The Big Bang Project: Observations and Lessons Learned from Pantex's Largest Emergency Exercise

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SITE OFFICE

technical services

A VPP Star Site

History

- **Sort of a "re-do" of a 2008 Emergency Exercise**
- **Incorporated lessons learned from 2008**
  - Weather related problem
  - Lack of contingency planning
  - Too many competing demands for exercise planning team
  - Planning time too compressed
- **Not really anyone's fault but left a bad taste in some mouths**

Exercise Scope

- **Changed several times during the planning process**
  - Field play
  - Tabletop?
  - Who's really going to play and in which part
  - Extension of date from June to October
- **State of Texas**
- **Four Counties**
- **DOE HQ**
- **Thomas Creek Veteran's Medical Center (VA)**

Scheduling

- Had to formally request a change from June to October for more planning time
- Partially due to the expanding and contracting scope of the exercise
- It's hard to hit a moving target

The Exercise Scenario

- **Started with one event**
- **Two events!**
  - Tritium release from one nuclear facility (SAE)
  - Explosion with plutonium dispersal from second facility about an hour later (GE)
- **Allowed different decision-making processes (both on and off site)**
- **Created interesting challenges for onsite field responders**

Planning Process

- **Planning Team commitments**
  - Get the right people early
    - People who CAN make a commitment for an organization, not just a messenger
  - Get their managers to commit to let them work on the project
- **Need to define what reviewers are reviewing for**
  - Technical Content review versus grammar and formatting review
- **Not one but THREE rounds of letters to some organizations to ask for commitment**

Simulated Victims

- **Transportation**
  - Had to keep minimum number of ambulances on site
  - Had to coordinate bringing external ambulance on site
- **Reception Center, Hospital, and Clinic**
- **Numbers**
- **"Body Doubles"**
  - Confusing
  - Doubled the number of props, victim cards, moulage, and victim actors
  - Use of victims as controller

Victim Cards

"This is an exercise" **TRIAGE INFO – Critical #1** **Name: John Doe/ John Smith** **Bleeding from the ears, left >right, left ear pinna bloody with exposed cartilage** **Respirations:** **20/min** **Cap fill:** **<2 sec** **Radial pulse:** **Present** **Mental Status:** **Brief loss of consciousness; conscious but appears confused, disoriented; does not respond to commands or questions** **"This is an exercise"**	**"This is an exercise"** **INITIAL VITALS – Critical #1** **Name: John Doe/John Smith** **BP:** **160/90** **Pulse:** **90** **Respirations:** **20/min** **Mental Status:** **Conscious but appears confused, disoriented; does not respond appropriately to commands or questions** **"This is an exercise"**
"This is an exercise" **ENROUTE – Critical #1** **Name: John Doe/John Smith** **02 via nasal cannula** **IV TKO normal saline** **No meds administered at scene or en-route** **BP:** **140/80** **Pulse:** **80 regular** **Respirations:** **20/min** **Mental State:** **Conscious, appears confused; does not respond appropriately to commands or questions** **Contamination:** **Unknown at scene; transported as critical** **"This is an exercise"**	"This is an exercise" ARRIVE at ERTF – Critical #1 Name: John Doe/John Smith Vitals: stable Mental status: GCS 13 = E4 V4 M5; responds to written messages. Both TMs appear to have perforations but blood & cerumen obscure definitive visualization. "This is an exercise"

Simulation Data

- Use the right kind of subject matter expert
- Someone with just a general familiarity might not provide the right data