

LOTO

Practices

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BROOKHAVEN NATIONAL LABORATORY

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LOTO NEWSLETTER

LOTO Surveillances

Last month, BNL organizations completed 30 Lockout/Tagout (LOTO) surveillances. Of those, 25 were found to have no deficiencies. Of the remaining five, the most noted item for improvement is the need to use personally identifiable locks. Personally identifiable locks are necessary to keep everyone involved in the LOTO process aware of who is working on the system at any given time. See the Q and A section of this newsletter for more information.

Number of noted items for improvement by LOTO sub-process—May 2014

LOTO Training	0
LOTO Planning	1
LOTO Application	4
LOTO Removal	1

Noted items for improvement—May 2014 LOTO Surveillance analysis

- LOTO lock was not personally identifiable
- LOTO tag not logged per organizational process
- Isolation point not correctly identified

Lessons Learned: Continual awareness everyday—Shared Neutrals

During the removal of lighting at another DOE Lab, work was being performed under a simple LOTO. An electrician cut a 110-volt energized wire, which resulted in a spark and another breaker subsequently tripping. The investigation determined that there was an atypical wiring configuration. The lighting circuit was sharing a neutral with other circuits and the light fixtures were being utilized as a wiring raceway for multiple circuits. The workers, who had many years experience with that particular building, never considered the possibility of shared neutrals because they had never found that wiring configuration in that building prior to this incident. The workers used a proximity tester to test for zero voltage.

What can we take away from this event? Here are a few items that can help keep you safe when working on multi-wire circuits.

- Always stay focused and examine the wiring prior to starting work.
- When removing or adding neutrals to an existing circuit, consider the possibility of shared neutrals in your pre-job planning. Remember that disconnecting a neutral from a shared neutral circuit may change circuit characteristics and expose you to a potentially hazardous voltage.
- Lock ALL breakers that are part of a shared neutral circuit prior to starting work.
- In a multi-wire branch circuit, treat the neutral as a “hot” conductor
- Always use a voltmeter to do zero energy checks and perform a recheck when returning to work after a break.
- If you discover an unexpected shared neutral situation, pause work and remove the potentially hazardous condition. Plan a new work package and inform your BNL supervisor /contact who can then consult with the appropriate Subject Matter Expert on a path forward.

Q and A

Question - Why is it important to use a personally identifiable lock when applying LOTO?

Answer - As we know, communication is a key element for safety. This is one reason for the personally identifiable lock requirement. Having a person's name associated with each applied LOTO lock ensures that anyone working in the vicinity can readily contact the person conducting the service and maintenance if there is a question or concern. In a group LOTO, the Primary Authorized Employee can easily recognize who is actively working on the job at any time.

At BNL, there are three acceptable ways to make your LOTO lock personally identifiable. You can have your name and phone number printed and applied to the lock, have a printed inventory number applied to the lock that can be traced through an electronic data-base, or apply a BNL approved LOTO tag with a legible name/signature and phone number.

When you apply a LOTO lock, make sure it is personally identifiable. Having contact information clearly visible on the lock/ attached tag is part of the communication process that ensures the process is completed safely and efficiently.

Have a LOTO question?
Ask the LPWG!