

Broadening Perspectives

**Interagency Emergency Response
Exercises between the National Guard,
Civilian Agencies, and Academic
Institutions**

Colorado National Guard Civil Support Team



Two series of exercises responding to potential “Weapons of Mass Destruction” scenarios

- Approached by local 8th Civil Support Team (CST) of the National Guard
- Involved campus Police, Emergency Management and Environmental Health & Safety
- State Health Dept.
- Local municipal police, hazmat response
- Local FBI



Advantages to University for joint exercises with CST :

- No cost to University
- Establish contacts, trust with external agencies BEFORE real incident
- Identify gaps in own emergency response
- HSEEP compliant
 - Could count as SA annual exercise
- Use CST/NG assets as evaluators or participants

CST Mission:

Supports Civil Authorities at a domestic CBRNE incident or disaster site by:

- **IDENTIFYING** CBRNE agents/ substances,
- **ASSESSING** current and projected consequences,
- **ADVISING** on response measures, and
- **ASSISTING** with appropriate requests for additional state support.



National Guard-CST

- Response within first 12 - 48 hours of an event
 - In support of local Incident Commander
- CST unit in every state and territory
- Fulltime National Guard team, 24/7 response
- CBRNE incidents, natural, and man-made disasters
- Deployed in-state or nationwide, state or federal status, reserve or reinforcing
- Certified by Secretary of Defense for proficiency

CST Does NOT:

- Conduct traditional Hazmat response
- Have mass decontamination ability
- Have mass medical treatment capability
- Have waste disposal capability, CAN advise
- Cover long term operations, 36 hrs maximum
- Have approval authority for release additional National Guard assets



National Guard-CST

- Army and Air Force Personnel
- Multiple military specialties
- Command structure
 - Operations
 - Logistics/Admin
 - Communications
 - Medical
 - Hazmat



National Guard-CST

- Full response is not “subtle” presence
 - 8 vehicles/3 trailers
 - Large parking footprint
 - Generator noise
- On-site analytical & communication suites
- Decontamination, Medical Surveillance, Emergency Treatment
- Detection equipment (chem, bio, rad)
- Multi-entry capability
- PPE
- Field sampling
- Isolate/evaluate potential threats with minimal disruption to venue operations



CST Partnerships

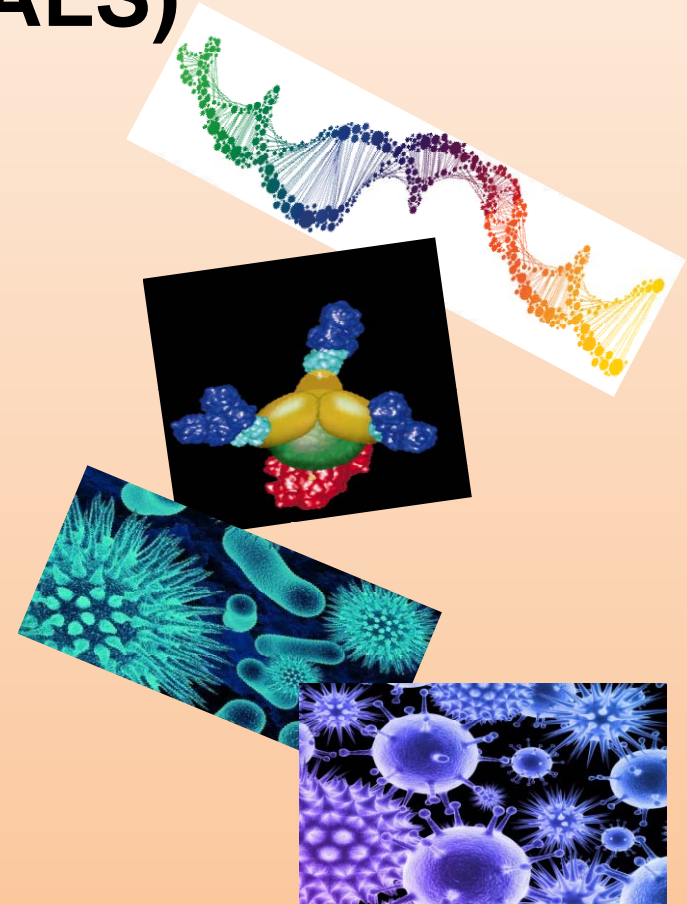
- Fire/HazMat
- Law Enforcement / Public Safety
 - Local
 - Federal
- Department of Energy
- Laboratory Response Network
- Emergency Management
- Local venue



