



51st Weapons of Mass Destruction Civil Support Team

Capabilities Overview

National Guard Mandate

In addition to the “Warfight ...”

Preposition and stage and/or respond with National Guard forces and capabilities to immediately support civilian authorities to:

- Save lives, mitigate suffering
 - ✓ Evacuation and rescue
- Preserve or restore civil order
- Maintain or reestablish communications
- Ensure continuity of operations and government

National Guard Overview

NG Homeland Defense missions are focused in four areas:

- **Critical Infrastructure Protection (CIP)**
- **CBRNE events**
- **CONUS Communications Support**
- **Joint Force command and control**

Quick Overview

- Federally funded
- Full-time
- Twenty-two person
- Army & Air National Guard
- Designed to support local and State authorities during natural or man-made disasters



Where Did We Come From

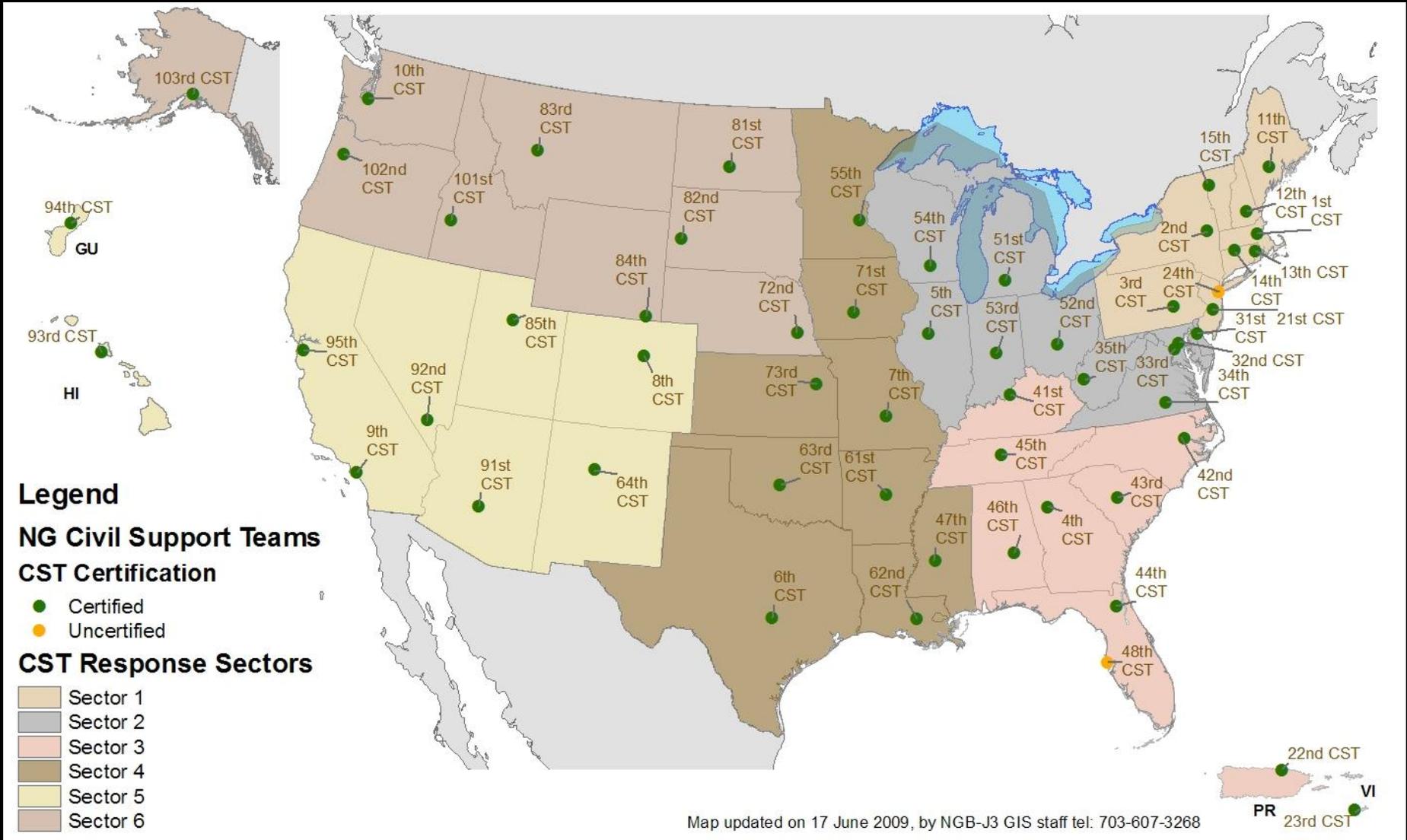
- '93-World Trade Center bombing
- '95-Oklahoma City bombing
- '96-Congress mandates *Defense against Weapons of Mass Destruction Act*
- '97-SECDEF recommends National Guard be assigned role of responding to chemical/biological terrorism in the US

