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# **Emergency Response Capabilities at Sandia National Laboratories**

## **KRMC Training Program Module 5: Transportation of Nuclear Materials**

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Sandia National Laboratories is a multi-program laboratory operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

# Guiding Vision for Sandia's Emergency Response Programs

- We strive to be leaders in providing technical solutions for anticipating, mitigating, and responding to emerging threats from conventional explosives, chemical, biological, nuclear devices and accidents in support of our Nation.
- Sandia will play key roles in all aspects of Emergency Response.

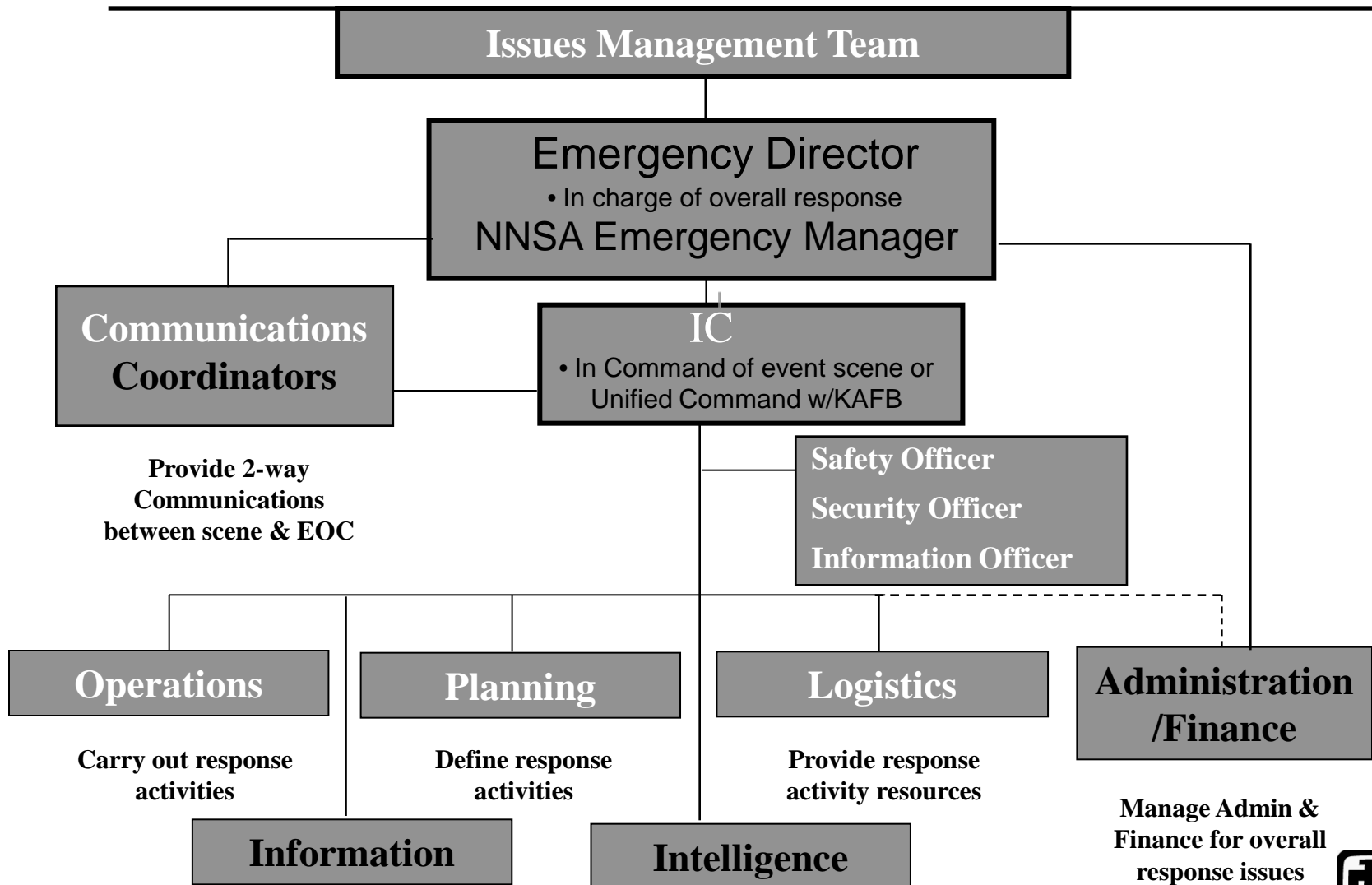


# SNL/NM Response Capabilities



- Incident Commanders
- Sandia National Laboratories/New Mexico (SNL/NM) Emergency Response Team (ERT) & Volunteer Corp. Hazardous Material (HazMat) Team
- Emergency Operations Center
- 911 Communications
- Kirtland Air Force Base (KAFB) Fire Department & HazMat Team
- KAFB Security Police
- KAFB Explosive Ordnance Disposal
- Ambulances
- Emergency Medical Technician (EMT) Paramedics
- Building Evacuation Teams
- Tone Alert Radios
- Radio Sandia (1640 AM)
- Support Staff
- SNL Protective Force

