National Guard Civil Support Teams as Partners for Select Agent Security and Emergency Response Drills

Matthew Philpott, Ph.D., RBP; Peter Schoonover, Lisa Plagmann, Oregon State University; Julia Appt, CPT, 102nd WMD Civil Support Team

Emergency Response Drills

- For U.S. entities with Select Agents, regulations require annual drills to test security, biosafety and emergency procedures.
- OSU recent CDC inspection concerns:
  - Previous drills mostly tabletop exercises or orientations for emergency responders.
  - Question of meeting intent of regulations

Inception: Joint Exercise

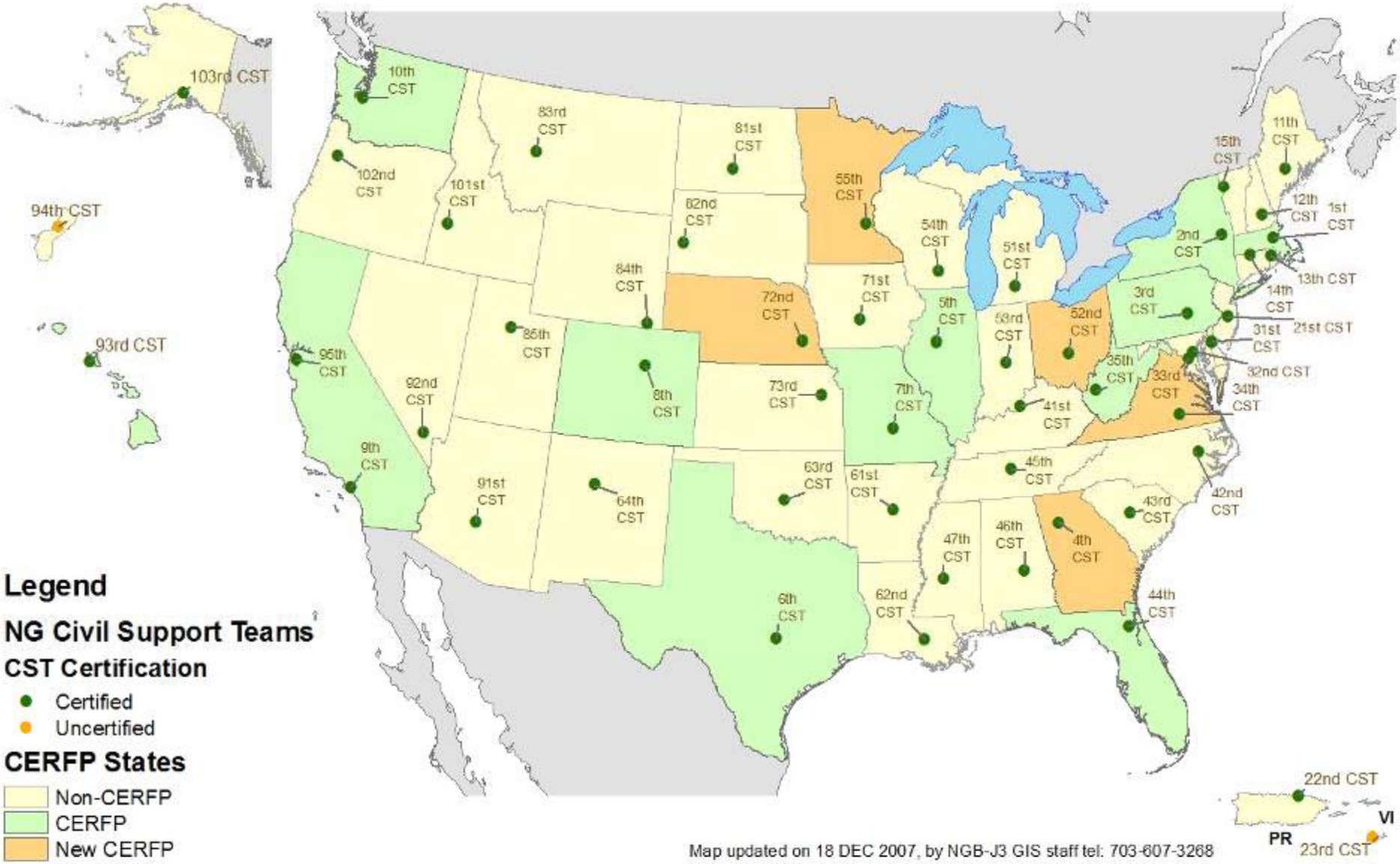
- Approached by an officer in the ORNG 102nd CST about conducting a drill at OSU containment lab.
- Decided on a joint exercise; EH&S and CST
- Began planning in fall 2009; Exercise held February 2010.