Analytical Laboratory System (ALS)

Biological

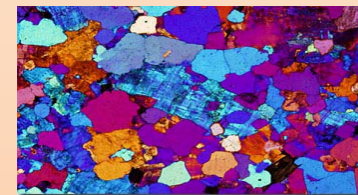
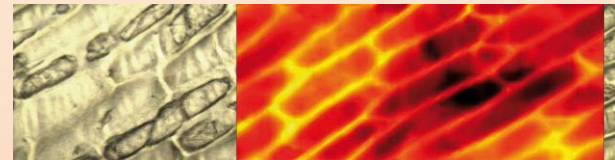
- Detect DNA
 - Fluorescence Microscopy
 - Polymerase Chain Reaction (PCR)
- Detect toxin/ bacterial/ viral proteins
NanoIntelligent Detection System (NIDS)
 - *Electrochemiluminescence (ECL) assay*
- Class III Glove Box



Analytical Laboratory System (ALS)

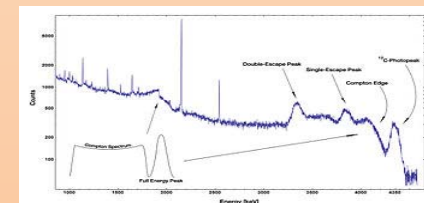
Chemical

- FTIR Microscopy –organic
- Gas Chromatography/ Mass Spectrometry
- Polarized Light Microscopy –inorganic



Radiological

- Computer-based Radiological Spectrum system
- Communications link to UCS



ALS



- Two primary operators
- Monthly proficiency testing of live Chem / Bio agents or Rad spectra
- Partner with the Laboratory Response Network (LRN), DOE, EPA, and others
- Send split samples and data to partners for technical reach back and confirmation of field laboratory results
- American Association for Laboratory Accreditation to ISO 17025 Standards

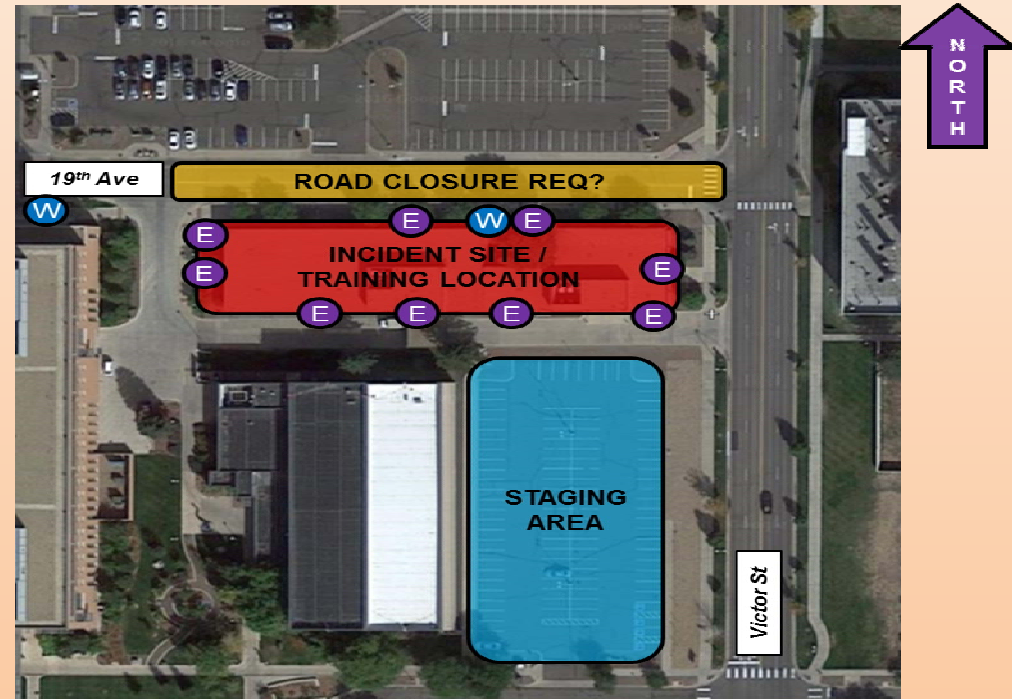
CST Teams:

- Survey Team
- Medical Response
- Decontamination



January 2017 Exercises

- **Chemical and Radiological Hazards**
- Held at AMC campus, EHS hazmat facility



Chem/Rad Scenario

- Denver metro area received multiple coordinated terrorist attacks
 - Explosions, intel on intended
- Initial readings show high VOC
- All first responders in metro area sent to current sites

Chem/Rad Scenario

- University Police (UPD) response
 - UPD receives call of unauthorized entry
 - Suspicious on-campus laboratory found
 - Lab contains unknown chemicals & IED materials
 - Support required
- UPD calls Aurora FD
- Aurora FD redirects to Douglas County (DC)
- Hazmat Monitoring shows high luminescence
- DC Hazmat calls 8th CST

Chem/Rad Exercise

Mock lab in EHS
Hazardous
storage facility



LOTS of neat TRUCKS!!

Chem/Rad Exercise

Acetone peroxide instructions



DIY chem/explosive lab

Chem/Rad Exercise



Surveying & evaluating the entire facility

Chem/Rad Exercise



Decon out

Evacuation of
personnel down



Chem/Rad Observations

- University Police Department (UPD): good test of detection equipment and scene management
- Good coordination between CU Denver UPD and EHS and between CU entities and CST
- Good value added by realistic venue and props

January 2017 Exercises



- **Biological Hazard**
- Held at Buckley Air Force Base, Training Site
- Involved 8th CST, Buckley Security Forces, Buckley Fire
- CU Denver EHS served as support
 - Provided cultures:
 - Attenuated strains to provide “positive” hit during on-site screening
 - Distractor cultures: common RG2 agents
 - Equipment, supplies for “stage props”
 - Provided disposal of cultures, etc. after the exercise

January 2017 Exercises: Bio Scenario

- Security Forces (SF) request 8th CST to investigate suspect's DIY bio lab in camper trailer after domestic dispute between neighbors
- One person stabs another with a syringe containing possible biological material (notional)
- Attacker charges responding SF and is killed
 - Spouse not on the scene
- Victim is quarantined in responding ambulance
- CST needs to determine relevant samples and analyze biological materials



Donning



Going in



DIY Lab



“Safety Cabinet”



DIY Incubator



Exiting: Checking for Rad Contamination



Heading for Decon



Observations: January Bio Exercise

- 14° F high for both days, Bio room was not heated
- Takes several hours to run all the samples in the ALS
- ALS has limited spectrum of antigens it can test for
 - Basically some of the Tier 1 SA
- Good value added for CST by realistic props supplied by EHS & researchers



July 2017 Exercises: Operation Ypres

- 100 years after the third battle of Ypres during WWI
 - Mustard gas used in chemical warfare



- Local news article:

<http://www.thedenverchannel.com/news/local-news/weapons-of-mass-destruction-readiness-drills-to-take-place-through-denver-metro>

July 2017 Exercises: FBI “Alert”