# Incident Command Structure



# Lead SNL Emergency Responder

- **SNL Incident Commander (IC)**
  - 24-hour/ 7-day Coverage
  - IC for SNL/NM Responses
  - IC at Scene (Except When KAFB/Fire Department Is Responding to a Fire or Large Hazmat Event Beyond SNL Capability – Then Unified Command Established)
  - Performs DOE Event Categorization & Classification





# SNL/NM Emergency Response Team

- Team Makeup
  - Dedicated Team
    - Hazmat
    - Confined Space Technicians
    - Emergency Management System (EMS) Response



# Corporate HazMat Team

- **9-Member volunteer team - Trained as HazMat Operations and Technicians**
- **Subject Matter Experts from Environmental Safety and Health, Waste Management, Facilities, etc.**
- **On call using pagers and phones during normal duty hours and off-hours**





# SNL Protective Force

- On-site Protective Force
  - Central Alarm Station (CAS)
  - Plans & Training





# Operations Center

- **911 Communications Coordinators**
- Positions to support field response on 24/7 basis:
  - Answer 911 Calls
  - Certified NM Public Safety Telecommunicator
  - NM-Certified emergency medical dispatchers (EMD) & National Academy of EMD (NAEMD)



- Dispatch Emergency Response Organization (ERO)
- Contact Resources
- Make Notifications
- Support Field Communications

# Tone Alert Radios (TAR)

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- Performs as a wireless, site-wide Public Address system
- Located 1800 radios in key buildings
- Contact TARs individually, in groups, or site-wide
- Pre-recorded or “on-the-fly” messages
- Controlled by Communications Coordinators



# SNL/NM Emergency Operations Center

- Staffed by SNL/NM and Sandia Site Office (SSO) Management of Incidents
- Offsite interface
- Coordination of field support
- Interface with KAFB, SSO, DOE Headquarters Emergency Operations Center (EOC), and Offsite Agencies



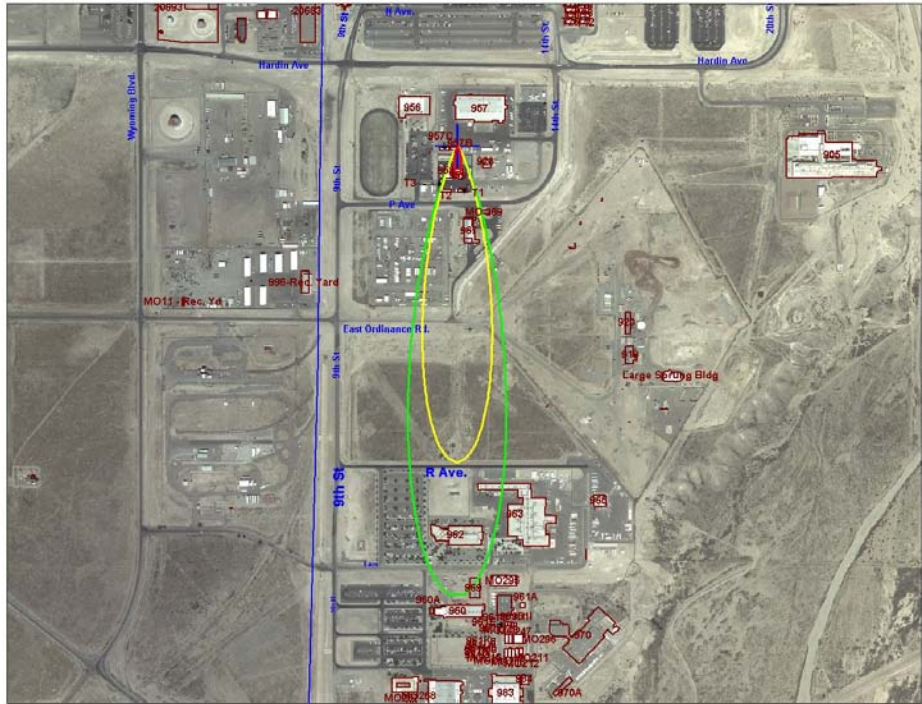
- Improved EOC Capabilities (Telecommunications Upgrades, Information Displays, Geographic Information System (GIS), Classified Capabilities, Access Controls, computer aided tomography (CAT) includes connectivity to the National Atmospheric Release Advisory Center (NARAC)





# Consequence Assessment

- Timely initial and continuing assessment capability
- Radiological and chemical modeling using site meteorological data
- Explosives impacts
- Access to building hazmat information, material safety data sheets (MSDS), and other technical information
- Subject Matter Expert team, on call



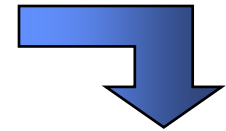


# SNL Roles in Nuclear Incident Emergency Response Programs

- Incidents involving unknown radiation sources...



