Can provide technical & operational support in coordination with lead agencies

Can respond quickly to support other agencies in nuclear/radiological accidents or incidents

Can furnish resources appropriate to the situation

Will be focused and trained to deal with unusual technical challenges
Response Timeline

- Initial Dispersion Predictive Plots: 15 mins – 1 hr
- RAP Team: 2 hrs
- CM Home Team: 2 hrs
- CMRT Phase I: 4 hrs
- AMS: 12 hrs
- CMRT Phase II: 24 hrs
- CMRT Phase III: 24+ hrs
- FRMAC

Approximate Activation Time
Paperless Data Collection

• Tablet PC interfaces with rad instruments, GPS, barcode scanner (for samples)
• Digital form and standardized data format
• Real-time telemetry of data to central database

• NEW: extension of capability to State/local agencies (FEMA funded)
Federal Radiological Monitoring And Assessment Center (FRMAC)

• Mission: Provide a Common Operating Picture of the environmental radiological conditions for the response

• Multi-agency operational framework for coordinating on-scene monitoring and assessments during a radiological emergency

• Phased Response
  – Consequence Management Home Team (CMHT)
    • Provide technical support to IC before arrival of FRMAC
  – Phase I (Consequence Management Response Team I)
    • Validate protective action guidelines
    • Gross Field Monitoring & Data Assessment 25 People 2500 # Eq.
  – Phase II (Consequence Management Response Team II)
    • Define where population relocation is warranted 35 People
    • Extensive field monitoring & sampling 30,000 # Eq.
  – Phase III
    • Ingestion Pathway Analysis
    • Detailed Sampling & Analysis
• Initially staffed and equipped by DOE Consequence Management Response Teams (CMRT I & II)
• May absorb part or all of RAP Team(s) deployed to incident
• Technical support from the Consequence Management Home Team (CMHT)
• Leadership transitions to the Environmental Protection Agency for long-term recovery
• ARAC
  – Plume modeling
  – Predictive plot
• Aerial Measurement System (AMS)
  – Initial model validation
  – Helps drive initial monitoring and sampling plan
• RAP Assistance
• CMHT
  – Integrate State, Facility, & Radiological Assistance Program (RAP) data into initial monitoring and sampling strategy
• FRMAC
  – Comprehensive monitoring and sampling plan and activities
  – Recovery
FRMAC NIMS Implementation Plan for Single Event

LEGEND

- DOE
- Unified Command

* = Assumed Operations

FRMAC Reporting Line

Information Exchange

All FRMAC elements will remain under the administrative and policy control of their respective Department/Agency and/or the FRMAC.

The FRMAC and Advisory Team exchange information between the IC/UC, MACS, and JFO through appropriate channels.

FRMAC Director located IC/UC.

FRMAC Director most likely be located at an Incident Command post supporting the Senior Planning and Response Staff.

For Multi-IC/UC FRMAC, may be addressed through MACS.

Support to FRMAC, RAP and UC

Consequence Management Home Team

Incident Command/Unified Command

State, Tribal and Local

Public Information Office

PIO

FRMAC Liaisons

Liaison Officer

Planning Section

Operations Section

Logistics Section

Finance/Admin Section

FRMAC Director

Health & Safety

AMS

Monitoring Manager Field Monitoring & Sampling Teams

Laboratory Analysis Manager

Assessment Manager

Emergency Worker Support

Population Monitoring

Air Operations

DOE Rad Support to Operations Section Chief

All red boxes will interface.
Aerial Measuring System (AMS)

Fixed-Wing Aircraft
- All-weather operation
- Rapid Characterization of Deposition Pattern
- Cursory radiological data transmitted during flight (radiation surveys)

Helicopter
- Visual flight operation
- Detailed aerial surveys
  - Exposure rate contour maps
  - Dominant isotope gamma spectra
  - May take several days

Provides aviation-based equipment to survey large areas in response to radiological emergencies.
AMS Surveys

AMS Helicopter Survey ▼

AMS Fixed Wing Survey ▲

EXERCISE
Aerial Measuring System
Fixed-Wing (King Air B200, SPARCS)

Release Points:
- 80
- 101 - 200
- 201 - 400
- 401 - 800
- 801 - 1200
- 1201 - 2000
- 2001 - 3000
- > 3000

EXERCISE
MONTICELLO CM RESPONSE

AMS Helicopter
External Exposure Rate (µSv/hr)
- 0.001
- 1 - 5
- 5 - 10
- 10 - 20
- 20 - 50
- 50 - 200
- 200 - 1200
- 1200 - 12000
- 12000 - 100000

Sub-Area
Evacuated Sub-Area
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<td>2011</td>
<td>September</td>
<td>NASA Mars Launch</td>
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FEMA Tasking:
State and Local Digital Field Monitoring

Task 1: Modify existing software to be hardware agnostic (barcode scanner, gps, ink, touch screen, etc.).

Task 2: Develop a basic data viewing capability that can be operated outside of Radiological Assessment and Monitoring System (RAMS) (no home-team support).

Task 3: Maintain optional FRMAC synchronization.

Task 4: Integrate Radiological Assessment Training Simulator (RATS) data integration capability.

Task 5: Set up software updater for non-DOE personnel / equipment (security plan).

Task 6: Initial demonstration of application system in the Fall of 2009.
Contact Information

Daniel Blumenthal
DOE/NNSA Office of Emergency Response
202-287-5269
DOE Watch Office 24 Hr Number
202-586-8100