# **Cobalt Magnet Briefing**

## **NRC Annual Regulatory Information Conference**

Dr. Wendy Renno March 14, 2024



## Select Nuclear Emergency Support Team (NEST) Asset Missions

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## Public Health & Safety

#### Radiological Assistance Program (RAP)

• Provides technical advice during incidents involving radioactive materials that pose a threat to public health and safety or the environment.

#### Nuclear Search Program (NSP)

 Provides advanced search and technical advisory during incidents involving radioactive materials that pose a threat to public health and safety or the environment.

#### **Consequence Management (CM)**

 Provides resources through the Nuclear/Radiological Incident Annex (NRIA) to the National Response
Framework (NRF) for federal responses to Nuclear/Radiological emergencies.

## **Counter Weapons of Mass Destruction**

### Joint Technical Operations Team (JTOT)

Supports FBI and DoD operations to prevent nuclear/radiological incidents.

### **NEST Standards and Training Program (NSTP)**

Supports FBI and DoD operations to stabilize nuclear/radiological devices.

### Accident Response Group (ARG)

Scientists, technical specialists, crisis managers, and equipment ready for raid dispatch to the scene of a U.S. nuclear weapon accident.

## **DOE Forensics**

### Disposition and Forensic Evidence Analysis Team (DFEAT)

Conducts disassembly, assessment, and disposition of nuclear threat devices in support of national investigations.

### Department of Energy Forensic Operations (DFO)

 Conducts health physics, mission planning and in-field sampling through the Ground Collection Task Force (DOE, DOD, FBI).



## Federal Radiological Monitoring & Assessment Center (FRMAC) Mission

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## **Mission Statement**

Provide timely, high-quality predictions, measurements, analyses, and assessments to promote efficient and effective emergency response for the protection of the public from the consequences of nuclear or radiological incidents.

## **Technical Expertise**

- Health Physics
- Atmospheric Modeling
- Aerial Measurements
- Environmental Monitoring & Sampling

## **Technical Assistance**

- Data Visualization
- Sample Control & Management



## **FRMAC Initial Response Elements**



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# **Cobalt Magnet Exercise Series Overview**



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The Cobalt Magnet exercise series is a Department of Energy (DOE)/National Nuclear Security Administration (NNSA)-led that focuses on managing the off-site consequences of a radiological or nuclear incident.

Response organizations come together in a full-scale environment to establish working relationships prior to an event; validate concepts of operation; and identify best practices, capability gaps, and areas for improvement.

## Southern Exposure 2015: South Carolina



## Northern Lights 2016: Minnesota



## Cobalt Magnet 2022: Texas



## Cobalt Magnet 2019: Florida



## Cobalt Magnet 2025 (CM25) Exercise Summary

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The DOE led CM25 exercise will be conducted from March 14-21, 2025



The EPA led Long-Term Recovery Workshop will take place in Michigan in May 2025





The event will be a Nuclear Power Plant (NPP) release scenario based on a simulated disaster at the Fermi II NPP



# **Overarching Objectives**



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Provide an integrated technical and scientific response to an incident involving radiological or nuclear materials which requires modeling, monitoring and sampling, assessment, analysis, and data management to inform tactical, operational and strategic decision making.

Using the National Incident Management System (NIMS) and National Response Framework (NRF), manage a coordinated federal, state, local, international, and/or private sector response and prepare for the recovery to a complex incident involving radiological or nuclear materials.

Among all response partners, within both the United States and Canada, effectively coordinate to manage and share information among tactical, operational and strategic partners while conducting response and recovery actions.

Implement coordination mechanisms to share information regarding the possible harmful effects of the radiological or nuclear material to ensure consistency in the selection, communication and application of responder and public health and safety guidelines for the identified hazards.

Provide timely, technically accurate, and unified public messaging during the response while implementing applicable public affairs/public information plans, policies and procedures.



# **Unique Details For CM25**

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- This will be the first time outside of a Federal Emergency Management Agency (FEMA) evaluated exercise that plume phase will be played.
  - FEMA evaluated exercises are very prescribed during plume phase and end after a short period of time.
  - CM25 will be an extended release that will last many hours which will impact the entire first day of play actions.
  - This has the possibility to impact the FEMA Radiation Emergency Preparedness (REP) manual in future revisions.
- Players will be deploying during the simulated plume phase
  - This is similar to real-world Japan.
  - They will not be given logistics details in player manuals.
- Michigan, Indiana, and Canadian labs are interested in collaborating on sample analysis.
  - In supporting the lab funding request for spiked samples, this will benefit this goal.
  - CMHT and the labs will play after ENDEX to finish processing the samples and use that information for the recovery workshop.
- Simulated media through Argonne National Laboratory (ANL) expert support
- Aerial Measuring System (AMS) and Natural Resources Canada (NRCan) are planning to fly over at least a portion of the same airspace during execution



