Controls Power Outage Response
Reviewed by _____

If the Controls System is affected by a power outage, use the guidance below to aid in the investigation and recovery. Steps don't need to be done in the order they're written. Some can be done simultaneously and some can be skipped depending on the situation. Be aware that the Controls Department has a procedure they will use for power outage recovery. <u>As always, the major objective during any power outage is to ensure the safety of personnel and equipment, and to restore power.</u>

Contact Personnel as Necessary:
- Duty Electrician
- Database Expert – ASAP to allow shutdown before corruption occurs!
- Hardware Expert
- Consoles Expert
- Network Expert
- Operations Specialist for Controls
- Operations Department Head

Cooling:
If Computer Room cooling is affected, temperatures may begin to rise. During cool weather, consider the practicality of opening and actively supervising doors to reduce heat in XGC-108. Do not leave open doors unattended. If cold aisle temperatures exceed 85 degrees, consult with experts as it may be necessary to shutdown additional systems or even operate the Emergency Power Off (EPO) to prevent equipment damage. (Note that if databases are not properly shutdown corruption may occur!)

Scout:
If personnel are available, a field team can try to ascertain the extent of the outage.
- Bring a flashlight and walk the Computer and MAC Rooms and make note of the areas that are without power.
- Make note of any other issues found such as strange odors and water on the floor.

Monitor:
If the Controls System is running, it can be used to monitor the following:
- Computer and MAC Room temperatures.

Actions:
- If power is down longer than an hour, power down the four CAMAC front ends (MI1 – 3, Tclk) in the MAC Room, even if they are off due to local UPS failure. Toggle the power switches so they stay off.
- Follow all guidance given by the experts who are contacted. They may have additional instructions.

When Power Returns:

UPS Status: If UPS capacity is exhausted before power returns, the Emergency Power Off (EPO) will be activated and nothing in the room will power back on until the EPO is reset.

- o If UPS system appears to still be supplying power, skip down to **Cooling.**
- o Follow this **EPO reset procedure** *only in consultation with Controls experts*
    - i. Verify UPS is operating normally (see front panel & instruction book in metal drawer inside at the bottom of the main UPS rack.)
    - ii. Press black reset button on panel on the west wall across aisle from UPS (between two breaker panels labeled 'fed from DHP-CG2-CIR 7,8,11').
    - iii. Reset two breakers on the south angled wall in the pump room labeled **USS-CG-1-3 for T-CG-8A & USS-CG-1-3 for T-CG-8B**.

Cooling: Assure that the room cooling situation is normal. `D97 <1>` is a good page to check, if available. **(You may need to consult with ISD)**

- i. Verify locally that both (South wall and East wall) Air Handlers are running.
- ii. Verify locally that cooling water pumps are running for both the Computer and MAC Rooms.
- iii. Note that in the exceptional case that supply water is warmer than the room temperature, pumps should be stopped, but blowers left on.

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.