What Is Our Purpose

“To provide military unique capabilities, expertise and technologies to assist State Governors (to) prepare for and respond to CBRNE incidents. Team must **complement and enhance** (not duplicate) State CBRNE response capabilities.”

DoD Program Review, Sep. '01

WMD CST Locations



51st WMD Civil Support Team

The 51st WMD CST rapidly deploys by land or air to augment local and regional terrorism response capabilities in events known or suspected to involve the use of chemical, biological, radiological, nuclear, or high yield explosive (CBRNE) agents. Specifically, the CST deploys to an area of operations to:

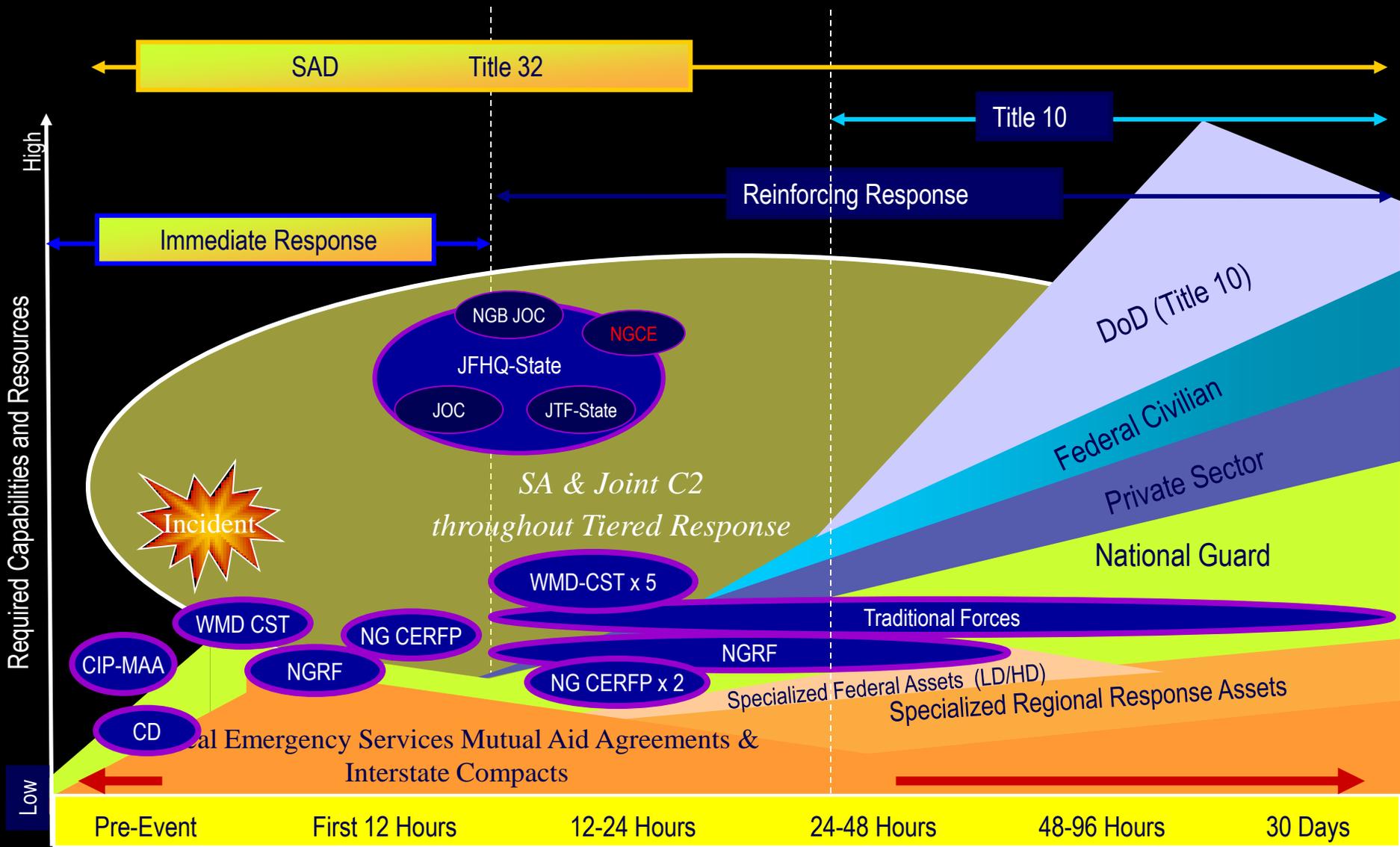
Support civil authorities at a domestic CBRNE incident site to identify CBRNE agents & substances

