

# Developing an Exercise Program Curriculum

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# The Process

- Overview of the Requirements (Needs Analysis) – Bob Murawski
- Overview of Requirements & Courseware/ Curriculum – Liz Sousa

# Exercise Orders

- DOE Order 151.1C, *Comprehensive Emergency Management System*,
- DOE Order 473.3, *Protection Program Operations*,
- DOE Order 150.1, *Continuity Programs*

## Exercise Guidance Documents

- DOE G 151.1-3, Programmatic Elements, *Emergency Management Guide*, Chapter 3, *Exercises*
- DOE G 151.1-3, Programmatic Elements, *Emergency Management Guide*, Chapter 4, *Readiness Assurance*

# DOE Order 151.1C – Base Program Exercise Requirements

## DOE Order 151.1C, Chapter 3 Paragraph 3.b:

- Each site/facility must conduct **annual building evacuation exercises** to ensure that employees are able to safely evacuate their work area.
- Each site or facility, as applicable, must **annually test communications with DOE Headquarters, the Cognizant Field Element, and offsite agencies systems** to ensure that communications systems are operational.

# DOE Order 151.1C – Hazardous Materials Program Exercise Requirements

DOE Order 151.1C Chapter IV, paragraph 4.b

- A formal exercise program must be established to validate **all elements of the emergency management program over a 5-year period**
  - Each DOE/NNSA facility must exercise annually
  - Site level ERO and resources must participate in a minimum of one exercise annually
  - Offsite response organizations must be invited to participate at least once every 3 years

# DOE Order 473.3 – Protection Program Operations Exercise Requirements

## DOE Order 473.3 Attachment 2, Annex 2, Table 2-1:

- **Limited Scope Performance Test (LSPT):** Weekly at facilities implement the DOE Tactical Doctrine
- **Alarm Response and Assessment Performance Test (ARAPT):** Two/quarter/alarmed SNM location and one/quarter for all other locations when the facility is implementing the DOE Tactical Doctrine
- **Validation Force on Force (VFoF):** One per year for site with armed Protective Force (Additional requirement for Category 1 facilities)
- **Command Post Exercise (CPX):** One per year per site
- **Command Field Exercise (CFX):** One per year per site
- **Joint Training Exercise (JTX):** As required by the Site Security Plan

## DOE Order 473.3 Attachment 2, Annex 2, Paragraph 2:

- **COORDINATION.** When a CPX, CFX or JTX involves a demonstration of site level emergency response capabilities, the development and conduct of the exercise must be coordinated with the appropriate site level emergency management organizations.

# DOE Order 150.1 Exercise Requirements

- A COOP training, testing, and exercise program:
  - Must be developed and implemented to assess and validate the integration and practicality of all aspects of Continuity of Operations Program (COOP) plans, policies, procedures, systems, and facilities used in response to a continuity event.
  - Provide the opportunity for Continuity Emergency Response Group members to demonstrate familiarity with COOP plans, the capability to perform their assigned actions.
  - Provide the opportunity to demonstrate inter-and intra-agency communication capabilities.
  - An annual formally documented continuity exercise must be conducted.  
**The exercise may be part of a larger emergency management exercise.**
  - A comprehensive debriefing must be conducted after each exercise.

# Fukushima – Beyond Design Basis Events (BDBE)

## 8.1.3 Update the DOE Emergency Management Order and Guide

Initiate revisions of DOE Order 151.1C and DOE Guide 151.1-2 to include criteria and guidance for:

- Analyzing the emergency planning needed to respond to BDBEs.
- Integrating the analysis of BDBEs performed as part of the documented safety analysis into emergency planning.
- Planning for the response to simultaneous accidents at multiple facilities.
- Planning for the response when support services may not be available.
- Coordinating site, facility, and community emergency plans.
- **Integrating the site's emergency management, security, and continuity-of-operations activities.**
- Integrating BDBE requirements and guidance with DOE Guide 421.1-2, DOE-STD-3009-94, and DOE-STD-1189-2008.