Planning Phase

- Perception: Concern about visibility of military activity attracting attention of public, causing rumors.
  - Ran a series of announcements about planned exercise.
- Working lab, disruption of research.
  - Arranged use of building between experiments to avoid disruption.
- Scenario development
  - Worked with outside contractor on scenario development, creating props.
  - Working with a contractor is not the norm, scenario development and set up is usually conducted internally

Civil Support Teams

- Created by Presidential Directive to provide response to chemical, biological or radiological incidents
- 57 teams currently – each state / territory now has at least one team
- Both Army and Air National Guard members, controlled by the state Governor
- Subject matter experts, full time personnel with expertise in assessment, monitoring, medicine, science, and communication
- No cost associated with use (real world or training)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Legend
NG Civil Support Teams
CST Certification
Certified
Uncertified
CERFP States
Non-CERFP
CERFP
New CERFP
Map updated on 18 DEC 2007, by NGB-J3 GIS staff tel: 703-607-3268

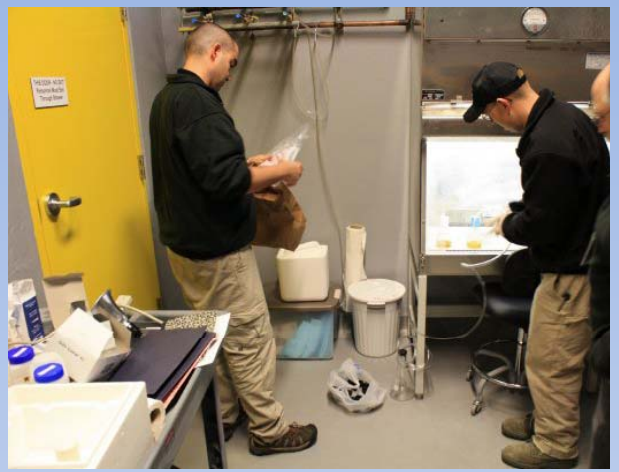
Mission of CSTs

- CST is to support civil authorities at domestic CBRNE (chemical, biological, radioactive, nuclear, enhanced explosive) incident sites by:
  - **identifying** CBRNE agents and substances
  - **assessing** current and projected consequences
  - **advising** on response measures,
  - **assisting** with appropriate requests for additional support.
  - This includes incidents involving the intentional or unintentional release of CBRBE and natural or man-made disasters that result or could result in the catastrophic loss of life or property in the United States.

ONG 102nd WMD – CST

- Based in Salem, Oregon – about 40 miles from OSU
- Organized into sections, each with defined roles in response and analysis:
  - Incident Tracking and Operations
  - Communications
  - Survey – site analysis, entry and sample collection
  - Medical – analytical laboratory, medical support
  - Decontamination – limited personnel decontamination

Scenario Development



- Utilized one of two OSU BSL-3 laboratory buildings.
- Staged labs with props – to appear that illicit work involving Select Agents was in progress by unknown persons.
- Outside calls organized to give appearance of medical cases flooding local hospitals and clinics.

