

Exceptional service in the national interest



A Robot Rodeo for DOE-EM

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Advanced Field Operations & Robotics



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Born from EM's SoS Initiative



Non-Bomb Squads?

- The 3 D's
 - Dull, Dirty, Dangerous
- Hazmat
- EMS (Emergency Mgmt Services)
- Civil Support Teams (CST)
- Other?

Example of the 3 D's



DOE-EM Examples

1. Cool It Hotshot

- Routine cylinder inspections
- Suspicious devices
- Need to 'clear' devices

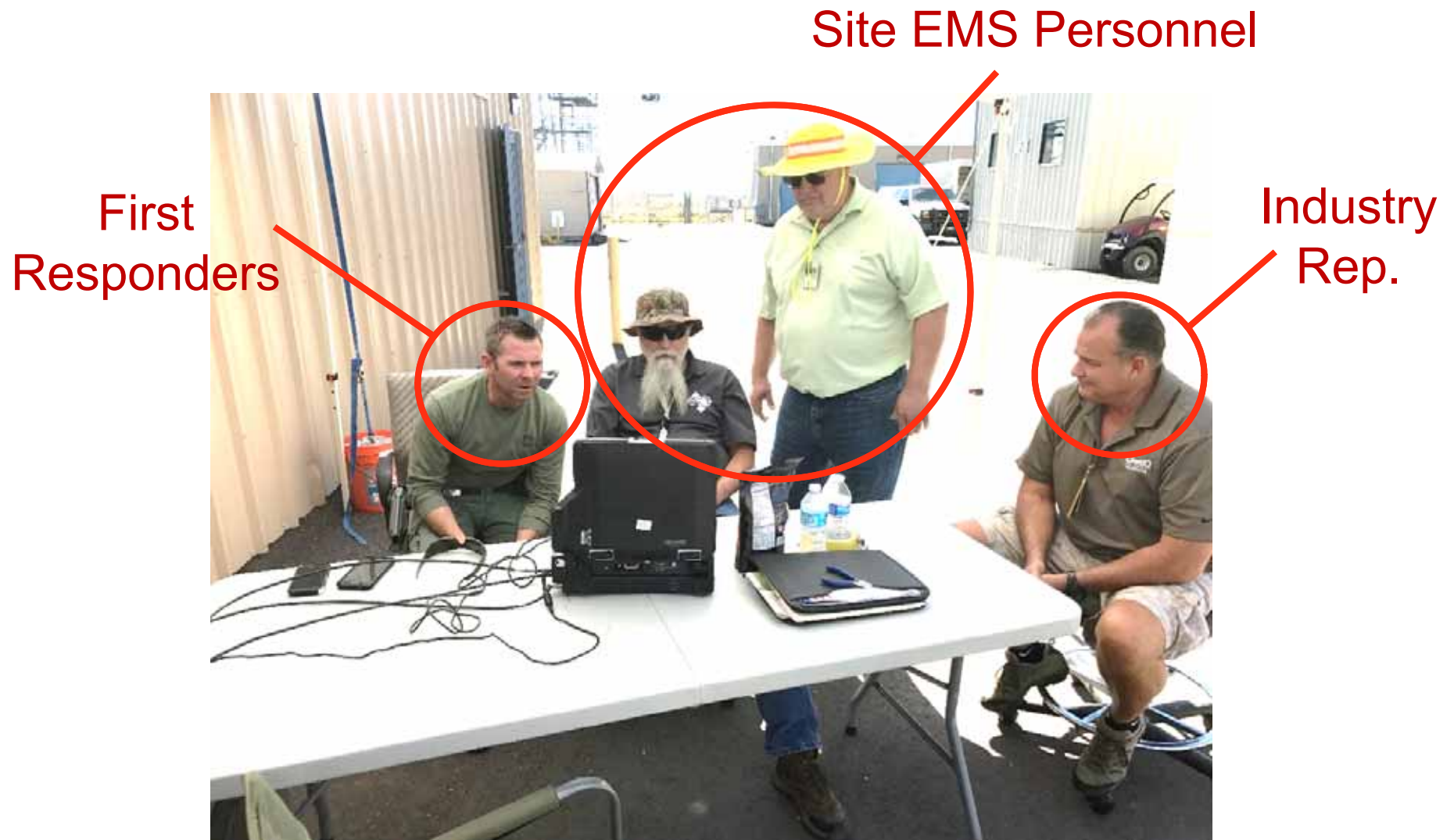
2. What a mess!

- Criticality alarm
- Leaking contaminated fluid
- Identify, mitigate, stop leak

Cool it Hotshot!



DOE-EM Examples



What A Mess!



What A Mess!



What A Mess!



Purpose

- Train with your people
- Train with your equipment
- Train with your local responders
- Train in realistic scenarios

Benefits

- **Develops Critical Thinking**
- Operations Planning
- Operator Proficiency
- New TTPs, Approaches
- Training Environment

Critical Thinking



Critical Thinking

- What could go wrong?
 - Risk Assessment?
- Where are my responders?
 - Internal?
 - External?
- Where is my equipment?

Benefits

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Operations Planning



Benefits

- Develops Critical Thinking
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- **Operator Proficiency**
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Operator Proficiency: Do all this ...



... while doing this!



Benefits

- Develops Critical Thinking
- Operations Planning
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- **New TTPs, Approaches**
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Tactic, Techniques, & Procedures



- Train, train, train
- “No harm, no foul!”
- “What if we tried it this way ...?”

“You fight like you train.”

Lt. General George S. Patton

Benefits

- Develops Critical Thinking
- Operations Planning
- Operator Proficiency
- New TTPs, Approaches
- Training Environment

Training Environments

- Real-world
- Challenging
- Imagine the unthinkable
- Varied or “Outside the box”
- Non-threatening

Lessons Learned

1. Readiness of your equipment
2. Adequate training time
3. Train with entire response community
4. Shortfalls are identified

Conclusions

- Develops critical thinking
- Competition builds comradery
- Try new procedures
- Try new equipment

Become a better First Responder!