
Electrical Safety Incident

SC--BHSO-BNL-BNL-2006-0014

Bldg 490 – August 24, 2006

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Description of Event

On August 24, 2006, a PE painter was scraping the walls in Bldg 490, Room 9-830, in preparation for painting when his spackling knife made contact with energized 110 Vac wires protruding through conduit pipe above a doorway. The painter observed sparks and heard a popping sound. As a result of this electrical transient a circuit breaker tripped and the room lights went out.

Recommended Corrective Actions:

- Abandoned wires to be terminated from its power source and removed from the conduit. (Corrected 08/24/06)
- Conduct an inspection of similar decommissioned/unoccupied areas to see if they have similar incidents.

Photos of Area of Concern

Ground Level View of Electrical Conduit



Photos of Area of Concern

Elevated View of Electrical Conduit



History of Laboratory 9-830

- This area was being used as a chemistry lab (retrofitted with hazardous area intrinsically safe fixtures/utilities) until 1998.
- Interview with 1998 occupants revealed that all of the fixtures in the lab were intrinsically safe and that there was a hazardous area wall clock above the doorway where the conduit/abandoned wires were. These types of clocks are generally hardwired. It was also noticed that there was a circular “dirt and dust shadow” encompassing the conduit.
- The lab then remained vacant until 2004 when it was used by the Environmental Services Division Field Sampling Team to process environmental samples.
- The lab was vacated in May 2006 and is currently being renovated to be a multi-user lab.

Post Incident Follow-up

- During the week of December 4-8, 2006, a visual inspection of vacant areas within the Medical Department (Bldg 490) was conducted to determine if any legacy electrical issues exist. This inspection was a recommended corrective action as a result of a recent NTS categorized incident involving abandoned electrical wiring.
- Overall, several areas of concern were identified.

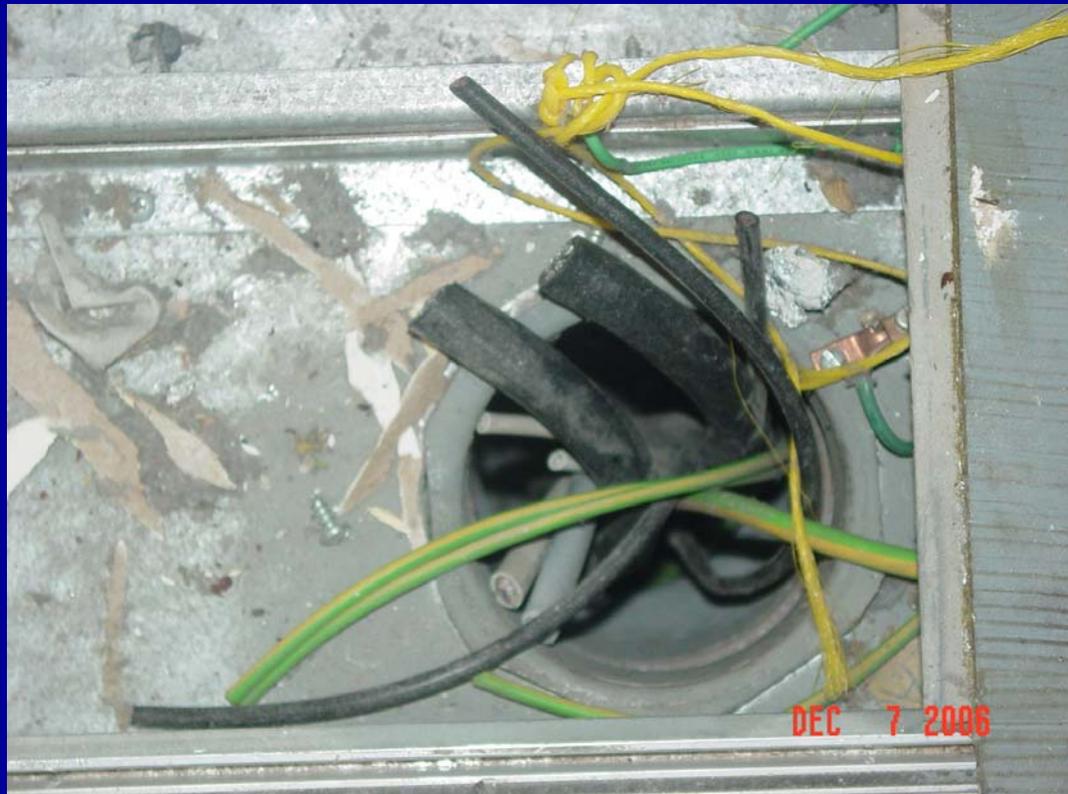
Bldg 490 Loading Dock



Decommissioned WBNIF



Decommissioned Radiation Therapy Facility



Medical Basement Breaker Panel



Medical Basement Corridor



Medical Legacy Interior Cylinder Storage Room



Biology Hallway



Biology Phase 1 Hallway



- All areas of concerns noted during this inspection were determined to be electrical wires abandoned in place that were isolated from it's electrical source, or low voltage signal wires.

Recommended Lessons Learned:

- As equipment and utilities are removed or placed out of service, ensure the remaining utilities is left in such a way that it does not create the potential for injury to other personnel. In addition, if abandoned wiring is discovered it should be considered energized until it can be verified that it is de-energized.
- A toolbox safety meeting will be held with the relevant crafts to review this incident and alert others to the potential hazards of renovating old labs.