Assess current and projected consequences

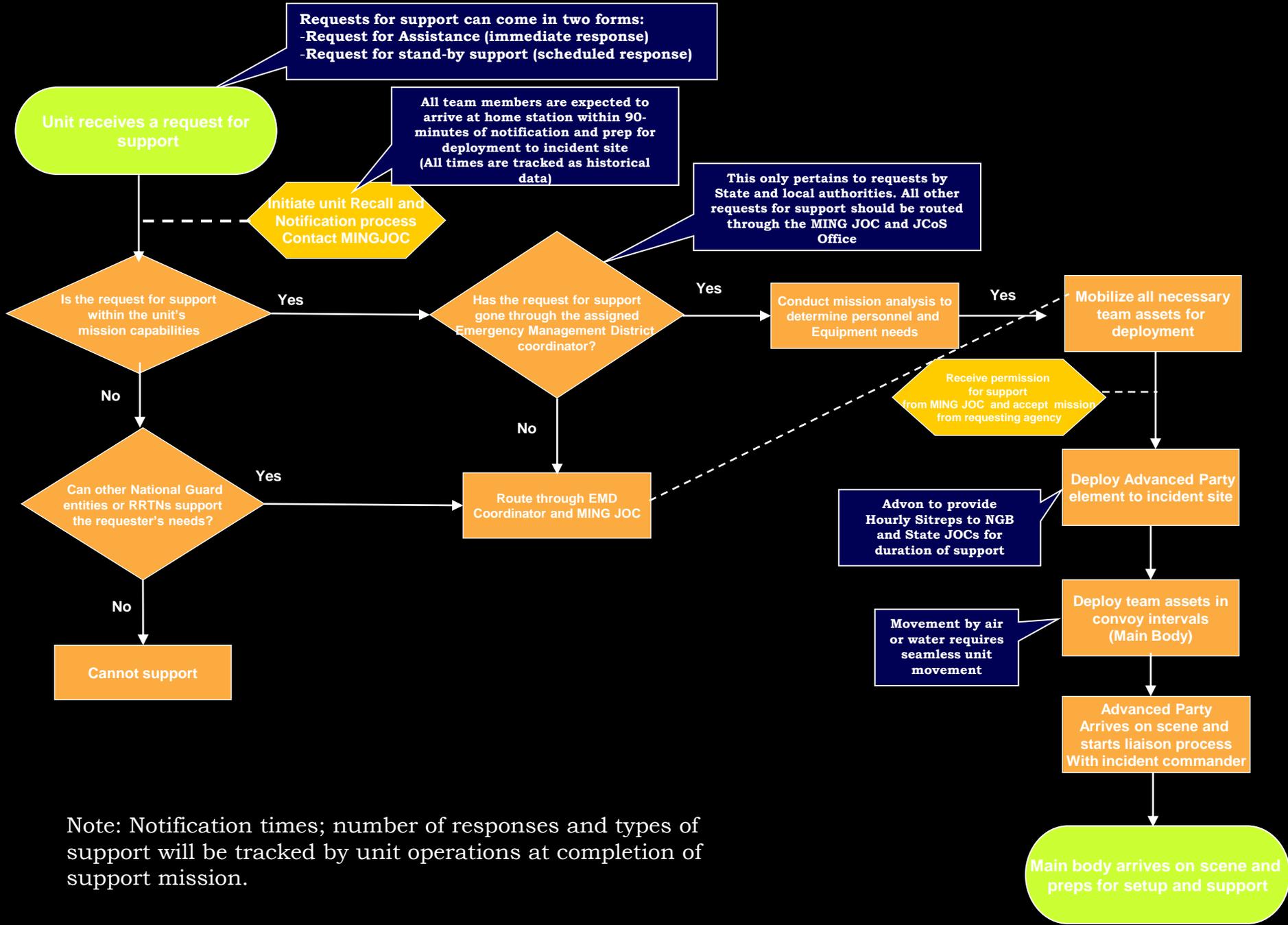
Advise on appropriate response measures

Assist with mitigation and additional request for state and federal support

Where Do We Fit In



WMD CST Response Operations



Note: Notification times; number of responses and types of support will be tracked by unit operations at completion of support mission.

What Can We Do For You

- Establish and maintain an operations center
- Coordinate with Incident Command System personnel
