



Department of Energy

Exercise FORWARD CHALLENGE 04

After-Action Report

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Table of Contents

- 1. Purpose of Report 1
- 2. Exercise Concept 1
- 3. Exercise Objectives..... 2
- 4. Overview of Data Collection Effort..... 3
 - 4.1 Data Collection Methodology..... 3
 - 4.2 Hot Wash Summary 4
- 5. Accomplishment of Exercise Objectives 5
 - 5.1 Interagency Objectives..... 5
 - 5.2 Internal Department/Agency Objectives..... 5
- 6. Significant Lessons Learned by Functional Area 5
 - 6.1 Plans/Procedures 5
 - 6.2 Guidance/Policy 5
 - 6.3 Logistics 6
 - 6.4 Security 6
 - 6.5 Operations 6
 - 6.6 Facilities 7
 - 6.7 Tests, Training and Exercises 7
 - 6.8 Finance/Procurement 7
 - 6.9 Information Technology/Communications..... 7
- 7. Proposed Next Steps 7

Annexes

- A. Acronyms and Abbreviations A-1

Tables

- 1. Overarching and DOE Specific Exercise Objectives..... 2

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Exercise FORWARD CHALLENGE 04

After-Action Report

1. Purpose of Report

The purpose of this After-Action Report (AAR) is to document the significant outcomes of the Department of Energy's (DOE's) participation in Exercise FORWARD CHALLENGE 04 (FC 04). This AAR provides a brief overview of DOE's exercise objectives and Continuity of Operations (COOP) response activities at both the departmental and interagency levels. The AAR also identifies significant lessons learned in six of the nine functional areas identified in section 6 of this report.

2. Exercise Concept

Exercise FORWARD CHALLENGE 04 was a full-scale, scenario-based, interagency COOP exercise. Exercise play was conducted at two levels: at the interagency level and at the individual Department and Agency (D/A) level. FORWARD CHALLENGE 04 was the first interagency COOP exercise conducted for the Federal Executive Branch and was conducted as a no-fault exercise. The interagency exercise provided a framework for each D/A to conduct their own internal COOP exercise focused on a D/A-specific purpose and optional D/A-specific objectives.

At the interagency level, scenario events were injected into exercise play by an exercise control team and engaged players in response activities that facilitated the accomplishment of the identified purpose and objectives. All exercise play was conducted at the alternate sites of the participating D/As outside the National Capitol Region. The start of the exercise occurred on Tuesday, May 11 at 9:00 p.m., and the end of the exercise was at 2:00 p.m. on Thursday, May 13.

In addition to the interagency injects, DOE specific scenario events were injected into exercise play by an exercise control cell located at the COOP site. The scenario events were designed to provide DOE and National Nuclear Security Administration (NNSA) COOP personnel and organizations the opportunity to demonstrate their abilities to perform their national security, infrastructure support, emergency response, and command and control essential functions. Internal DOE scenarios included the following:

- Internal strife in a major oil exporting foreign country significantly curtailed the amount of oil coming into the United States, thereby initiating analyses of domestic oil markets and discussions on possible draw down of DOE Strategic Petroleum Reserves oil.
- Detection of radioactivity in scrap metal being transported on a U.S. highway resulted in deployment of a DOE Radiological Assistance Program Team.
- Two scenarios involving the movement of radiological materials overseas resulted in the need for DOE monitoring and assistance. In one scenario, a foreign government requested U.S. assistance, provided by DOE, for an incident involving the smuggling of radioactive material that could be used in a dispersal device. In the other scenario, DOE assistance was

required when a transport vehicle moving radioactive material from Russia to the U.S. experienced mechanical difficulties.

- An explosion of unknown origin at a DOE nuclear weapons laboratory required the formation of a DOE Headquarters Emergency Management Team to monitor and provide field support during the incident.
- An intruder detected at a DOE nuclear weapons facility required DOE Headquarters to monitor and report on the situation.
- A series of events of unknown origin led to major blackouts in the Northwest that affected the department’s Bonneville Power Administration and invoked DOE’s role as the lead Federal agency for the energy sector of the nation’s critical infrastructure.
- Introduction of a rapidly spreading computer virus so invasive that a decision was made to shut down major components of the DOE computer network.

