



Eagle Horizon 2018 Continuity of Operations Exercise

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Agenda

- Purpose
- Continuity of Operations (COOP)
Background
- Scenario
- Hot Wash
 - NRC Perspective
 - Maryland Perspective



Common Acronyms

- Headquarter Operations Center (HOC)
- Headquarters Operations Officer (HOO)
- Regional Operations Officer (ROO)
- Primary and Mission Essential Functions (PMEF and MEFs)
- MEF Support Teams (MEF Team)
- Emergency Relocation Group (ERG)

Exercise Overview

- National Level Exercise 2018 Dates: April 30 – May 11, 2018
- Externally evaluated; FEMA evaluator at regional locations
- Federal government-wide scenario involving Federal, State, local, tribal, and private sector participants

- Eagle Horizon 2018 Dates: May 7-8
- 2 day full-scale exercise
- Locations: Headquarters Operations Center (April 30-May 4), regions (May 7-8)
- The ERG relocated to the ERG Relocation Site

Eagle Horizon 2018 Interagency Objectives

- Demonstrate and assess the ability to implement COOP plans and perform essential functions
- Demonstrate the ability to communicate and coordinate with Federal executive branch leadership



Eagle Horizon 2018 NRC Objectives

- Validate incident response in COOP Plan, support of PMEF and MEF
- Test employee accountability
- Examine the ability of a back-up relocation site to receive the ERG if the first regional location is unavailable.



Primary and Mission Essential Functions

- Primary Mission Essential Functions (PMEF)
 - Directly support National Essential Functions
 - NRC PMEF is “Events Assessment”
 - Includes **Threat Assessment** (ongoing), **Situational Awareness** (ongoing), and **HQ Incident Response** (as needed) functions
- Mission Essential Functions (MEF)
 - Elements of 4 core NRC mission areas: Licensing, Inspection, Allegations/Investigation, and Enforcement
 - Time-sensitive actions with potential public health and safety implications (e.g., NOEDs, orders, special inspections, etc.)

Background

Eagle Horizon 2018

- Eagle Horizon 2018 (COOP exercise) simulated a large Category 4 hurricane (Hurricane Cora) making landfall in Virginia and then proceeding north to impact the National Capital Region as a Category 2.
- The exercise simulated damage to the University of Maryland, and several licensing injects were considered during the exercise.
- The exercise identified a need to be able to better access subject matter expertise throughout the agency during a COOP event; including non-power reactors and materials.

Objectives for NPR Participation

- Demonstrate ability to respond to events at NPR facilities during COOP emergency.
- Validate current response procedures, and identify areas where normal operating procedures/process may need to be amended or changed for COOP situations.
- Identify enhancements and/or next steps.
 - **Understand the roles and responsibilities of MUTR staff.**
 - **Establish the resources available in emergency situations.**
 - **Determine the process for an emergency LAR.**

COOP Background

- During a COOP event, several assumptions are made that create differences in the normal operational approach:
 - There has been an emergency or threat at NRC HQ, and the facilities and staff are not available (or degraded)
 - HOO function is transferred to COOP Site; and key HQ leadership (i.e., ERG) has been deployed
 - Regions have primary responsibility for NRC essential functions (e.g., PMEF, licensing, inspection, allegation/ investigation and enforcement)
 - Communications are degraded; phones, email, ADAMS, and incident response IT systems should be available

COOP Background (contd)

- Some, possibly all, HQ staff may be unavailable due to degraded communications conditions
 - Regions and ERG must be prepared to conduct all NRC essential functions without HQ support
 - Some permanent teleworking staff may be available
- COOP Plans must take into account potential impacts to NRC licensees in the National Capital Region.
 - A regional COOP event large enough to impact NRC HQ would also likely impact 3 NPRs: AFRRI, NIST, and/or University of Maryland.

Key EH2018 Participants

- Exercise play included participation from Federal agencies, State and local, and private sector
- The State of Maryland and Commonwealth of Virginia
- NRC participation included interaction with NRC licensees (Dominion and University of Maryland)

Injects Developed for Exercise

- #1-Information Only (10:12am)
 - Power is out at the reactor and there is no access to a generator.