- Conduct hazard modeling
- Establish communications
- Conduct reconnaissance of the contaminated area
- Collect samples
- Analyze and identify unknown substances
- Provide medical treatment advice
- Provide training assistance, planning and documentation support

Our Limitations

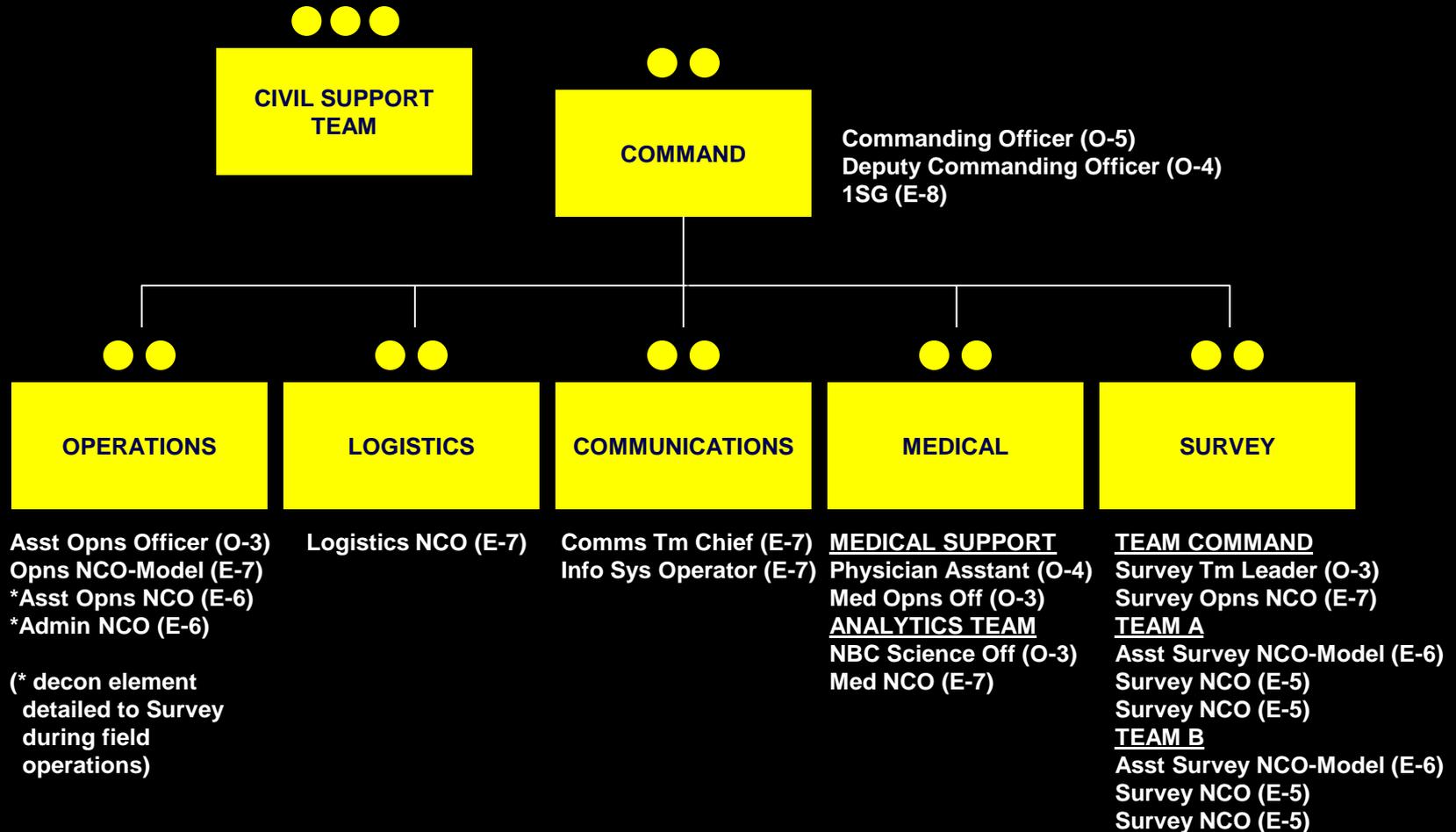
- Instant response time
- Medical treatment of the public
- Search and rescue
- Mass decontamination
- Explosive Ordnance Disposal
- Long-term sustainment