3. Exercise Objectives

The interagency community established specific, overarching objectives for Exercise FORWARD CHALLENGE 04. These objectives, which are identified in Table 1, applied to all D/As participating in the exercise. The right hand column of Table 1 identifies the internal DOE specific objectives for FC 04.

Table 1. Overarching and DOE Specific Exercise Objectives

	Overarching Objectives	DOE Objectives
1.0	Exercise alert and notification of COOP staffs during an emergency situation	<ul style="list-style-type: none"> • Receive and acknowledge notification of DOE COOP plan activation
2.0	Establish an operational capability at an alternate facility	<ul style="list-style-type: none"> • Implement operational deployment at a COOP relocation site • Perform selected essential functions from the relocation site; national security, command and control, infrastructure support, and HQ emergency response • Validate availability and accessibility of vital records necessary to perform national security critical essential functions from an alternate COOP site
3.0	Implement succession plans and delegation of authority	<ul style="list-style-type: none"> • Test succession and delegation of authority plans
	3.1 Ensure plans are compatible with established requirements	

<p>4.0</p>	<p>Demonstrate an interoperable communications capability</p> <p>4.1 Demonstrate redundant communication capabilities</p> <p>4.2 Communicate with the Federal Emergency Management Agency (FEMA) Operations Center (FOC), internal D/A elements, other D/A COOP sites and customers</p> <p>4.3 Communicate via secure means, as required</p>	<ul style="list-style-type: none"> • Communicate, as appropriate (i.e., secure, non-secure, internal and external) from the DOE COOP relocation site to National Capital Region (NCR) Departments and Agencies 24 hour points and selected DOE HQ COOP “reach back” locations
<p>5.0</p>	<p>Implement the process of receiving, processing, analyzing and disseminating information from internal and external entities</p> <p>5.1 Notify appropriate entities of change of operation location</p> <p>5.2 Notify entities of means by which D/A can be contacted (e.g., email address, phone & fax numbers)</p> <p>5.3 Notify FOC and all other appropriate agencies regarding the D/A COOP status in accordance with Section 11 b, FPC 65</p> <p>5.4 Coordinate/disseminate information with the appropriate organizations</p>	<ul style="list-style-type: none"> • Test departmental information receipt, coordination, and dissemination <ul style="list-style-type: none"> - Within DOE HQ - Between HQ and selected field sites - Between DOE and other D/A COOP sites

4. Overview of Data Collection Effort

4.1 Data Collection Methodology

DOE and NNSA data collectors were present in all of the venues where participant activity was occurring. The data collectors used a variety of methods to record their observations and data depending upon what method they were most comfortable using. Most of the data collectors used forms developed internally by DOE that outlined the overall objectives and multiple sub-objectives established for each responding departmental organization. The sub-objectives developed for each organization were specific to the actions that organization was expected to take based on the scenario events, and to successfully demonstrate the ability to implement their essential functions at the COOP relocation facility used for this exercise. DOE did not use the data collection forms provided in the FC 04 Exercise Plan or Data Collection Plan, although our forms were similar in design and concept.

4.2 Hot Wash Summary

The information presented here is derived from a combination of post-exercise hot washes; verbal and written comments from exercise participants, data collectors, evaluators, and controllers; and completed participant questionnaires.

The key points identified from these information sources include:

- FC 04 provided DOE an excellent training opportunity for our COOP responders and others associated with the exercise. The general framework provided by the exercise facilitated DOE's ability to realistically test many of our COOP plans and procedures.
- Once initial technical difficulties in delivering FC 04 injects to our control cell for the first hour of the exercise were resolved, there was good communication and support between DOE representatives in the interagency control cell and the control cell at our COOP site. Internal communication flow from the FC 04 senior controllers to the D/As within the interagency control cell was also effective.
- The use of the interagency control cell at Mount Weather to transmit all FC 04 injects created exercise artificialities that made it very difficult to test communications. In a real incident, communications would flow through paths that were not tested during FC 04.
- The D/A control cell status reports that were due at noon and 4 p.m. did nothing but detract from implementing the exercise. A lot of the information requested in the reports was unknown by our control cell at the time and it was not appropriate to interrupt our field controllers during play since the requested information would be collected after the exercise was complete.
- The exercise did not include sufficient interagency scenario events to test use of the COOP Communications Plan.
- It was difficult for DOE senior managers and offices with essential functions affecting other D/As to find contact numbers for those agencies at their COOP locations. The phone number listing for other agency COOP sites is classified. Apparently, a review is going to be conducted to determine if this information would remain classified once the activation of COOP plans has been directed. A determination also needs to be made as to what drives the document to be classified and whether excerpts from the document, such as telephone numbers, can be extracted as an unclassified reference document. During an event, the FOC should routinely update and distribute contact information for distribution to all D/As.
- DOE has established security condition (SECON) levels similar to the Homeland Security Advisory System. As a result of this exercise and the computer virus scenarios, DOE has recognized a need to incorporate cyber security threats and attacks into our advisory system and graded protection strategy.