Incident Commander Objectives

- Life safety
- Site characterization
- Hazard identification via sample collection
- Determine possible exposures and/or cases
- Mitigate threats
- Advise on public health protection measures

Sequence of Events

- 0700: OSU EH&S responded to report of suspicious activity in BSL-3 building.
  - Called in Oregon State Police, 102nd CST
- 0800 – 0920: OSP, 102nd CST responded to scene.
  - As per OSU SA Emergency Response Plan, OSP assumed Incident Command with EH&S and 102nd CST in supporting roles (simulated IC).

Initial briefing by IC

Initial Site Activities

- Survey team assessed site for chemical / radiological hazards; established zones

Initial Site Activities

- CST Operations / EH&S established staging areas upwind and outside hot zone

Initial Site Activities

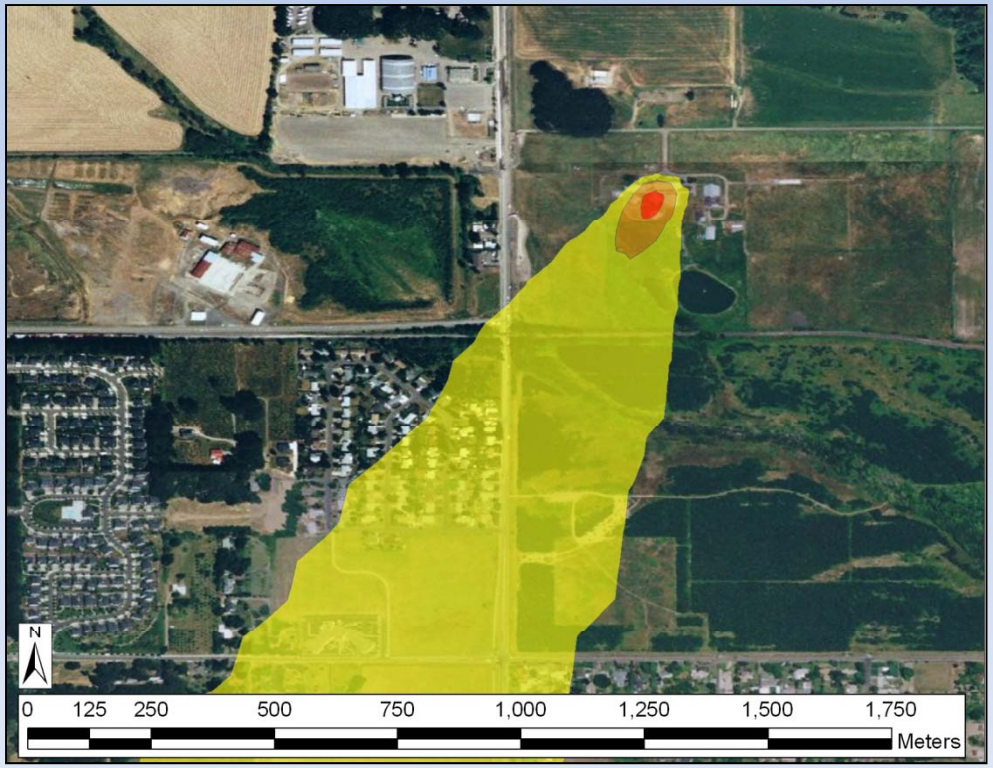
- Decon and Medical teams set up personnel decontamination line / medical monitoring at edge of hot zone

Modeling and Briefings

- OSU EH&S – led briefing: agents present, routes of exposure, facility entry policies

Modeling and Briefings

- CST Incident Tracking / Operations used weather conditions, other data to model worst case scenarios for release of agents.
- Supported briefings
- Enhanced decision making



First Entry

- Joint first entry to building for survey / assessment /data collection by EH&S ,CST