How Are We Trained

- **HAZMAT site safety officer**
- **WMD Tech**
- **NIMS, NRP**
- **NFPA/IFSAAC/DoD certified HAZMAT Tech**
- **RAC/3**
- **Radiation HAZMAT Tech**
- **Medical Effects of Ionizing Radiation**
- **White Powder Identification**
- **Confined space Entry and Rescue**
- **Microbiology for WMD Responders**
- **HAZMAT site operating procedures**
- **Clan Lab Operators course Incident response to terrorist bombings**
- **Emergency vehicle operator course**

450 to 2400 hours of HAZMAT/WMD training per person!

Our Organization



Operations Section

Capabilities

- Establishes a unit or joint operations center
- Establishes and maintains contact with supporting agencies
- Establishes and maintains a common operating picture
- Coordinates unit operations
- Hazard modeling
- Real-time weather data

Logistics Section

- **Ensures 'Class 1' needs are met**
 - **Food**
 - **Water**
 - **Sanitary facilities**
- **Coordinates re-supply**
 - **Local replenishment when possible**
 - **Replenishment by our central support depot**
 - **Re-supply from other private sector, State and Federal channels**
- **Manages chain of custody**
- **Coordinates transfer or sharing of equipment**

Survey Section



- **Makes entry into the “hot” zone**
- **Performs site characterization**
- **Collects samples**
- **Performs basic mitigation**
- **Performs chem / rad / bio detection**
- **Runs contamination reduction line**

Survey Section

Protective Clothing

- **Level A - Fully encapsulated to protect against liquid and/or vapor contamination.**
- **Level B - Provides protection against liquids and some protection against vapors.**
- **Military JSLIST and civilian Lanx (charcoal impregnated suits)**
- **One hour 4500psi Drager SCBA, 4 hour Drager Rebreathers, full face military respirators**



Survey Section

Chemical Detection



- **Multi-Rae™**
 - Detects VOC's, O₂ levels, LEL's, Cl, Phosphene, H₂S, NO₂, SO₂, HCN, CO, NH₄
- **Area-Rae™ / Safe Site™**
 - Detects VOC's, O₂ levels, LEL's, Cl, Phosphene, H₂S, NO₂, SO₂, HCN, CO, NH₄, & Gamma Radiation
- **ICAM (Improved Chemical Agent Monitor)**
 - Detects 'G' series nerve and 'H' mustard agents
- **Colorimetric tubes and papers**

Survey Section

Chemical Identification

- **HAPSITE™** - Portable gas chromatograph/mass spectrometer
- **Hazmat ID™/TravelIR™** (FTIR Spectrometer)
- **1st Defender™** (Raman Spectrometer)
- **GasID™** (FTIR Spectrometer)
- **Colorimetric tubes and papers**



Survey Section

- **Radiation detection / identification**

- **AN/PDR-77 Radiac**

- Detects and measures alpha, beta, gamma, and X-ray radiation

- **GammaSpec**

- Detects and measures gamma and neutron radiation. Can identify the isotope

- **UDR-13 / Film Badges**

- Electronic / Luminescent Dosimeters

- **Thermo Electron FH 40**

- Detects and measures gamma radiation
- Available 13 foot extension probe
- Additional probes allow for detection of Beta and Alpha radiation

