

Physics Department Safety Issues All Hands Meeting

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October 21, 2014



SIXTY YEARS
OF DISCOVERY
1947-2007

BROOKHAVEN
NATIONAL LABORATORY



Agenda

- How did we do in Physics in FY 2014?
- Barricades
- New Labs
- Vermiculite
- Other?

How did we do in Physics in FY 2014?

- DART cases **NONE**
- TRCs **NONE**
- First Aid Cases **NONE**

- Security – Physical - **No incidents**, Cyber - **In compliance**

- The move-back into 510 **NO ONE INJURED**

- Training Completion: Employees **99%** Guests **94%**

- Tier I violations: **Very Few Found**

- Radiation Dose **None**

Barricades



A team met and developed a policy for the Subject Area: Signs, Labels, and Placards for ESH.

There is now policy/requirements to prevent “warning over-kill” and “my perception of risk” decisions.

The BNL policy sets the following requirements for barricade use:

- “DANGER” and “CAUTION” are used only when death and/or injury is a real risk.
- Barricades require a tag or sign that indicates ownership and hazard in the area.
- Unauthorized crossing of barricades can lead to disciplinary action.

Selecting the Right Warning

OSHA requires the Signal Word (CAUTION or DANGER) to be based on the actual risk posed by the hazard.

- **DANGER** is limited to situations where serious injury or death is imminent.
 - Examples: electrocution, hospitalization, loss of limb, death.
- **CAUTION** is used when less serious injury is likely.
 - Example: Mild burn, minor cut, twisted ankle, first aid case.



DANGER DO NOT ENTER



CAUTION vs DANGER

SIGNAL WORD on barricades at BNL	ACCEPTABLE	NOT CORRECT
<p>DANGER is always with “DO NOT ENTER”.</p> <p>Color: Must be Red background with white or black lettering. No other color is allowed</p>		
<p>CAUTION is always used with “ENTRY REQUIRES PERMISSION”.</p> <p>Color: Must be Yellow background with black lettering.</p>		

Who can go into CAUTION & DANGER Areas?

DANGER – DO NOT ENTER is reserved for serious injury/death situations.

Only authorized personnel listed on the work planning documents are allowed to enter the restricted area created by the barricade.

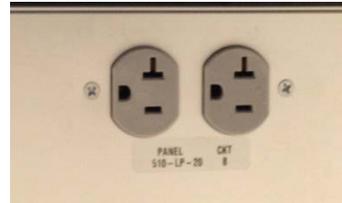
(There will be special PPE and work practices that are known to these workers.)

CAUTION - ENTRY REQUIRES PERMISSION is used for less immediate & less serious injury/health risk.

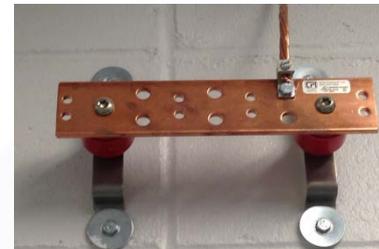
There will be situations when personnel not listed on the work planning documents are allowed to be in the restricted area created by the barricade. The tag will indicate whom to call for permission to enter.

New Labs – What you should know!

- **Electrical Outlets** – Labs are configured with different sets of colored outlets, orange and grey. Each outlet is marked with the circuit breaker that feeds the outlet.



- **Overhead track electrical busses**, can be configured with receptacles of various types and voltages (120 VAC, 208 VAC - 2 and 3 phases). Additional outlets can be added or removed as needed. As can be seen in the photo, these outlets are orange, enabling one to remove all power through the Emergency Power Off Button.



New Labs – What you should know!

Emergency Power Off Buttons (EPO) are provided in each laboratory for quick removal of power in an emergency situation of all devices powered through the **ORANGE** outlets.

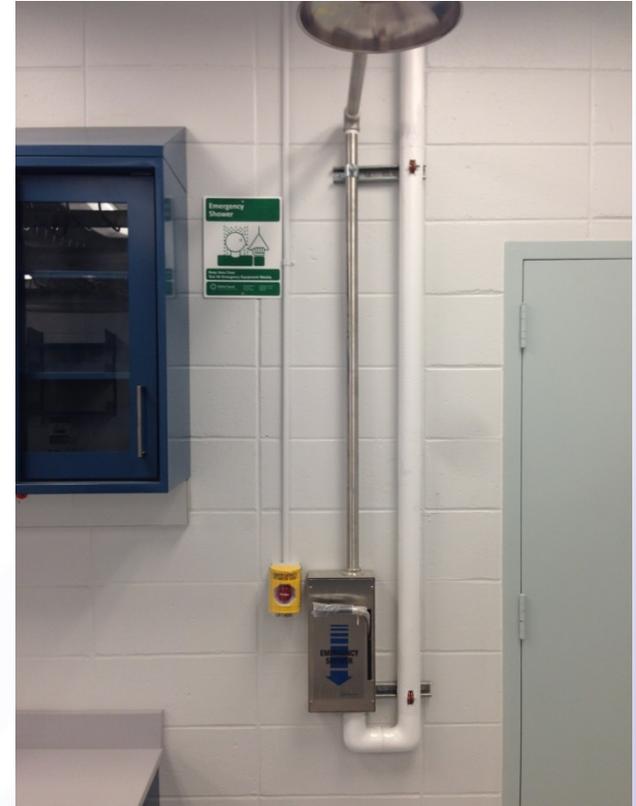


New Labs – What you should know!

Showers are located in each lab near entrance/exit doors. The handle is located below the shower head and is activated by pushing the handle as indicated by the arrow. **The handle does NOT function as an on/off switch.** Once activated, the shower continues to flow for a set period of time at 20 gallons/minute for 15 minutes (ANZI Standard). There are no drains below the showers allowing the water to pool all over the floors, into lab spaces, hallways, and nearby offices.

It is highly recommended the Emergency Power Off Buttons be activated prior to pulling the handle to reduce the possibility of electrical contact with the water.

Showers should never be used except in emergencies and when tested by F & O personnel.



Vermiculite Packaging Material May Contain Asbestos

- A relatively new advisory from the US EPA and the NY State Department of Health has determined that vermiculite is a potential asbestos containing material (ACM). **BNL accepts this advisory and treats all vermiculite as ACM; even though not all vermiculite contains asbestos.**



Discussion of Activities:

- Some products have been made with vermiculite containing asbestos, mainly from vermiculite that was mined from Libby, Montana during the period 1920 to 1990 where the mine had a naturally-occurring asbestos called termolite-actilite vein. Even if shippers use vermiculite that has been tested and certified to be asbestos free, there is no way for the receiver to know it is a certified as asbestos-free material. Therefore, BNL has chosen to take extra care to ensure staff safety. At BNL, if determined by CMS that the package contains vermiculite, it will be forwarded to the BNL Insulation Shop for remediation.

Recommended Actions:

- Notify shippers that an alternate to vermiculite is preferable when shipping samples and/or chemicals to BNL.