- Intel that small cell of foreign agents, foreign gov’t sponsored, assembling materials/means for multiple attacks of undetermined nature
 - Could include explosives, chemicals, biological
- Targets:
 - Perceived enemies of the leadership of sponsoring gov’t
 - Hospitality industry, infrastructure



July 2017 Exercises: Overall Objectives

- CSTs from different states came to Denver area for multiple exercise incident scenes over two days
- 8th CST coordinated different incident scenes:
 - Incorporate exercise needs of each CST and local partner agencies,
 - Exchange tactics, techniques, procedures
- Each incident involved multi-agency response & field operations, ICS, Evaluator



July 2017 Exercises: Local agencies

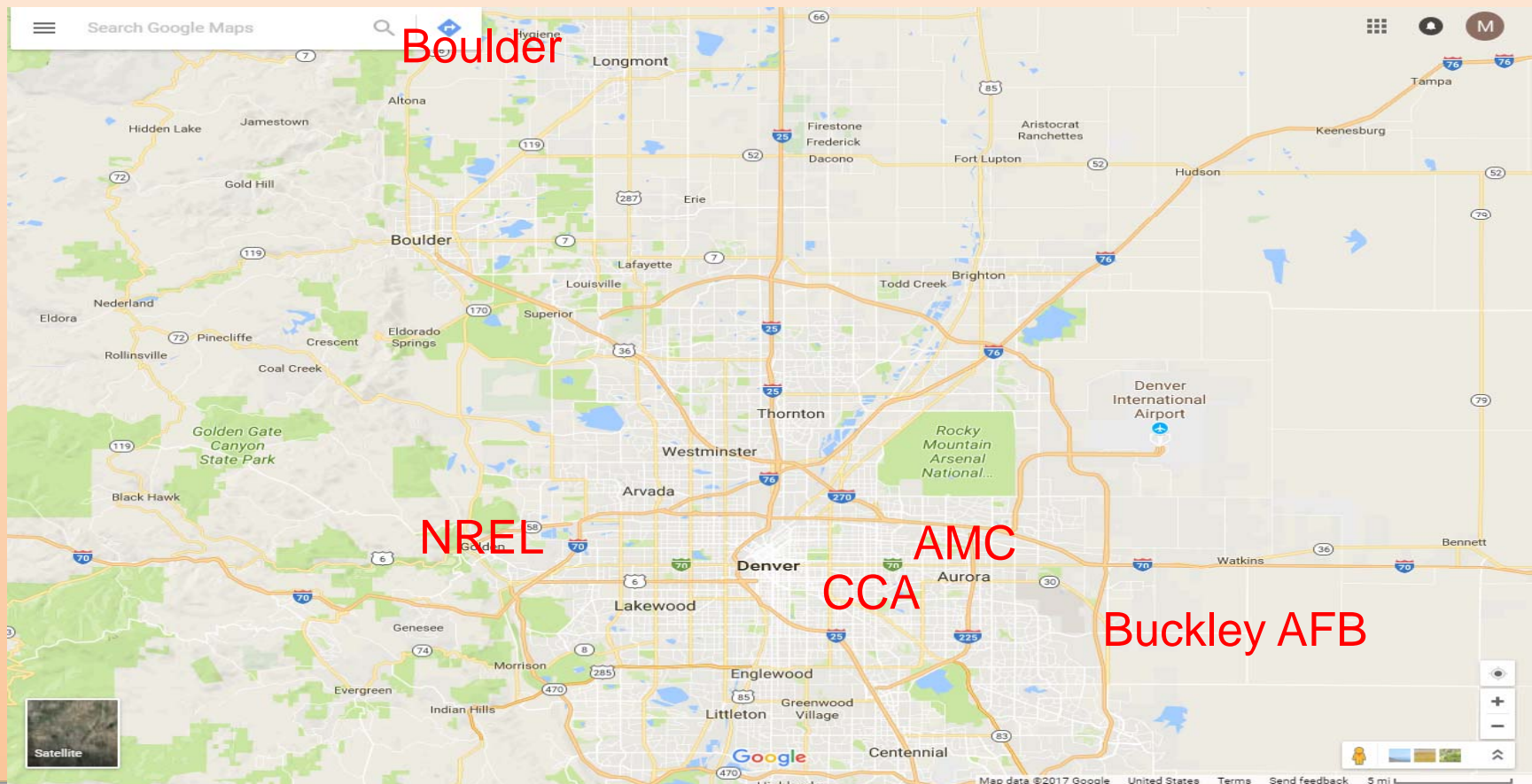
- Boulder County HAZMAT
- National Renewable Energy Laboratory (NREL)
- University of Colorado Denver | Anschutz Medical Campus
- Community College of Aurora (CCA)
- Laboratory Response Network (LRN)
- Colorado Department of Public Health & Environment (CDPHE)
- Edgewood Chemical Biological Center (ECBC)



