



Highlights of [GAO-09-996T](#), a testimony to Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology, Committee on Homeland Security, House of Representatives

## Why GAO Did This Study

A terrorist's use of a radiological dispersal device (RDD) or improvised nuclear device (IND) to release radioactive materials into the environment could have devastating consequences. The timely cleanup of contaminated areas, however, could speed the restoration of normal operations, thus reducing the adverse consequences from an incident.

This testimony examines (1) the extent to which federal agencies are planning to fulfill their responsibilities to assist cities and their states in cleaning up areas contaminated with radioactive materials from RDD and IND incidents; (2) what is known about the federal government's capability to effectively cleanup areas contaminated with radioactive materials from RDD and IND incidents, and (3) suggestions from government emergency management officials on ways to improve federal preparedness to provide assistance to recover from RDD and IND incidents. We also discuss recovery activities in the United Kingdom. This testimony is based on our ongoing review of recovery preparedness issues for which we examined applicable federal laws and guidance; interviewed officials from the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), Department of Energy (DOE), and Environmental Protection Agency (EPA); and surveyed emergency management officials from 13 large cities and their states, as well as FEMA and EPA regional office officials.

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# COMBATING NUCLEAR TERRORISM

## Preliminary Observations on Preparedness to Recover from Possible Attacks Using Radiological or Nuclear Materials

### What GAO Found

DHS, through FEMA, is responsible for developing a comprehensive emergency management system to respond to and recover from natural disasters and terrorists attacks, including RDD and IND attacks. The response phase would involve evacuations and providing medical treatment to those who were injured; the recovery phase would include cleaning up the radioactive contamination from an attack in order to permit people to return to their homes and businesses. To date, much federal attention has been given to developing a response framework, with less attention to recovery. Our survey found that almost all cities and states would be so overwhelmed by an RDD or IND incident that they would rely on the federal government to conduct almost all analysis and cleanup activities that are essential first steps towards recovery. However, we found that the federal government has not sufficiently planned to undertake these activities. For example, FEMA has not issued a national disaster recovery strategy or plans for RDD and IND incidents as required by law. Existing federal guidance provides only limited direction for federal agencies to develop their own recovery plans and conduct exercises to test preparedness. Out of over 70 RDD and IND exercises conducted in the last 5 years, only three have included interagency recovery discussions following a response exercise.

Although DOE and EPA have experience in the cleanup of small-scale radiation-contaminated areas, their lack of knowledge and capability to apply approaches to address the magnitude of an RDD or an IND incident could increase recovery costs and delay completion. According to an expert at Idaho National Laboratory, experience has shown that not selecting the appropriate decontamination technologies can generate waste types that are more difficult to remove than the original material and can create more debris requiring disposal—leading to increased costs. Limitations in laboratory capacity to rapidly test thousands of material samples during cleanup, and uncertainty regarding where to dispose of radioactive debris could also slow the recovery process. At least two-thirds of the city, state, and federal respondents expressed concern about federal capability to provide the necessary analysis and cleanup actions to promote recovery after these incidents.

Nearly all survey respondents had suggestions to improve federal recovery preparedness for RDD and IND incidents. For example, almost all the cities and states identified the need for a national disaster recovery strategy to address gaps and overlaps in federal guidance. All but three cities wanted additional guidance, for example, on monitoring radioactivity levels, cleanup standards, and management of radioactive waste. Most cities wanted more interaction with federal agencies and joint exercising to test recovery preparedness. Finally, our review of the United Kingdom's preparedness to recover from radiological terrorism showed that that country has already taken actions similar to those suggested by our survey respondents, such as issuing national recovery guidance, conducting a full-scale recovery exercise, and publishing a national handbook for radiation incidents.