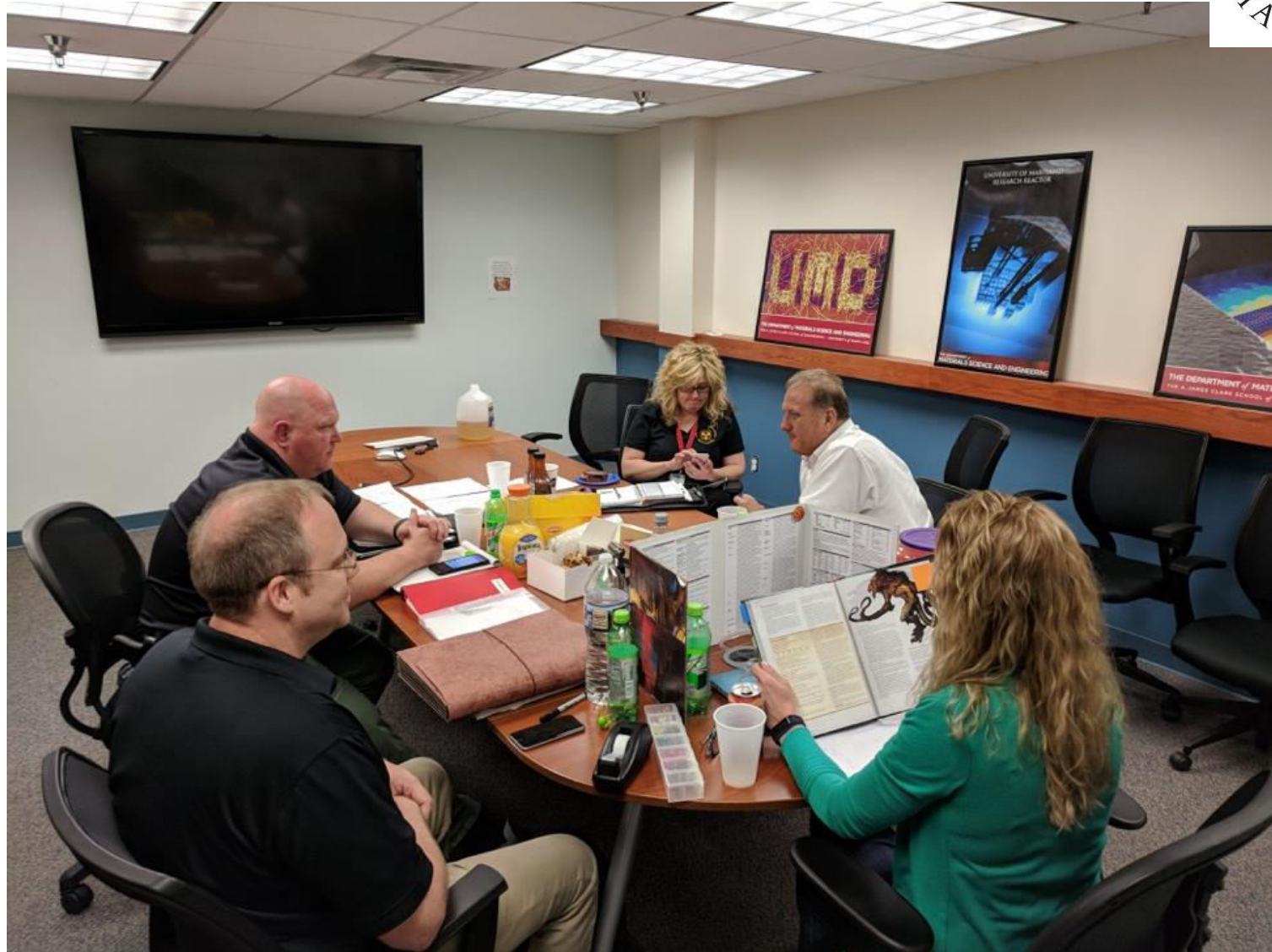




Injects Developed for Exercise

- Over the weekend the region experienced a Category II hurricane with sustained wind speeds of 96-110 mph and gusts exceeding those levels.
 - Rainfall accumulation was 5-6inches.
 - Power is expected to be out for 3 weeks.
- Fortunately, in preparation for this, Director, Tim Koeth, RSO, Mary Dorman, and Capt. Ecker have chosen to stay on campus after a mandatory evacuation.