A Report to the Secretary of Energy, *“Review of Requirements and Capabilities for Analyzing and Responding to Beyond Design Basis Events”*

# Draft Contracts Requirement Document for DOE 151.1C

The following represents a DRAFT version of a severe event section of revised DOE O 151.1C, Attachment 2, Contractor Requirements Document (12/19/2011):

4. SEVERE EVENT RESPONSE PROGRAM. Response plans and associated implementing procedures for severe events [including Beyond-Design-Basis Events (BDBEs) and multi-facility events resulting from a common accident initiator] must be considered and developed, if appropriate, as follows:
  - e. **The site-wide emergency management program must be integrated with site security and Continuity-of-Operations activities to promote a more effective response to severe events, including BDBEs and multi-facility events.**
  - f. Training for response to severe events, including BDBEs and multi-facility events, must be included in the site-wide training program for the Emergency Response Organization (ERO). Training must be offered to offsite response organizations.
  - g. The site-wide exercise program must include **exercises focusing on severe events**, including BDBEs; scenarios must cover events that can cause the loss of infrastructure capabilities and mutual aid; and events that impact multiple facilities. Offsite response organizations must be offered the opportunity to participate.

# Results Overview

- Each order requires or strongly suggests that COOP, Security, and Emergency Management exercise programs be integrated.
- The “Beyond Design Basis Events” report states that the Emergency Management, Security and COOP programs be more closely integrated.
- COOP and Security approved exercise design, development, conduct, and evaluation guidance does not exist beyond an overview. [**Note** that DOE O 473.3 does an excellent job with Force on Force safety planning.]

# Exercise Courseware

- EXR 101DW: Overview of the DOE/NNSA Emergency Exercise Program (EOTA)
- EXR 102DW: Developing Exercise Scenarios (ORISE)
- EXR 103DW: Developing Exercise Objectives (ORISE)
- EXR 111: Train the Trainer Evaluator and Controller Course (EOTA)
- Basic Controller and Evaluator Tutorial (BCET) (ORISE)
- EXR 131: Fundamentals of Exercise Design (EOTA)
- EXR 231: Exercise Design Laboratory (EOTA)

# Overview of Requirements & Courseware/Curriculum

- Review of existing exercise/course/curriculum objectives
- Correlate objectives to DOE regulations
- Analyzed data will be surveyed to validate content
- Courses will be refined/developed based on results of validated data

Course/Training Objective	Task/Knowledge/Skill	Job Area
Describe the basic elements of the design and development process for preparing an exercise plan <b>LESSON I OBJECTIVE</b>	<b>T Scenario</b> <b>T</b> Ensure the scenario is consistent with the set of exercise objectives and explicitly supports an evaluation /validation of each objective.	<b>T</b> DOE 151.1-3, EXERCISES <b>Slide: Lesson 1-14, 20, 21, 22, 23.</b>
	<b>T Introduction</b> <b>T</b> Establish a formal exercise program that validates all elements of a facility/site or activity emergency management program over a 5-year period.	<b>T</b> DOE 151.1-3, EXERCISES <b>Outside of the scope for this course.</b>
	<b>T Logistics Support</b> <b>T</b> Identify logistical support for specific responsibilities	<b>T</b> DOE 151.1-3, EXERCISES <b>Move to Objective 4, Located in Lesson II, Slide 11-19.</b>
	<b>T General Approach</b> <b>T</b> Ensure exercise-specific objectives are used to specify the emergency response functions to be tested.	<b>T</b> DOE 151.1-3, EXERCISES <b>Slide: Lesson 1-12.</b>

# Draft Exercise Curriculum

- Basic Courses
  - Evaluator and Controller Training
  - Overview of DOE/NNSA Exercise Program
- Design Courses
  - Developing Exercise Objectives
  - Developing Exercise Scenarios
  - Exercise Program Management (Proposed - New)
- Advanced Courses
  - Exercise Design Laboratory
  - Security Focused Exercises (Proposed - New)