Chemical Sciences Division

Fiscal Year 2014

Environmental Health Safety

Self-Assessment Report

Continuity of Operations Plan (COOP) Safety Infrastructure Assessment

Approved By:_____ _____

Ali Belkacem, Chemical Sciences Division Director   Date

Prepared By:_____ _____

Martin Neitzel, Safety Coordinator, Chemical Sciences Division   Date

Executive Summary

The Chemical Sciences Division (CSD) must ensure that every aspect of the Continuity of Operations Plan (COOP) can be executed safely. To accomplish this, the chemical sciences safety program must be functioning very shortly after an event or major disaster. This self-assessment outlines the methods that were used to determine the robustness of the safety program, and describes new procedures and infrastructure that were put in place to insure a more rapid and coherent safety response following an emergency or disaster. Personal interviews were conducted with Chemical Sciences Division personnel, and the summary of these interviews is presented. In addition, a power outage incident occurred on Monday 17th of February that highlighted deficiencies within the Chemical Sciences Division safety infrastructure. Over the course of this assessment, we identified communication deficiencies that were rectified by creating a list of after-hours contact information, a division phone tree for rapid dissemination of information, and methods for accounting for all personnel after an incident. We identified the need of IT equipment, such as laptops and iPads, which could be deployed in remote work areas in the event that staff needed to be relocated. We also addressed problems at home offices to ensure that all data storage, file sharing, and network accessibility were fully functioning. We enhanced the telecommunication system to allow voicemail to be forwarded to any remote work area or mobile location. We also identified the need to have backup safety staff cross-trained to ensure all critical safety activities can be accomplished without delay.

Introduction

A continuity event is an event that disrupts the normal business, work or mission of the Chemical Sciences Division. The Chemical Sciences Division (CSD) continuity plan must ensure that life safety is not compromised and that business operations continue or resume with minimal disruption. An excellent business continuity plan must ensure that safety is well managed and that every aspect of the plan can be executed safely. To accomplish this, the Chemical Sciences Safety Program must be functioning very shortly after a major disaster, and therefore we must ensure that our safety continuity plan is well thought out and fully implementable. We must ensure we have sufficient communication resources, accessible data storage, network capabilities, file sharing capabilities, and IT security. This self-assessment tested our continuity plan to the extent that was feasible for the purpose of discovering deficiencies in the program. Our goal was to identify these program deficiencies, and find solutions to ensure excellent safety performance throughout all recovery operations and activities.

Assessment Methodology

Personal interviews were conducted with Chemical Sciences Division personnel, responses were recorded, and the summary of these interviews is presented below.

Lines of Inquiry with Summary of Responses

1. What are the catastrophic event possibilities that need to be considered? We need to be prepared for each eventuality.

    - Natural disaster (such as earthquake, wild-land fire, landslide)

- Man-made disaster (such as fire, flood, chemical spills, radiation spill)
- Security threat (such as bomb threat, active shooter)
- Planned shutdown (such as holiday shutdown)
- Unplanned shutdown (such as government shutdown)

2. What safety programs need to be online immediately?

- Life safety cannot be compromised.
- Communication is paramount immediately following event. It is important to identify potential safety concerns and prioritize them for response. Then communicate with emergency resources for mitigation or resolution.
- It is critical to account for all CSD personnel as soon as possible. Multiple avenues for communication should be established as communication failures are common during major events.
- IT infrastructure needs to have back-up systems for data storage and retrieval.
- IT infrastructure needs to have multiple possibilities for workstation access.
- All safety and EHS resources should be leveraged to assure safe operations and proper work authorizations are in place at continuity facility. Access to these resources is necessary.

3. What resources are available to assist with the essential functions?

- EHS – Hazardous Waste, Radiation Protection, Industrial Hygiene, Safety, Environment.
- Facilities – multiple groups, Engineering, Plant Maintenance, Electrical, Rigging, etc.
- Protective Services – Emergency Management, Fire Protection, Police.
- HR – HR partners.
- Get all of these numbers into mobile phones.

4. What databases, programs, and network access is essential for critical safety programs?

- AHD, JHA, TSJHA, sJHA, RWA, TWA.
- All systems will need to be accessible remotely.

5. Do we have sufficient infrastructure for remote work?

- All personnel interviewed have a computer at home.
- Most personnel have worked from home through Remote Desktop and by taking papers home with them. (Depending on the event the solution may not be feasible).
- Working from home is infrequent. Some that were interviewed felt discouraged to do.

- All personnel interviewed also have backup with Carbonite so work files can be transferred to remote workstation.

6. How do we ensure that our remote work facilities will be adequate and fully functioning immediately after an event?

  - Emergency management has a variety of resources to assist with remote work facilities evaluation and can be found here, http://bcp.lbl.gov/drupal/sites/default/files/BCP-FAQ-for-supervisors.pdf

  - Obtain and have available extra Division computers. Employees that do not have a home computer can loan one from division.