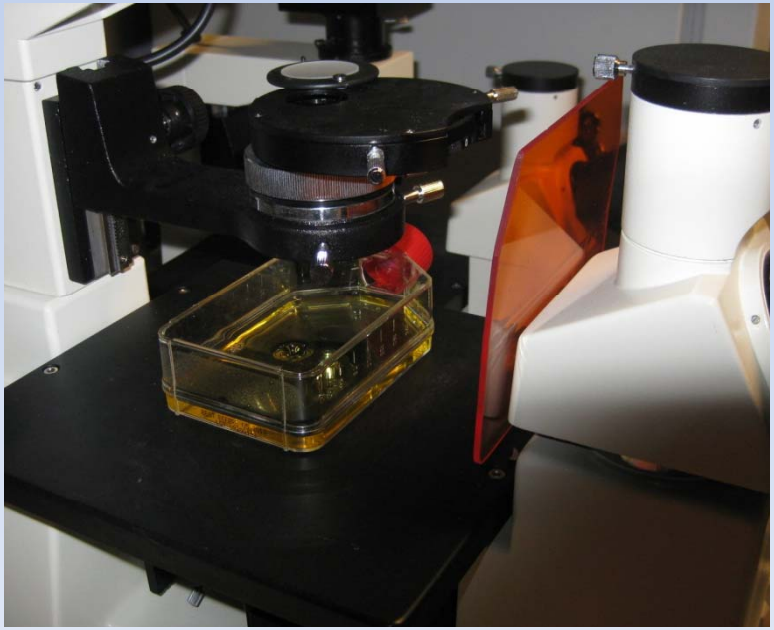
Post – entry decontamination and medical evaluation

First Entry

- Team carried live camera that recorded and transmitted data to command post, also took digital still photos.
- Data analyzed by science officer, others.
- Briefing held to communicate assessment.

Second Entry Planning

- Data from first entry was used to prioritize a set of samples to be collected by second entry team.
  - biological samples, documents, photographs



Second Entry

- Joint entry by EH&S and CST Survey to collect samples, take instrument readings for on-site analysis.

Second Entry: Sample Collection

- Samples collected / triple bagged using FBI's 12 step sampling and evidence preservation procedures
- Samples are split for confirmatory analysis at the State Lab

Analytical Laboratory System

- Samples collected during 2nd entry were analyzed on-site in mobile laboratory.

Analytical Laboratory System

- Capabilities
  - Class III BSC for sample prep / extraction.
  - Bacteria, viral, toxin identification 30 minutes - 2 hours
  - Biological Analysis
    - Epifluorescence Microscopy
    - Electrochemiluminescence
      - Antigen/antibody binding
    - PCR
      - Joint Biological Agent Identification and Diagnostic System (JBAIDS)
      - Multiple plasmid and DNA targets
      - RT-PCR

Pathogen Identification Capabilities

- Pathogen Identification (presumptive)
  - ***Bacillus anthracis***
  - ***Clostridium botulinum* toxin**
  - ***Yersinia pestis***
  - **variola major**
  - ***Francisella tularensis***
  - ***Brucella* species**
  - ***Salmonella* species**
  - ***Burkholeria mallei***
  - ***Burkholderia pseudomallei***
  - ***Rincinus communis***
  - **Staphylococcal enterotoxin B**
  - **Viral encephalitis**
  - **Others available if specifically requested**

Presumptive Analysis and Closure

- Sample analysis lead to presumptive identity of agents
- Objectives of Incident Commander met
- OSP maintain control of site pending arrival of FBI
- CST and EH&S continues on site to provide advice and reach-back capabilities as needed.
- Exercise concluded at 2030.

Lessons Learned

- by OSU EH&S:
  - systematic approach to incident response; opportunity to learn from highly trained and well equipped responders
  - familiarity with CST capabilities
  - importance of communication during incidents
- by 102nd CST:
  - opportunity to train in actual working containment laboratory setting

Conclusions

- Civil Support Teams have capabilities and training that make them important response partners to Select Agent incidents.
- Mutual benefit can be gained by conducting joint exercises involving Select Agent entities and CSTs and other emergency responders.