5. Accomplishment of Exercise Objectives

5.1 Interagency Objectives

DOE was able to accomplish the FC 04 interagency objectives to the extent allowed by the scenario and exercise play. The extremely limited interagency play did not provide a substantive test of critical portions of FC 04 objectives 4.2 and 5.4, or the COOP Communications Plan. Although FEMA required that a COOP Status Reporting Form be submitted periodically by each D/A during the exercise, the purpose for submitting the form was not clear in that it was never used to develop and disseminate an up-to-date and validated interagency contact list to the participating D/As at their COOP locations. The Status Reporting Form also needs to be accompanied by better instructions to ensure that it is being completed appropriately and accurately by all D/As, and meets its intended purpose (which is not defined) upon completion.

The matrix of participating D/A public affairs contacts that was distributed prior to and specifically for FC 04 created a significant exercise artificiality.

5.2 Internal Department/Agency Objectives

DOE, including NNSA, successfully achieved all of its internal objectives. Most importantly, DOE and NNSA were able to demonstrate successful continuity of all of the essential functions that were tested by this exercise.

6. Significant Lessons Learned by Functional Area

Exercise FORWARD CHALLENGE 04 provided the opportunity for selected DOE employees to deploy to an alternate site and establish an operational capability for the department's essential functions. This section addresses the significant lessons learned from the exercise that apply to the COOP program from an interagency or strategic-level perspective.

6.1 Plans/Procedures

None

6.2 Guidance/Policy

- Clarification needs to be made for all Federal D/As regarding what is meant by the term National Capital Region (NCR) as it pertains to the closure of Federal facilities in the Washington, D.C. metropolitan area under conditions requiring COOP plan activation. DOE maintains a Headquarters facility in downtown Washington, D.C. and another Headquarters element in the D.C. metropolitan area but outside of the capital beltway. When the Office of Personnel Management (OPM) declares that all non-essential Federal personnel are to remain home during an emergency, it is not clear what facilities the OPM directive encompasses. For snow emergencies, for example, closure of Federal facilities includes the DOE facilities that are within the D.C. metropolitan area but outside the capital beltway. It is not clear whether the same protocol should be applied to an event requiring COOP plan implementation. DHS and OPM should provide guidance as to whether the facilities impacted by a COOP-related evacuation or "stay home" directive are defined at the Federal level or are to be defined by individual D/As.

- DHS and OPM also need to clarify for Federal agency heads what authorities they possess if a decision is made at the Presidential or departmental level that employees must remain sheltered for their own safety or for the safety of the general public. For example, if a biological agent is known to have been dispersed in Washington, D.C., do Federal agencies have the authority to physically force their employees to remain indoors until the safety of the situation outdoors has been determined?
- The FEMA Federal Preparedness Circulars indicate that a viable COOP capability must be operational no later than 12 hours after activation. It is not clear what defines or identifies the requirements and expectations for emergency preparedness, response, and interagency communications/coordination during those first 12 hours.
- Guidance should be provided to public affairs personnel of all D/As regarding the respective roles of DHS and individual D/As in issuing press releases. This is critical to ensuring that conflicting information is not disseminated to Federal employees and the public during an emergency. Similarly, strict protocols should be established that define how D/A congressional and intergovernmental affairs representatives are expected to coordinate with or communicate to DHS their needs for contacting congressional, gubernatorial, and national and local stakeholder representatives in states where significant D/A activities occur. Past DOE experience has shown that congressional and gubernatorial representatives want information early on regarding the status of nuclear material protection at DOE field sites within their constituencies.