- **VDR-2**

- Detects and measures gamma and beta radiation



Survey Section

Sampling Capabilities



- **Quicksilver sampling kit**
 - containers and tools to take solid, liquid samples, and biological samples
- **BT650 Air Sampler**
 - Collects aerosolized and airborne particulate agents into a water or alcohol based film
- **Water Sampling Kit**
 - includes thief, bottle sampler, water bomb, auto-pipette
- **Can package for processing on-site or for shipment off-site**
- **Trained and equipped for evidence collection, evidence preservation and chain of custody**

Survey Section

Contamination Reduction

- **Wet or dry decon of responders, equipment and samples**
 - Limited emergency capability
 - Not designed for public
- **Equipment includes:**
 - Scrubbing stations
 - Wash-down stations
 - Water heater / distribution system
 - Contaminated water collection system
 - Liquid and vapor monitoring equipment
 - Radiation Portal , walk through radiation detector



Survey Section



Other gear / capabilities

- Tactical Body armor
- Radiation protection suits
- Chemical recon robot
- Confined space entry/rescue rigging
- Equipment / shelter trailer
- All terrain vehicle
- Tent shelters



Medical Section

- Team health and welfare
- Medical Monitoring
 - General health
 - Blood pressure
 - O2 saturation
 - Heart rate
 - Body temperature
- Emergency treatment of team members
- Reach back / signs and symptoms



Medical Section

Analytical Laboratory System (ALS)

- Enables scientific analysis of unknown samples under engineering controls
- Class III bio-safety cabinet
- Cold storage for samples
- Secure communications interface for reach-back
- Generator power (15kW)
- External lighting
- Air transportable



Medical Section

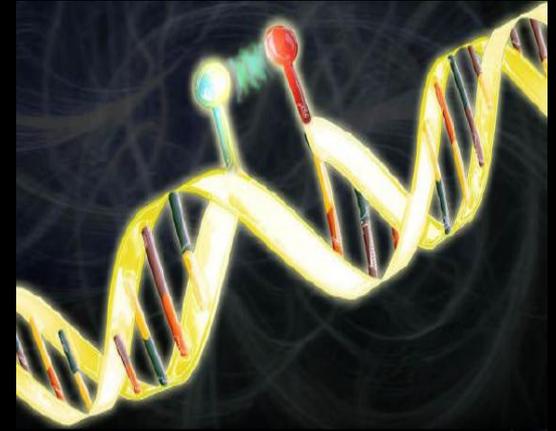
- **Chemical Sample Analysis**
 - **Basic wet chemistry characterization/colorimetric tests**
 - **Gas Chromatograph/Mass Spectrometer (GC/MS)**
 - **Detection of a wide range of toxic industrial chemicals (1-1000 amu)**
 - **FT-IR Spectroscopy**
 - **ID of approximately 10,000 powders/liquids**
 - **Raman Spectroscopy**
 - **ID of up to 1,500 solid/liquid compounds**
- **Chem/Bio Sample Analysis**
 - **Polarized/fluorescent light microscope w/FT-IR capability**



