

ESH&Q Emergency Operation Center (EOC) External Visit Summaries

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Introduction

In Fiscal Year 2019 (FY'19), ESH&Q established an "ad hoc" team to evaluate various Emergency Operation Center's (EOC) at similar or comparable facilities to Fermilab. The ad hoc team consisted of Martha Michels, Amber Kenney, David Esterquest, Lori Limberg and in CY'19 included Joe Rogers. The comparable EOCs identified included, *Northern Illinois University (NIU)*, *Northwestern Memorial Healthcare at Delnor*, and *DuPage County Office of Emergency Management and Homeland Security (DCOEMHS)*. The purpose of these EOC visits was to evaluate, observe and understand some best practices, lessons learned and physical design of their respective EOC's. The visits to these various EOC's allowed the team to identify industry practices and designs for effective emergency operation centers, and to determine which design elements and technologies Fermilab may consider integrating into its EOC.

In addition, interviews with the EOC coordinators and personal observations at the EOC's were conducted to gather additional information. These interviews and personal observations were conducted to ascertain how EOC's in other localities, identified above, are designed, what floor plan was utilized and what technologies they have incorporated into their EOC.

Results and Conclusions

Of the three EOCs visited, each varied in size, and design (layout) but all consisted of a single room design, as is the Fermilab EOC. It is important to note, EOC design and location(s) are guided by the jurisdictions budget and available space. DuPage County's EOC had a larger floor plan and break-out rooms as compared to NIU or Delnor Hospital who have a smaller budget and less space availability. Each locality must assess their needs and available resources and be creative in the design, functionality and location of their EOC.

In some jurisdictions, the EOC is a standalone, fully staffed and functioning facility as was observed at DuPage County. In other localities, the EOC is designated to be used as a meeting and/or classroom site. This was the situation at both NIU and Delnor Hospital. In 2014, Fermilab's EOC was removed from the list of available meeting rooms and only functions as an Emergency Operation Center. Other considerations in the design or layout of an EOC include site security, ongoing operations and utility backup systems. As the center for information gathering and management, and decision making both prior to, and during emergency incidents, EOC's must be able to control access into and out of the area. This access control and backup systems were in place at all three EOC's. Fermilab's EOC is in Wilson Hall on the ground floor and has very limited public exposure. Access is controlled by assigned keys to limited personnel and is scheduled to have automated card access sometime in 2019. The Fermilab EOC has redundancy in its power and IT infrastructure to ensure uninterrupted services during emergency operations.

EOC organization structure(s) should resemble the command and control structure used in daily operations. EOCs using the incident command system (ICS) organizational structure has been shown to increase effectiveness and coherence during operations. By basically mirroring ICS, an EOC can provide enhanced support to field personnel because they are sharing the same management structure. All three EOC's including

Fermilab have an established ICS structure which mirrors its internal organizations functional roles/responsibilities. ICS training was also a requirement for each of the three EOC's personnel.

Interviews at the three EOC's revealed some best practices for the use of technology. A couple of the EOC's we visited had a minimum of two or three displays which included flat panel and/or projection systems. The EOC at DuPage County, for example, had flat panel displays and drop-down projection screens. All of the EOC's have the capability to display video feeds from various sources, such as staff computers and television broadcasts. In comparison, Fermilab's EOC is similar to each of these EOC display capabilities. There are three flat panel LCD's in the front of the room, each with the ability to connect to HDMI or VGA at the center of the conference table. All three LCD's also have the ability to display video feeds from outside news sources.

During the interview sessions with each of the three EOCs, it was consistent the EOC personnel use, or have available paper versions of ICS forms and "job-aids" during emergency operations. The purpose of these documents is to assist EOC position personnel on key actions to be taken during an emergency or incident. These forms were not event specific but created for use as an "all-hazard" document. The EOC job-aids from DuPage County were provide to Fermilab Emergency Manager as a guide/template to mimic in the Fermilab EOC.

Recommendations

The purpose of the three EOC visits was to evaluate, observe and understand some best practices, lessons learned and physical design of their respective EOC's. Fermilab's EOC is designed, organized and structured very similarly to all three EOC's. As compared to NIU and Delnor, the DuPage County EOC was most robust in its floorplan, layout and access to breakout rooms and technology. As identified above, budget and space availability played a key factor in their design.

Based on the personnel interviews and knowledge gained during each of the three visits, the following are recommendations for Fermilab to consider in its EOC operations:

- Implement a standard system for information management, specifically it is recommended to create and implement EOC position job-aids and related ICS forms.
- EOC personnel to become familiarized with their EOC position job-aids and related ICS forms and learn to utilize them during an emergency.