6.3 Logistics

- DOE is trying to determine what, if any, arrangements should be made to identify and provide credentials for essential personnel to facilitate their access through security checkpoints to our COOP facilities, and whether it is reasonable or prudent to turn away non-essential personnel who may come to the facility volunteering to help.

6.4 Security

- In any type of emergency, there is likely to be some need for Federal agency personnel to access their facilities in and around Washington, D.C. if they can do so safely. DHS should coordinate with Federal, State, and local authorities to develop a government-wide system for providing credentials to selected Federal personnel that allows them to readily pass through local security checkpoints.
- DHS and OPM should consider providing guidance to D/As to aid them in determining the level of security (protective force personnel) that should remain to protect Washington D.C. Federal facilities during a major attack. This includes guidance or requirements regarding the roles and responsibilities of the Federal Protective Services during COOP-related emergencies; how to organize and command Federal and local security forces to maximize protection of critical facilities, essential municipal systems, and the evacuation or return of essential personnel; and protocols for communications among Federal and local authorities.

6.5 Operations

None

6.6 Facilities

None

6.7 Tests, Training and Exercises

- The pre-exercise meetings didn't provide a sufficient forum to address and coordinate interagency play and it was too hard for individual D/A's to coordinate this on their own, particularly given the fact that the Master Scenario Events List and injects were continually changing up until, and even during, the exercise.

6.8 Finance/Procurement

- FC 04 included an inject from the Office of Management and Budget (OMB) 70 minutes after D/As were expected to be operational under COOP requesting that all D/As identify emergency funding requirements by priority. It was not clear from the exercise whether this would be a realistic request at that stage of an emergency requiring D/As to implement their COOP plans. While it was a good test for our department to discuss emergency funding issues, OMB should consider defining a standard format and guidance ahead of time for D/As to submit this information if such an action is expected to occur during a real event. Similarly, it is not clear why within 60 minutes, OPM was requesting that each D/A report on how they planned to provide information to employees who were not involved in COOP activities and support those working from home during a COOP situation. These elements should already have been defined in D/A COOP plans and could be provided to OPM ahead of time. Thus, if still deemed necessary by OPM, D/As would only need to report any deviations from or obstacles to implementing their existing plans as an event unfolds.

6.9 Information Technology/Communications

- DOE is working to determine an effective internal communications mechanism to disseminate and facilitate the response to outside requests for information. It would be very beneficial if all D/As that anticipate requesting information from all or selected other D/As try to develop a standard form for requesting such information ahead of time so that responders are familiar with the information content and transmittal mechanism/location that is expected.

7. Proposed Next Steps

- One of the best things that DHS could do to assist the Federal community is to have a web site or other such mechanism to share lessons learned in implementing D/A COOP programs and conducting tests and exercises. Although each D/A has to develop their own COOP plan specific to their essential functions and needs, perhaps there are some common elements that can be shared or readily adapted among the D/A community. The CWG is another forum wherein lessons learned could be shared among D/As.
- DHS should consider conducting smaller exercises with objectives specifically designed to realistically test selected interagency play and communications (e.g., tests among selected D/As and tests that both do and do not include injects and play by the FOC, Homeland Security Operations Center, or DHS Office of National Security Coordination).

- Although the scope and conduct of this first interagency COOP test by DHS is laudable, a method needs to be devised to realistically test the ability of Washington, D.C. Federal offices to relocate to their COOP sites using a scenario that simulates a normal workday and the monumental challenges that would be involved in evacuating the city.
- DOE plans to conduct a series of smaller scale tests of our COOP plans, procedures, and response capabilities to continually improve our department-wide understanding of COOP requirements and expectations, and demonstrate that DOE is maintaining its ability to successfully perform our essential functions. Reporting of the results of these activities is an area where all D/As could significantly benefit from the sharing of lessons learned.

Annex A: Acronyms and Abbreviations

AAR	After-action report
COOP	Continuity of Operations
D/A.....	Department and Agency
DHS.....	Department of Homeland Security
DOE	Department of Energy
FC 04.....	Exercise FORWARD CHALLENGE 04
FEMA	Federal Emergency Management Agency
FOC.....	FEMA Operations Center
NNSA.....	National Nuclear Security Administration
OMB	Office of Management and Budget
OPM.....	Office of Personnel Management