July 2017 Exercises: Venues

- National Renewable Energy Lab (NREL)
- University of Colorado Anschutz Medical Campus
- Community College of Aurora (CCA)
- Longmont Fire Department Training Facility

Approximate location for each scenario:



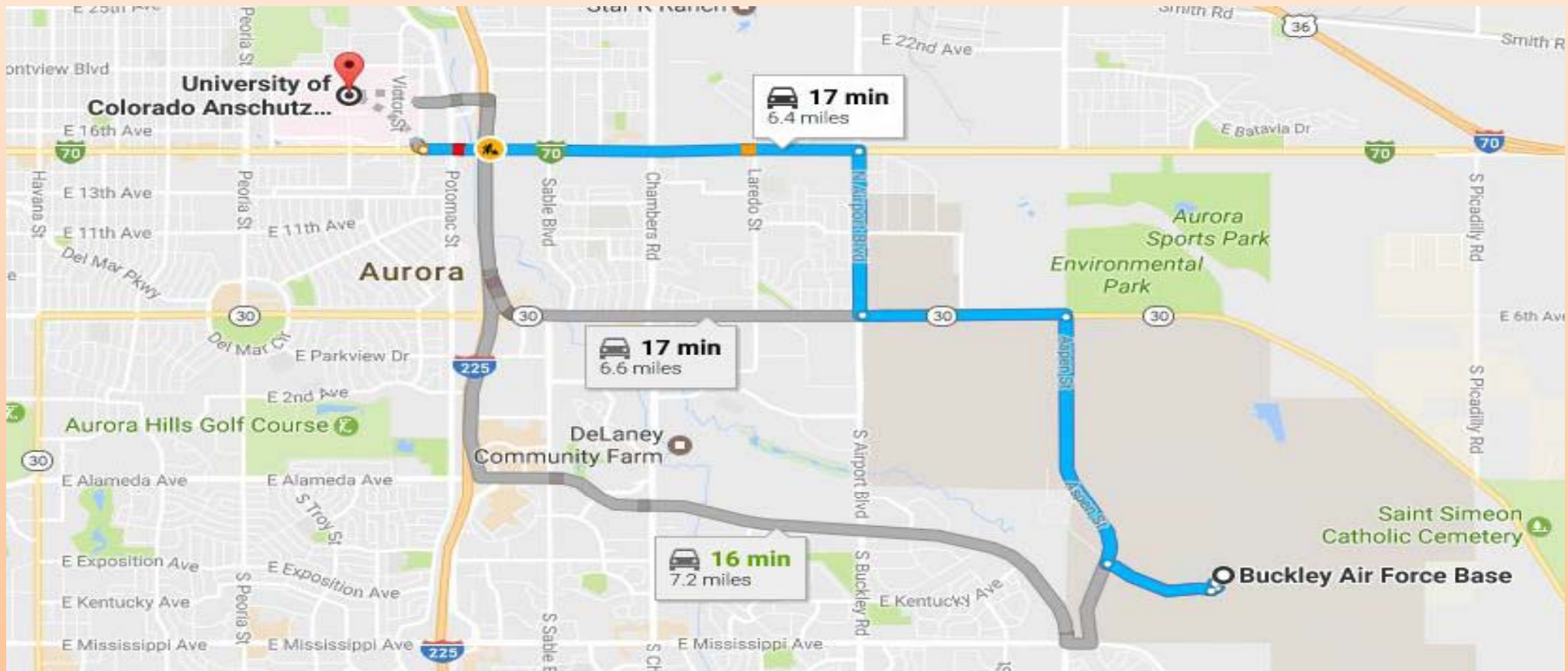
July 2017 Exercises: Local agencies

- **Sample Objectives:**
- Effectively implement Incident Command (IC), coordinate with security and other laboratory stakeholders
