



U.S. DEPARTMENT OF ENERGY
NATIONAL NUCLEAR SECURITY ADMINISTRATION

ACCIDENT RESPONSE GROUP (ARG)



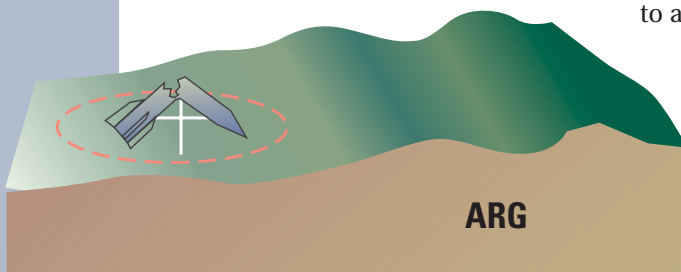
The Department of Energy's (DOE) National Nuclear Security Administration (NNSA) has the world's leading scientists, engineers and technicians from over 50 years of managing the nation's nuclear weapons program. When the need arises, DOE is prepared to respond immediately to any type of radiological accident or incident anywhere in the world with the following seven radiological emergency response assets.

AMS (Aerial Measuring System) detects, measures and tracks radioactive material at an emergency to determine contamination levels. ARAC (Atmospheric Release Advisory Capability) develops predictive plots generated by sophisticated computer models. **ARG (Accident Response Group)** is deployed to manage or support the successful resolution of a U.S. nuclear weapons accident anywhere in the world. FRMAC (Federal Radiological Monitoring and Assessment Center) coordinates Federal radiological monitoring and assessment activities with those of state and local agencies. NEST (Nuclear Emergency Support Team) provides the nation's specialized technical expertise to the Federal response in resolving nuclear/radiological terrorist incidents. RAP (Radiological Assistance Program) is usually the first NNSA responder for assessing the emergency situation and deciding what further steps should be taken to minimize the hazards of a radiological emergency. REAC/TS (Radiation Emergency Assistance Center/Training Site) provides treatment and medical consultation for injuries resulting from radiation exposure and contamination, as well as serving as a training facility.

INTRODUCTION

The Accident Response Group (ARG) is one of the emergency response resources, or assets, administered by NNSA. DOE is steward of the nation's nuclear weapons program, and can call upon the world's premiere nuclear scientists, technicians, and nuclear weapon's designers to respond to an emergency involving U.S. nuclear weapons. The

ARG is managed by the DOE Albuquerque Operations Office and is supported by the Nevada Operations Office, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, Sandia National Laboratories, Bechtel Nevada, and Pantex.





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MISSION

The ARG mission is to develop and maintain readiness to efficiently manage the resolution of accidents or significant incidents involving nuclear weapons that are in DOE's custody at the time of the accident or incident. The ARG will also provide timely, worldwide support to the Department of Defense (DoD) in resolving accidents and significant incidents involving nuclear weapons in DoD's custody.



Through years of practical experience and conducting joint emergency response exercises, DOE, NNSA and DoD have developed a system to manage and support each other's efforts during an emergency. Scientists, engineers, technicians, health physics and safety professionals from DOE's national laboratories and production facilities make up the ARG team. These skilled professionals from 30 different areas of technical expertise are ready to respond within two hours of notification. ARG members will deploy with highly specialized, state-of-the-art equipment that will be used in monitoring, assessing or removing nuclear weapons, components or debris.

ARG members focus on weapons recovery, health and safety evaluations of response personnel, and independent safety reviews during weapons recovery operations.



STEPS IN THE ARG RESPONSE

If an accident or incident involving a U.S. nuclear weapon were to occur, all appropriate Federal, state, Tribal, and local organizations are notified of the nuclear weapons accident. ARG deploys on military or commercial aircraft using a time-phased approach. ARG advance elements focus on initial assessment and providing preliminary advice to decision-makers. Once the follow-on elements arrive at the emergency scene, health and safety specialists perform evaluations for the safety and health of emergency response personnel, the public, and the environment. The ARG will also focus on weapons recovery and independent safety reviews during weapons recovery operations.

ASSESSING AND RECOVERING THE WEAPON

NNSA and DoD work as a team throughout the entire response to an incident involving a nuclear weapon. Recovery of the damaged weapon or weapon components begins with locating the weapon and gaining access to it, with safety the prime consideration. Team members assess the configuration, or structural arrangement, of the damaged weapon so that they can make it safe to work on and pack in special containers. Since nuclear weapons contain chemically reactive materials and radioactive elements, great care must be taken in gaining access to them. Understanding the internal structure of a damaged weapon in detail is necessary before recovery operations may begin.

Radiography can be used to examine the weapon's internal structure. If there is damage to the weapon or weapon's components, special techniques may be used to stabilize internal components. Team members can use specialized equipment to cut away wreckage, open shipping containers or to cut apart the weapon itself. All separate components are recovered and evaluated. The weapon is rendered safe prior to any packaging and shipping. The ARG has special containers for holding weapons and devices, and hardware stabilizers, such as foaming

assess
stabilize
recover



Specialized techniques, such as radiography, are used to examine the weapon's internal structure.

materials. Special containers can be constructed at the accident site for packing damaged weapon parts and debris.

When the weapons recovery operations are completed, the primary mission of ARG has been accomplished. At that time, the agency (DOE or DoD) responsible for the weapon involved in the accident leads the site restoration operations, and the role of ARG is to support the onsite radiological monitoring, analysis, and assessment.

Once the weapon leaves the site, the ARG mission is complete. NNSA's role turns to monitoring and assessment activities conducted by other NNSA assets, such as AMS, ARAC, FRMAC, RAP, and REAC/TS.