs.gov).