- Effectively implement Emergency Response Team (ERT) protocols including: size-up/assessment, zoning/control, entry team & DECON prep, hot zone characterization/monitoring, and exit DECON
- Demonstrate IC debrief coordination with various sections, and strategy implementation
- Demonstrate effective hand-off and coordination/support to responding authorities

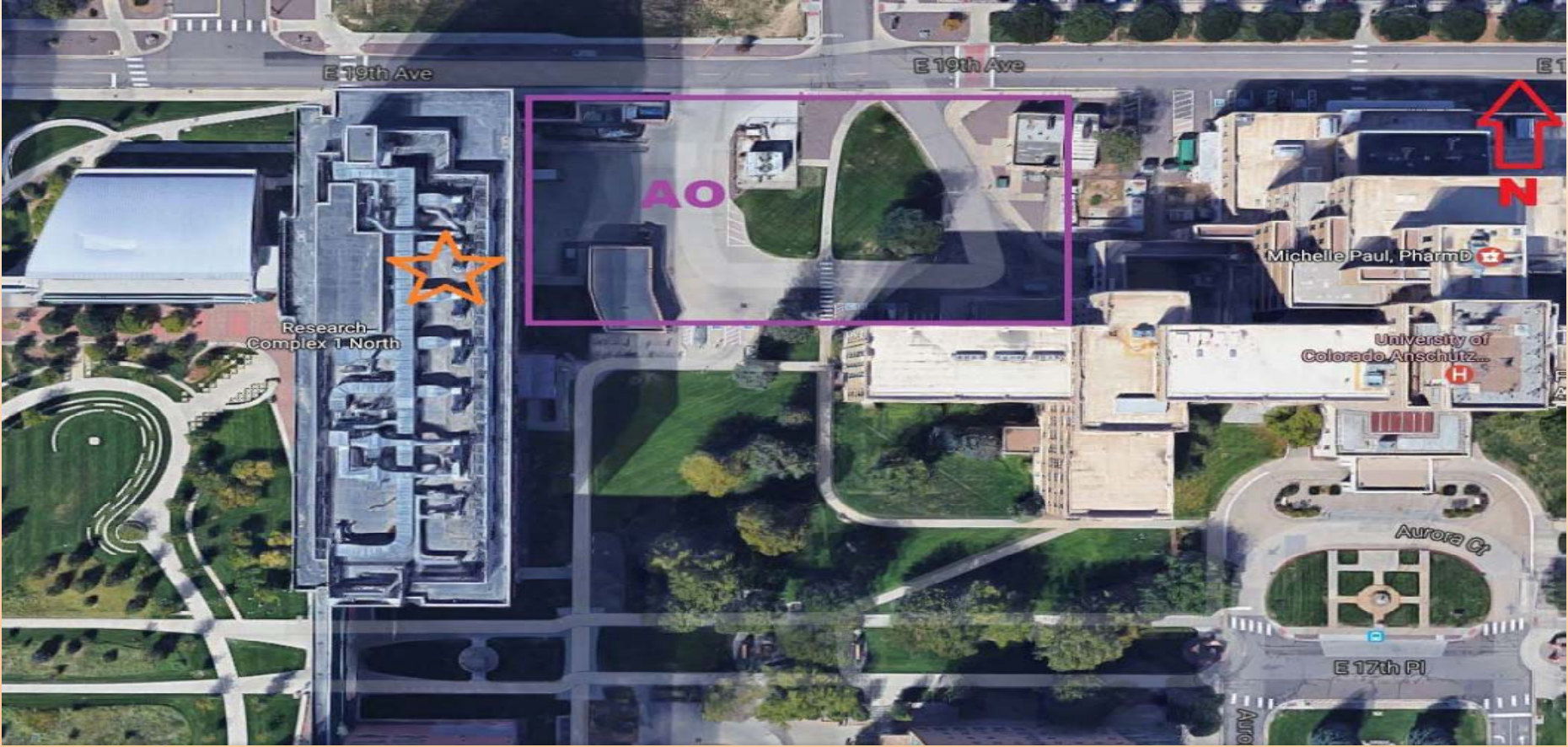
July 2017 Exercises: CST Objectives for AMC site