7. Is cross training of personnel necessary, if so whom, and in what areas?

  - Jerry Bucher lives near LBNL close enough where he could walk to work if it was necessary.

  - Martin Neitzel lives across the bay and would need to do all work remote.

  - Cross training of safety coordinators although not absolutely necessary is advisable.

  - An additional person trained in some critical aspects of the safety program that could be available on-site would be advantageous.

Power outage incident of February 17th

In addition to the lines of inquiry responses listed above, an incident occurred that highlighted deficiencies within the Chemical Sciences Division safety infrastructure. On Monday 17th of February, an air switch supplying power to a main transformer for the building 70 – 70A complex arced, destroyed the switch, and caused a loss of power to these buildings. The day in question was Presidents' Day holiday and CSD staff returned on February 18th to the buildings running on emergency power. It was also determined on February 18 that the buildings should not be occupied until full power was restored. Over the next week, many things worked well, some things did not work well, and many problems were overcome. However, in the Assessment Results I will focus only on the issues related to the CSD safety program.

Assessment Results

The CSD safety staff has come up with a variety of solutions to the questions and problems that are identified in the assessment methodology section. This Assessment Results section summarizes the problems and outlines the solutions.

During the power outage incident in mid February, CSD safety staff worked mobile with an iPad and mobile phone. It was identified that safety staff did not have after-hours contact information for all division PI's. In addition, safety staff did not have mobile numbers for EHS staff. As a result, mobile numbers for all PI's and key EHS staff have since been obtained and programmed into the Safety Coordinators' cell phones. Also, an

after-hours contact list and phone tree of all CSD PI's has been created (please see appendix) and both of these documents are updated regularly.

During this power outage event, it was necessary to relocate all staff with offices in building 70A. Many CSD personnel worked from home offices, but several staff members were relocated to temporary office space in building 15, 8, and 50. These temporary offices were equipped with chairs and desks, but all computer hardware needed to be supplied. Many CSD personnel could use their laptop computers, but not all personnel have access to laptop computers. In this instance, the division was able to supply all needed computer equipment. However, in a larger event this may not be the case. We realized that we would have to come up with more options for supplying computer equipment in emergency situations. The CSD safety staff now have a PC laptop, and a Mac laptop computer that can be loaned as well as 15 iPads that can be deployed. In addition, the EHS division has a Mac laptop computer that can also be loaned. Additionally, several new laptops are being purchased for staff. The old laptops will potentially be available for emergency loan, or deployed in temporary offices.

There is a variety of data storage and data sharing options available: C-drive with local back-up, Grouper on the IT division server, using Google Docs, Google drive, Dropbox, and Carbonite. At the beginning of this assessment, all of the safety program documentation and working files were being housed on the local hard drives with local backup and nightly backup to the Carbonite data storage system. This is a good solution as local events may destroy data on the local hard drive, but this data could be retrieved from local backup or Carbonite backup. Moreover, in cases of larger events the entire contents of one's computer could be taken from Carbonite and loaded to a secondary computer at a remote location. However, this arrangement has some limitations. Local backups need to be performed on a regular basis and sometimes these backups are neglected. Carbonite backup is done automatically, but the contract is for a particular computer unit. To transfer this data to remote location one would need to transfer the data and the contract to start backing up the remote computer. This is not a problem at a continuity facility, but may be a problem if an employee were asked to use their home computer system. Also, an employee working from their C drive could have access to that drive only if they were set up with remote access and the remote access and computer was left on. It was realized that a disaster would strike unexpectedly and that the work computers would not necessarily be set up for remote access. In addition to this limitation, a major earthquake could destroy the local hard drive and the backup. The LBNL IT department has an alternate solution to working from one's C drive. Upon request from the division, the IT department will partition a portion of their server and dedicate this for employee file storage. This partition is referred to as a Grouper account, and two such accounts were set up for the CSD safety program. The first Grouper account is a personal folder for Martin Neitzel that houses all working documents for the safety program. The second is a Division Safety Account that houses all finished documents and archives. This latter account is accessible to division line management as well as both safety coordinators and building management. Another viable option is storing working documents in the cloud. Google Docs, Google drive, or Dropbox files are available at any computer or mobile workstation.

In a major event, office telephone handsets may be destroyed, or offices may need to be abandoned and personnel transferred to continuity facilities or home offices. A feature that was identified from this assessment is the ability to transfer from the voicemail box of the LBNL phone system into the employee Google mail account. This feature has day-to-day advantages, allowing the safety coordinators to have rapid access to their phone messages while performing their duties from a mobile device across LBNL facilities. This feature also

offers great advantage during continuity events since all voicemail correspondence will be received rapidly at any continuity facility or remote work location.

