COOP-EV-17-AAR
Revision 0

After Action Report: Idaho National Laboratory Continuity of Operations Program 2017 Exercise September 26, 2017

November 2017

The INL is a U.S. Department of Energy National Laboratory
operated by Battelle Energy Alliance

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Emergency Management

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Submitted by Sherman Campbell Exercise Director	Date
Approved by Carl Farmer INL Emergency Management Department Manager	Date

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ACRONYMS

3DSVT	3D scenario visualization tool
BEA	Battelle Energy Alliance, LLC
CEMT	Continuity Emergency Management Team
CERG	Continuity Emergency Response Group
COOP	Continuity of Operations Program
ESA	essential support activity
INL	Idaho National Laboratory
PMEF	primary mission essential function
U.S.	United States
WCC	Warning Communications Center

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After Action Report: Idaho National Laboratory Continuity of Operations Program 2017 Exercise

1. PURPOSE

On September 26, 2017, the Battelle Energy Alliance, LLC (BEA), Idaho National Laboratory (INL) Continuity of Operations Program (COOP) conducted an annual exercise to demonstrate the COOP responder's ability to maintain COOP's primary mission essential function (PMEF) and essential supporting activities (ESAs) during a national loss of commercial power caused by a malware attack on the United States (U.S.) power grid. The Continuity Emergency Management Team (CEMT) and Continuity Emergency Response Group (CERG) responded to CERG notifications and worked through simulated challenges, using COOP's 3D scenario visualization tool (3DSVT), that challenged COOP's PMEF, ESAs, and impacted mission critical personnel's human capital. The PMEF and ESAs were successfully maintained as the CERG developed incident action plans through several phases of the scenario, addressing appropriate needs, concerns, and strategic planning.

2. SCOPE

Exercise participants and their extent of play are shown in Table 1.

Table 1. Participants and extent of play.

Participants	Extent of Play
BEA/INL Organizations	
BEA CEMT	Full participation
BEA COOP CERG	Full participation
Department of Energy Idaho Operations Office CEMT	Observation
Warning Communication Center (WCC)	CERG Notifications

This exercise was conducted to test CERG readiness to maintain the COOP PMEF and associated ESAs amidst physical and psychological interruption to the availability of mission critical personnel.

The CERG personnel were notified via Everbridge to respond to the COOP command room in Willow Creek Building Room 120-D. After a short introduction and safety brief, the exercise director presented the scenario using the COOP virtual tabletop tool. Four cascading phases of the scenario were shared, allowing the CERG sufficient time to respond and plan between each phase. After the concluding phase of the scenario, the CERG worked through a reconstitution plan to return the lab back to normal operational status.

The exercise was contained to CERG members located in the COOP command room with no play outside of the exercise. Actual drill play took place over approximately a two-hour period. All safety and security procedures were followed.

3. SCENARIO SUMMARY

Energy reliability and security is of the utmost importance to U.S. national security, national economic interests, and basic health and welfare. Electricity, in particular, is an essential part of modern life, the disruption of which would impact not only households, but virtually every sector of the economy, including the critical infrastructure related to transportation, drinking water, communications and information, finance, and oil and gas production.

Recent cyber-related events have raised concerns about the security and resiliency of the nation's electricity system. For example, in December 2015, cyber-attacks on the Ukrainian power grid represented the first publically acknowledged cyber-incidents to result in power outages, bringing increased attention to the potential risks posed to the U.S. electricity system by cyber-threats. These concerns are increased by the recognition that as technology advances and integrates into the electricity system, new threats and vulnerabilities can arise, creating new and significant challenges for thousands of system operators to face.

The four phases of the scenario were custom-built using a virtual tool to represent a malware attack against the national power grid resulting in what is known by experts in energy sector resilience as a "Black Sky" event or national blackout. The CERG response, planning, and communications efforts were challenging and continually evolving as the CERG members worked through the preparedness, initiation, response, and recovery phases of the scenario.

CERG members leveraged existing plans, procedures, and management practices to respond to the simulation. Responders demonstrated good flexibility and problem-solving skills as they worked through the phases, identifying potential challenges to continuous operations, and then establishing planning efforts to mitigate those challenges.

4. EXERCISE OBJECTIVES AND EVALUATION

During the exercise, four objectives were evaluated in the context of mitigation with regard to the ability to fulfill: (1) PMEF, (2) ESAs, (3) notifications from the WCC, and (4) whether the exercise conduct was both professional and timely. The following outlines the criteria for evaluating the degree to which the exercise objectives were achieved:

- The PMEF and ESAs were focused on and central to planning as the scenario developed.
- The WCC was notified of the exercise and made appropriate CERG notifications, initiating response.
- Players conducted themselves professionally and the exercise director facilitated a professional and timely exercise.

5. DRILL ISSUES

There were no issues observed in this exercise.

6. CONCLUSIONS

COOP conducted a successful exercise at INL. The CERG/CEMT demonstrated several capabilities of particular importance in the context of the objectives. The CERG was flexible as the scenario developed and presented new challenges. The CERG worked well together and complimented combined efforts to maintain continuous operations at INL. The PMEF, several ESAs, and staffing levels were directly impacted, which had the potential to interrupt the entire COOP PMEF. Because of the decisions made during the exercise, and through strategic planning efforts from the CEMT/CERG, the PMEF was never interrupted.

Overall, even with the uncertainties and unknowns that the CERG/CEMT experienced during this exercise, COOP successfully demonstrated the ability to respond to and mitigate a COOP event at INL.