- Reconnaissance & sampling
- Communication challenges
- Integration with another CST for site characterization, etc.
- Medical challenges (man down w/suit breach)
- Exercise the Lab Response Network (LRN)
- Large scale attack response

AMC Exercise Location



AMC Exercise



July 2017 Exercises: AMC Incident

- **University of Colorado Anschutz Medical Campus Objectives:**
 - Integrate the police and outside agency response personnel
 - Conduct a thorough mission brief and information transfer to the deploying CST

July 2017 Exercises: Bio Scenario For Campus

- PI arrives about 3am to take growth curve measurements and finds research that is not focused on approved project.
- Finds wild prairie dogs, including a dead one, in cardboard box. PI has NO approval for research involving wild prairie dogs.
- PI calls biosafety officer (BSO).
- BSO calls CU Police to secure area.
- BSO arrives on campus and investigates, reporting to CU Police that indeed this is very suspicious.
- Police make connection between non-approved research and recent FBI alert.
- Police contact FBI, who then contacts CST.





CST deployment on campus



Suiting up

Note different PPE than
January exercise



Heading into building with
suspicious activity



Searching the lab

Attenuated
Yersinia pestis

“Prairie Dog” carcasses
with black pepper “fleas”



Unauthorized cultures, “animals”

Decon area



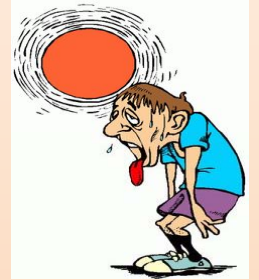
Decon after surveying lab



Incident Command

Observations, Lessons Learned

- It was 100° F both days (building had AC)
- Communications were generally excellent:
 - Intra- agency
 - *UPD & EHS*
 - Inter-agency
 - *CU entities and: CST, CDPHE, FBI*
- Rare to use academic environments for such exercises
- More realistic venue with continuing operations
- CU recent experiences in real situations emphasize the need for inter-agency cooperation, communication, and trust



Summary

- Communication and openness between agencies impressive from planning through after action reports
 - Shared contact lists
- Researchers enthusiastically supported exercise
- Gratifying to experience such cooperation
- AND fun (despite temperature challenges)





- Daniel R. Meade, 1LT USARMY NG COARNG
- Corey M. Hicks, 1LT USARMY NG COARNG
- Christian M. Gonzales, SFC USARMY NG COARNG
- Commander Steve Smidt, University Police Dept.
- Essi Ellis, Emergency Manager, University Police Dept.
- Allison Grice, Medical Teaching Lab Manager
- Environmental Health and Safety Dept. colleagues

QUESTIONS?



More pics on www.imfunny.net



University of Colorado
Denver | Anschutz Medical Campus