Injects Developed for Exercise





Injects Developed for Exercise

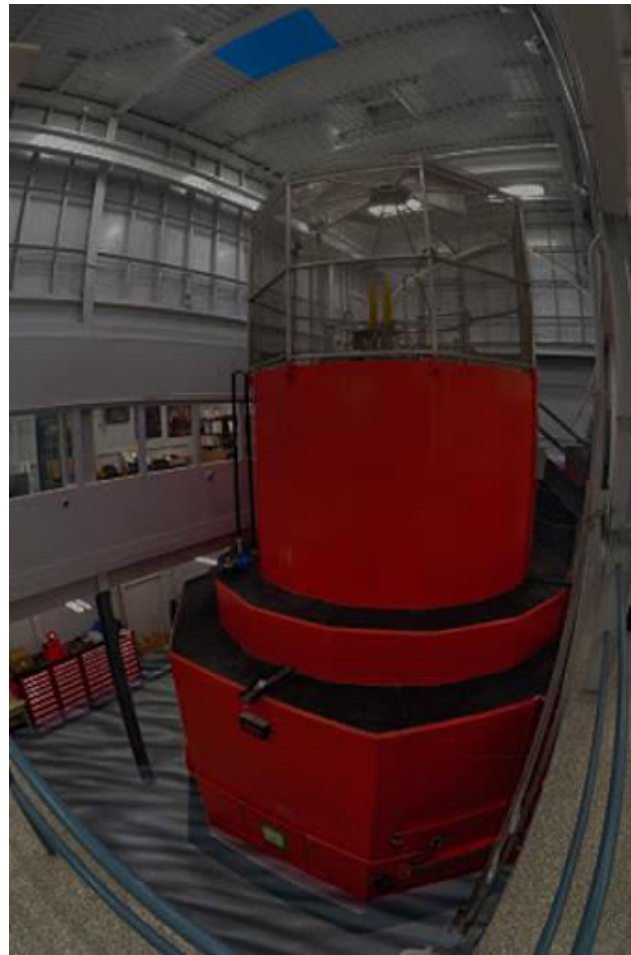
- #2-LAR (11:33am)
- High wind speeds caused a roof panel to blow away.
 - Rain water poured into the facility
 - Accumulation > 3 inches
 - Not over the reactor.
 - Documents are strewn about the facility.
 - Cabinets and machines have blown over.
- The power is out to the facility.
 - Could be 3 weeks until restored.
 - **Without power, we cannot meet license requirements.**
- Cell towers in the area have been destroyed.
 - Communication is spotty.



Injects Developed for Exercise

- #3-LAR (2:00pm)
- During an afternoon visit to the reactor high-bay, the group discovers that rain in the building over-flowed the sump storage.
- Water has begun to empty out of the reactor high-bay around the roll-up door and into the environment.
- With out power, unable to test the water before it is discharged to the public.
 - **This is a technical specification requirement.**

Obviously Photo Shopped Image!!



Responses From NRC

- HOO initially unsure of MUTR/RTR existence.
- From initial request for LAR, took 3.5 hours to find RTR expert.
- Never granted an emergency LAR to an RTR before!



Eagle Horizon (EH) Lessons Learned

- Beginning with EH2016, NSIR began to add NPR elements into EH exercises. EH2018 was the first actual interface with NPR licensee (i.e., Univ. of MD) during a National Level Exercise.
- EH2018 recommendations include adding a NPR expert to the ERG (i.e., NRR MEF Team).
- NPR procedures will be added to NRR Position Guides, which are accessible to region staff.
- Future EH exercises will continue to build on NPR planning for a variety of PMEF or MEF activities.



EH Lessons Learned

- Have a prepared statement when calling HOO. They will ask lots of questions!
- Prior to hurricane or severe weather event identify potential issues if facility experiences loss of power or flooding:
 - Tech Spec
 - Security Plan
- Determine essential staff and each persons role.
- Communication is important.
- University has hotel rooms set aside.

Questions

