

CUB Power Outage Response

Reviewed by _____

If CUB may be affected by a power outage, it can impact critical systems such as LCW and air conditioning for the Computer Room and other areas. The guidance below doesn't need to be done in the order it's written. Some can be done simultaneously, and some can be skipped depending on the situation.

Contact Personnel as Necessary:

- Duty Mechanic – ASAP, always.
- Linac Machine Coordinator if the Linac 55 system is affected.
- Booster Machine Coordinator if the Booster 95 system is affected.
- Muon Campus Machine Coordinator if the Muon 95 system is affected.
- Switchyard Machine Coordinator if the Remnant system is affected.
- Controls and Network personnel if the AC unit for the Computer/MAC Rooms are affected.
- Operations Specialist for associated areas.
- Operations Department Head

Scout:

If personnel are available, a field team can try to ascertain the extent of the outage.

- Go to the Computer Room to listen/see if the AC is running.
- Walk the Linac gallery to listen/see if the Linac 55 system is still running.
- Walk the Booster galleries to listen/see if the Booster 95 system is running.
- Walk the Transfer Gallery to listen/see if the Remnant system is running.
- See if the lights are on at CUB.

Monitor:

If the Controls System is running, it can be used to monitor the following:

- Supply and return pressures and temperatures for the above LCW systems. Signs of an LCW system going down are:
 - Supply and Return pressures are the same.
 - System temperatures begin to rise.
 - Power supplies on the system begin to trip off.
- LCW levels and/or make-up flows. Sudden changes in LCW pressure may open relief valves or otherwise cause leaks to form.
- Computer Room and MAC Room temperatures. If the AC units have lost cooling water from CUB, temperatures will start to rise.

Actions:

If you discover signs of trouble with the LCW or AC systems, take action to protect associated systems.

- Turn off power supplies for affected LCW systems. This can be done via the Controls System, or it can be done expediently by disabling the ESS for the affected area(s).
- For Linac 55 issues, breaker off the LRF quads in the Linac Gallery.

- For Remnant system issues, turn off the Remnant system to prevent cavitation in the pumps.
- Follow all guidance given by the experts who are contacted. They may have additional instructions.

When Power Returns:

- Inform everyone who has already been contacted
- Validate alarms to ensure everything that should be monitored is being monitored.
- Continue to monitor LCW system pressures, temperatures, and levels.
- Walk the Linac, Booster, and Muon Campus galleries/service buildings as time and personnel availability permit. Look for any signs of lingering complications.

Make sure to document all steps taken in the MCR e-log.

***A word file for this document is kept on the BD/Operations Staff Sharepoint.**

NOTES: Please use this area to note any problems encountered during recovery.