- Incidents involving accidents with US nuclear weapons...



- Incidents involving improvised and foreign nuclear weapons....



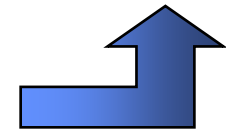
**Disposition**

- Incidents involving dispersal of radioactive/nuclear materials, Nuclear Detonation, Accident Response Group (ARG) Event,...



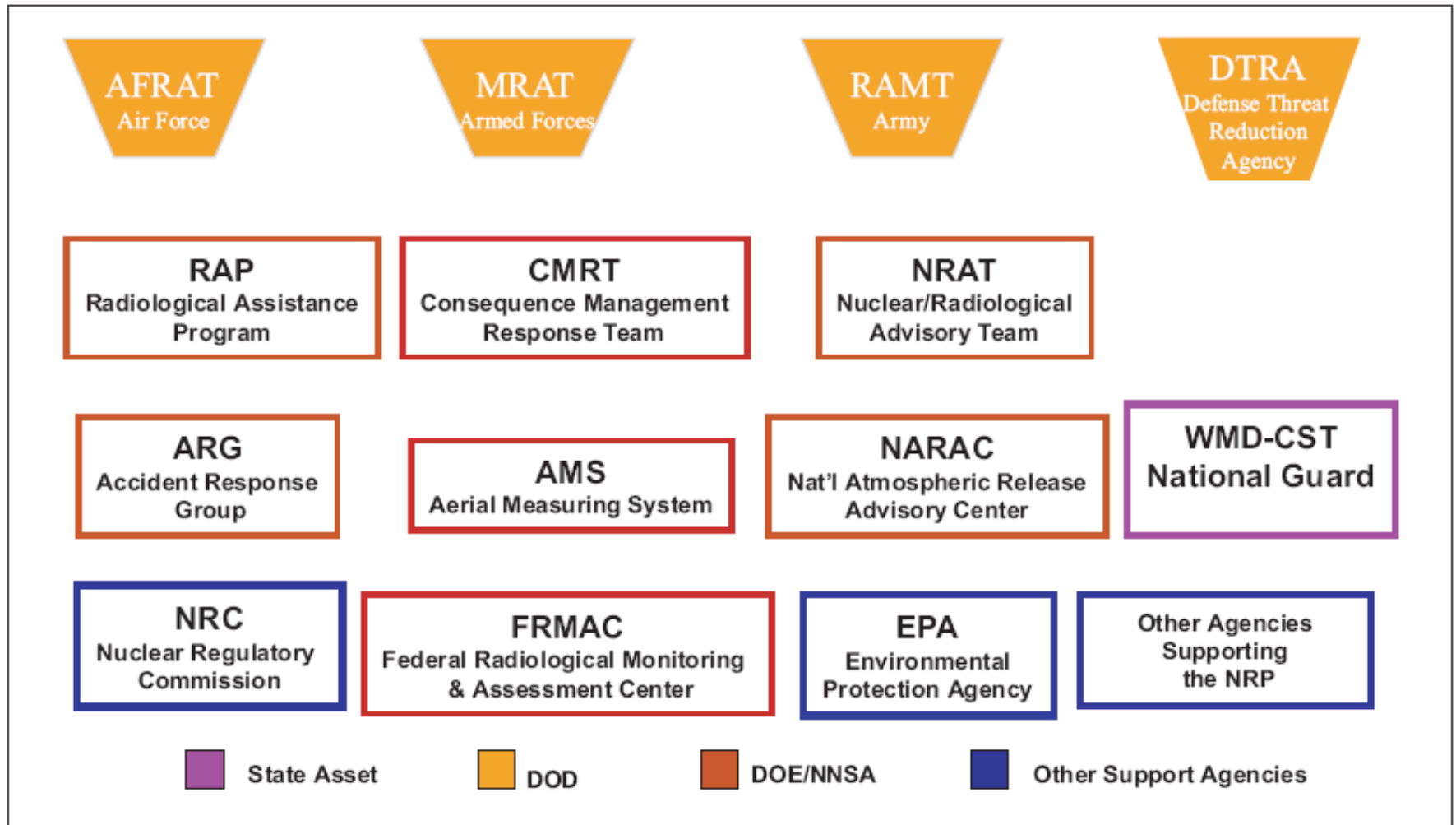
**DOE/CM**

Consequence  
Management





# Alphabet Soup





## Summary

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- **Sandia has its own emergency response capabilities and is not reliant upon the City of Albuquerque to respond to accidents/incidents that occur onsite**
- **Sandia has dedicated emergency response and hazmat teams capable of responding to incidents involving conventional explosives, chemical, biological, and nuclear devices**
- **Sandia strives to be on the forefront of research related to the detection, response, and containment of such incidents**
- **Sandia's emergency operations center uses state-of-the-art consequence modeling to characterize and predict atmospheric plume migration**