NuMI/MINOS Power Outage Response

Reviewed by _____

If the NuMI or MINOS service buildings or power supplies are 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. As always, the major objective during any power outage is to ensure the safety of personnel and equipment, and to restore power.

Contact Personnel as Necessary:

****DUE TO TRITIUM ABATEMENT ISSUES, SOMEONE MUST ALWAYS BE CONTACTED IN THE EVENT OF A NUMI GLITCH or POWER OUTAGE!**

- Duty Electrician
- The Area RSO
- NuMI Machine Coordinator
- External Beams Department Head
- Mechanical Support Department Head
- Target Systems Department Head
- NuMI Experiment Shifter(s)

If power is lost at MINOS Service Building:

- Check or have the Duty Mechanic check that the MINOS generator is on.
- Be sure to monitor the FIRUS sump alarms for MINOS.

Scout:

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

- Bring a flashlight and tour the NuMI/MINOS areas and service buildings 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:

- Supply and Return pressures and temperatures for the NuMI RAW systems.
- MINOS sump alarms on FIRUS.
- Service building temperatures.
- Status of NuMI power supplies.
- Status of NuMI/MINOS enclosure interlocks.

Actions:

If you discover signs of trouble with any NuMI/MINOS system, take reasonable action to protect associated equipment.

- For RAW system issues, turn off associated NuMI power supplies. This can be done via the Controls System, or it can be expediently done by disabling the MI-65 ESS.
- Notify the area's RSO for any issues with the RAW systems.

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 NuMI RAW system pressures, temperatures, and levels.
- Tour the NuMI/MINOS areas and service buildings as time and personnel availability permit. Look for any signs of lingering complications.
- Work with experts to begin recovering affected systems (vacuum, magnet power supplies, horn power supplies, etc.)
- Verify that all NuMI Nodes are responding to the node poll.
- Restore all NuMI CAMAC crates to a recent good running file via D2.
- When beam returns, verify that the NuMI Autotune is up and running.

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: Use this page to note specific problems encountered during recovery.