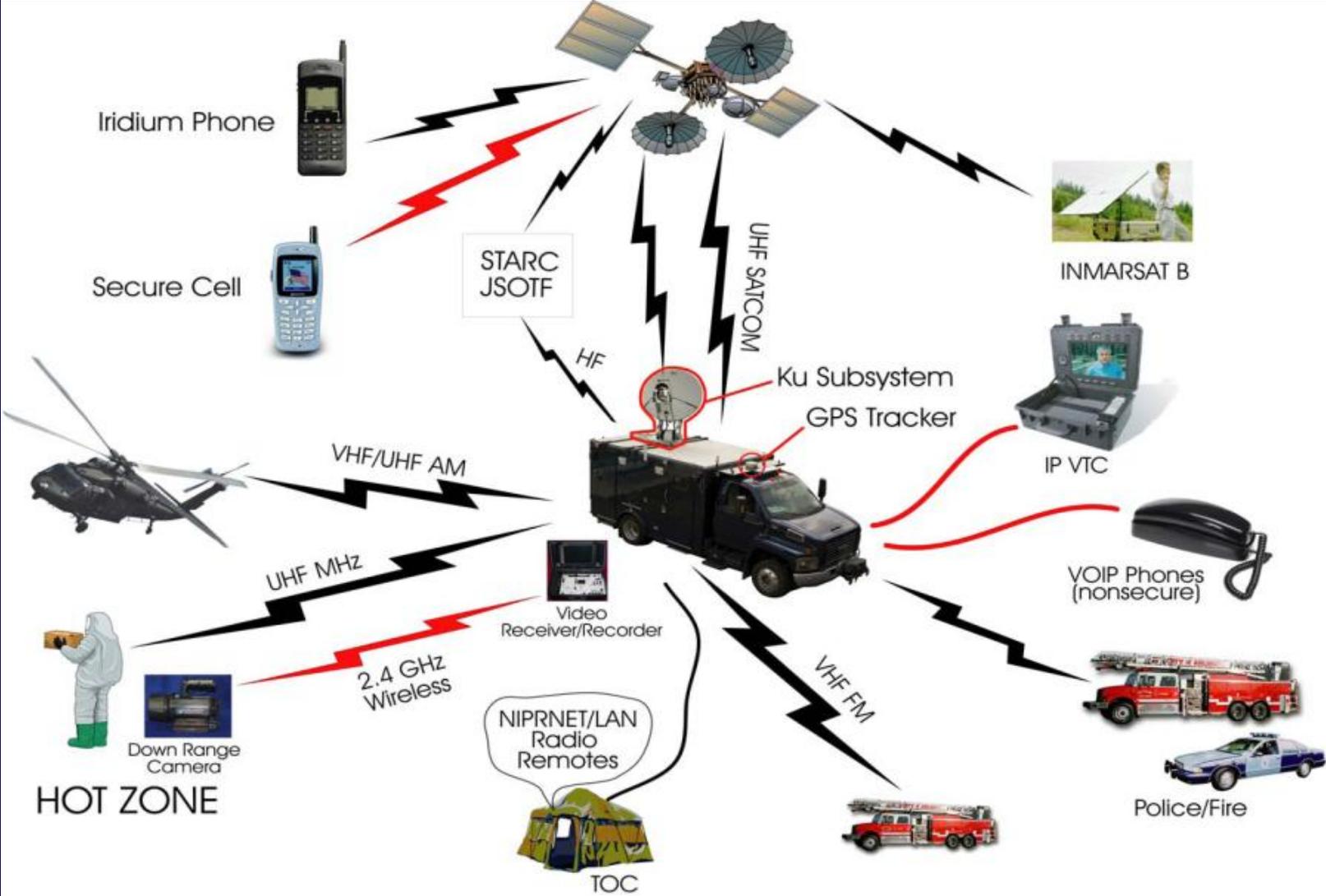
Medical Section

Biological Sample Analysis

- **Polymerase Chain Reaction (PCR)**
 - Anthrax
 - Plague
 - Tularemia
 - Smallpox
 - Venezuelan Equine Encephalitis
 - Brucella
 - Inhibition
- **Electrochemiluminescence (ECL)**
 - Ricin
 - Botulinum
 - Staph Enterotoxin B



Communications Section



Communications Section

Unified Command Suite (UCS)

- **Combination of commercial and military equipment**
- **Provides reach-back communications for connectivity with higher authority and technical support agencies**
- **Equipped with a 12.5 KW generator**
- **External lighting**
- **Air transportable**



Communications Section

UCS Systems and Capabilities

- Multiple satellite communication systems
- HF-SSB System
- VHF radio systems (136-174 MHz)
- UHF radio systems(403-433 MHz)
- Repeater and base station capabilities
- 800 MHz portable radios (806-870 MHz)
- Telephone equipment
- Cross banding capabilities
- Ku band satellite suite
- Communications security devices
- Fiber optic local area network with server and routers
- SIPERNET access
- NIPERNET access
- DSS Satellite system



Questions

Summary Overview

- **Federally funded**
- **Full-time**
- **Twenty-two person**
- **Army & Air National Guard**
- **Designed to support local and State authorities at an actual or potential terrorist event**

Questions

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