During a catastrophic event, one or more of the safety coordinators could be incapacitated or killed. It is therefore advisable to have staff cross-trained to handle some vital safety functions. Currently for the Chemical Sciences Division both Jerry Bucher and Martin Neitzel are fully trained to handle any and all safety functions for the division. Additionally, Adam Bradford is being cross-trained in key aspects of the safety program to act as backup for a safety coordinator should the need arise.

Following a major event, it is important to account for all division personnel. Division personnel have a variety of methods for checking in with their status. One method is the LBNL Check-in website located at, http://status.lbl.gov/. Another method is for an employee to contact their PI or supervisor via email, text message, or cell phone. The PI or supervisor can then report on the status of their personnel up through line management.

During a continuity event, factors such as bridge collapse or building collapse could necessitate safety staff to work from their home offices. It is therefore important for the safety staff to verify that they can perform all aspects of their job from their home office. Connectivity to the LBNL servers is of vital importance. For this assessment, remote connectivity to LBNL network was tested and an instruction sheet describing how to connect was created (see appendix). These instructions are on the CSD Safety website and also in the CSD Safety Folder, and can be emailed out at a moment's notice to CSD personnel needing assistance. All needed data systems and resources were verified to be accessible using the VPN.

Conclusion

The Chemical Sciences Division (CSD) continuity plan must ensure that life safety is not compromised and that business operations continue or resume with minimal disruption. This self-assessment outlined the methods that were used to determine the robustness of the safety program, and described new procedures and infrastructure that were put in place to insure a more rapid and coherent safety response following a continuity event. Over the course of this assessment, we remedied communication deficiencies; we identified the need for redundant and mobile IT equipment, such as laptops and iPads. We enhanced the telecommunication system to allow voicemail to be forwarded to a mobile device; and we addressed shortcomings with data storage, back-up, and network connectivity. We are also in the process of training a backup safety person to ensure that all critical safety activities are properly and quickly managed. As a result of this assessment, the CSD safety staff now has much more confidence that we can achieve a rapid and coherent response to a wide variety of continuity events in a safe and effective manner.

Appendix

Chemical Sciences Division Leadership COOP Order of Succession Plan

Revision: 1

Date: 12/11/2013

Position	Leader	First Successor	Second Successor	Third Successor
Chemical Sciences Division Director	Ali Belkacem	Kevin Wilson	Rebecca Rishell	
Heavy Element Chemistry	David Shuh	John Gibson	Rebecca Abergel	Wayne Lukens
Atomic, Molecular, and Optical Sciences	Ali Belkacem	William McCurdy	Thorsten Weber	
Chemistry at the ALS	Musahid Ahmed	Kevin Wilson	David Shuh	Hendrik Bluhm
Ultrafast X-Ray Science Laboratory	William McCurdy	Oliver Gessner	Ali Belkacem	

General guidance for orders of succession are: 1) Described by positions or titles, rather than by names when appropriate. 2) Geographically dispersed, where feasible. 3) Include devolution counterparts, where applicable. 4) Reviewed by the organization's general counsel, where applicable. 5) List any temporal, geographical, and/or organizational limitations.

Chemical Sciences Division COOP Delegation of Authority

Revision: 1

Date: 12/11/2013

Position	Leader	First Delegation	Second Delegation	Third Delegation
Chemical Sciences Division Director	Ali Belkacem	Rebecca Rishell	Kevin Wilson	
Glenn T. Seaborg Center for Actinide Science	David Shuh	John Gibson	Wayne Lukens	Rebecca Abergel
Atomic, Molecular, and Optical Sciences	Ali Belkacem	William McCurdy	Thorsten Weber	
Chemical Characterization, Transformation and Dynamics program	Musahid Ahmed	Kevin Wilson	David Shuh	Hendrik Bluhm
Ultrafast X-Ray Science Laboratory	William McCurdy	Oliver Gessner	Ali Belkacem	

Accessing Grouper files through VPN

The first thing you need to do is log into the LBNL network through the VPN network. Use Cisco AnyConnect and enter your LDAP username and password. This program can be downloaded from the LBNL IT software download page.

In All Programs, go to Accessories and choose Run.

In the run box enter \\Grouper.lbl.gov\Home5, That is assuming you are set up in Grouper 5. IT will let you know what Grouper file you are set up in when they set up your Grouper account.

It sometimes takes several minutes for the network password box to come up and there is no indication that anything is happening. You just need to sit back and be patient.

Enter Network Password:

Username is lbl.gov\mlneitzel, for me, you will have to replace the last part with your info.

Password is the password that you use to log into your PC at work. Usually LDAP password.