

Electrical Safety Training for staff

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PNNL-SA-68795

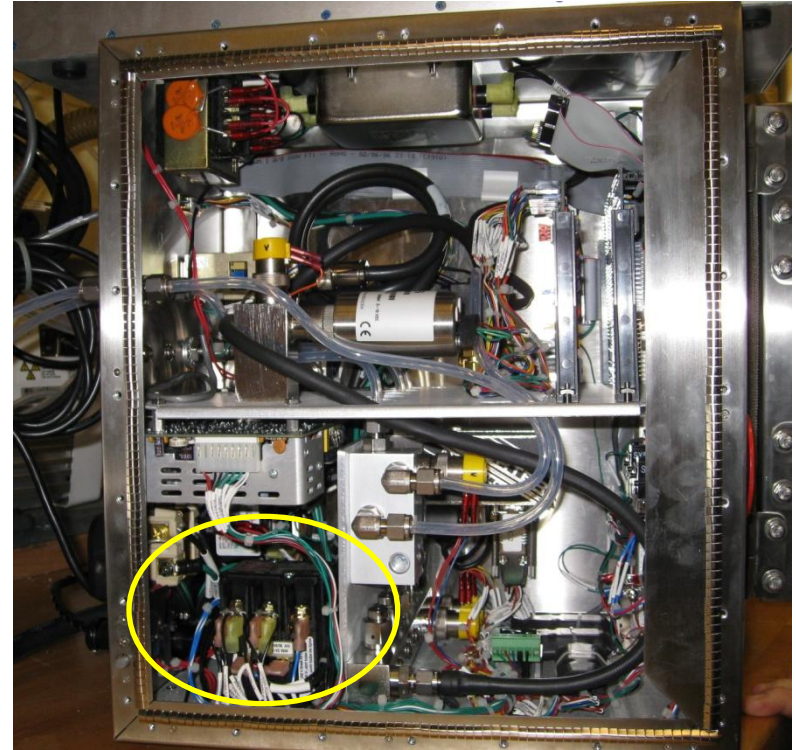


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Recent events - Case #1

- ▶ Instrument panel opened and parts energized
 - Interlock defeated, at vendor's direction
 - No training for this, not a qualified electrical worker



Who needs to take qualified electrical worker safety training Case #1

**Working within the Limited Approach Boundary
requires a qualified electrical worker,
with safety training.**

- ▶ An electrical hazard exists where there is an exposed, energized part at or above 50 volts and 5 mA
- ▶ Using a meter on parts at these levels requires electrical worker safety training

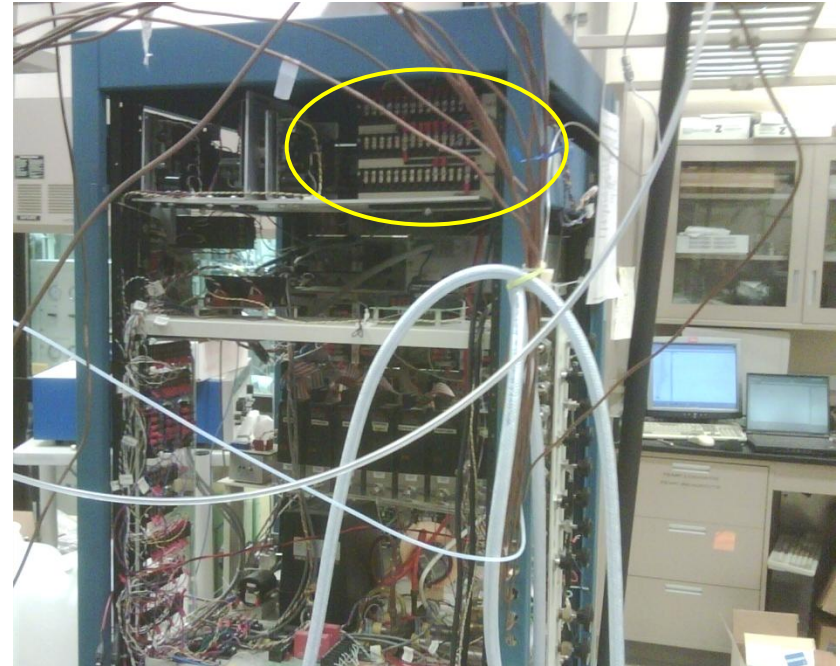


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Recent events - Case #2

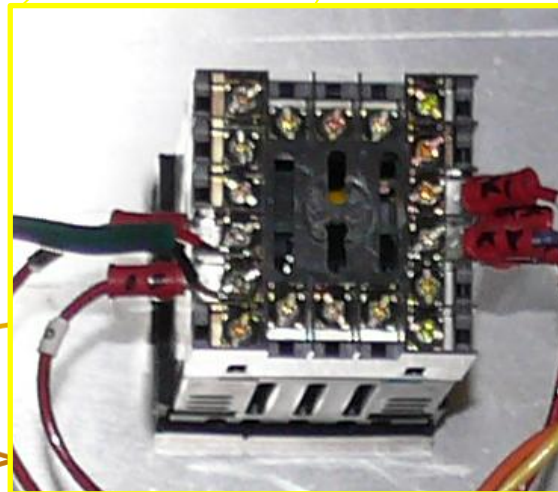
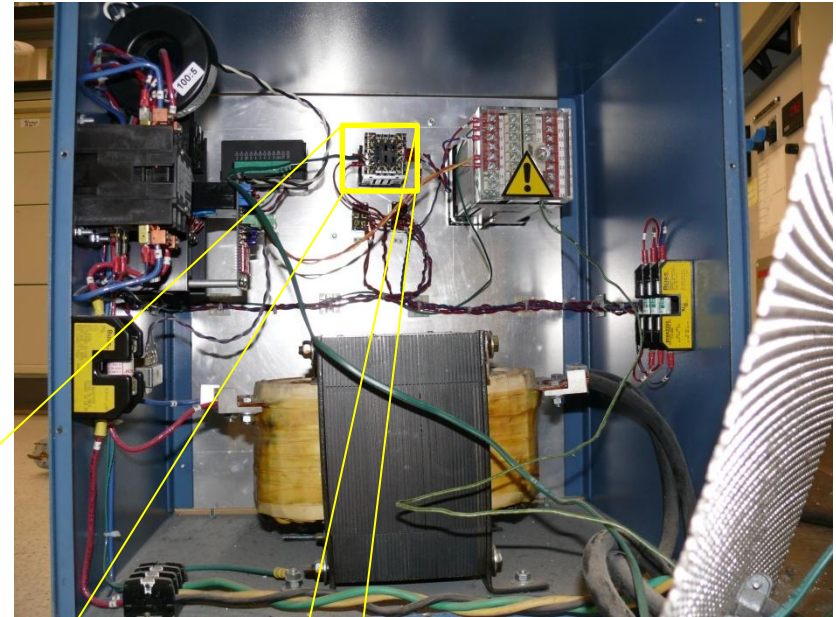
- ▶ Instrument rack discovered with exposed 120 VAC screw terminals
 - Some parts were labeled “120 volts!”
 - Adjacent to walkway through lab



Recent events - Case #3

▶ Shocked on thermocouple junction –

- Component replaced in the past, while de-energized
- No post-repair test done, hazard was created



Who needs to take qualified electrical worker safety training? Case #3

Repair and maintenance

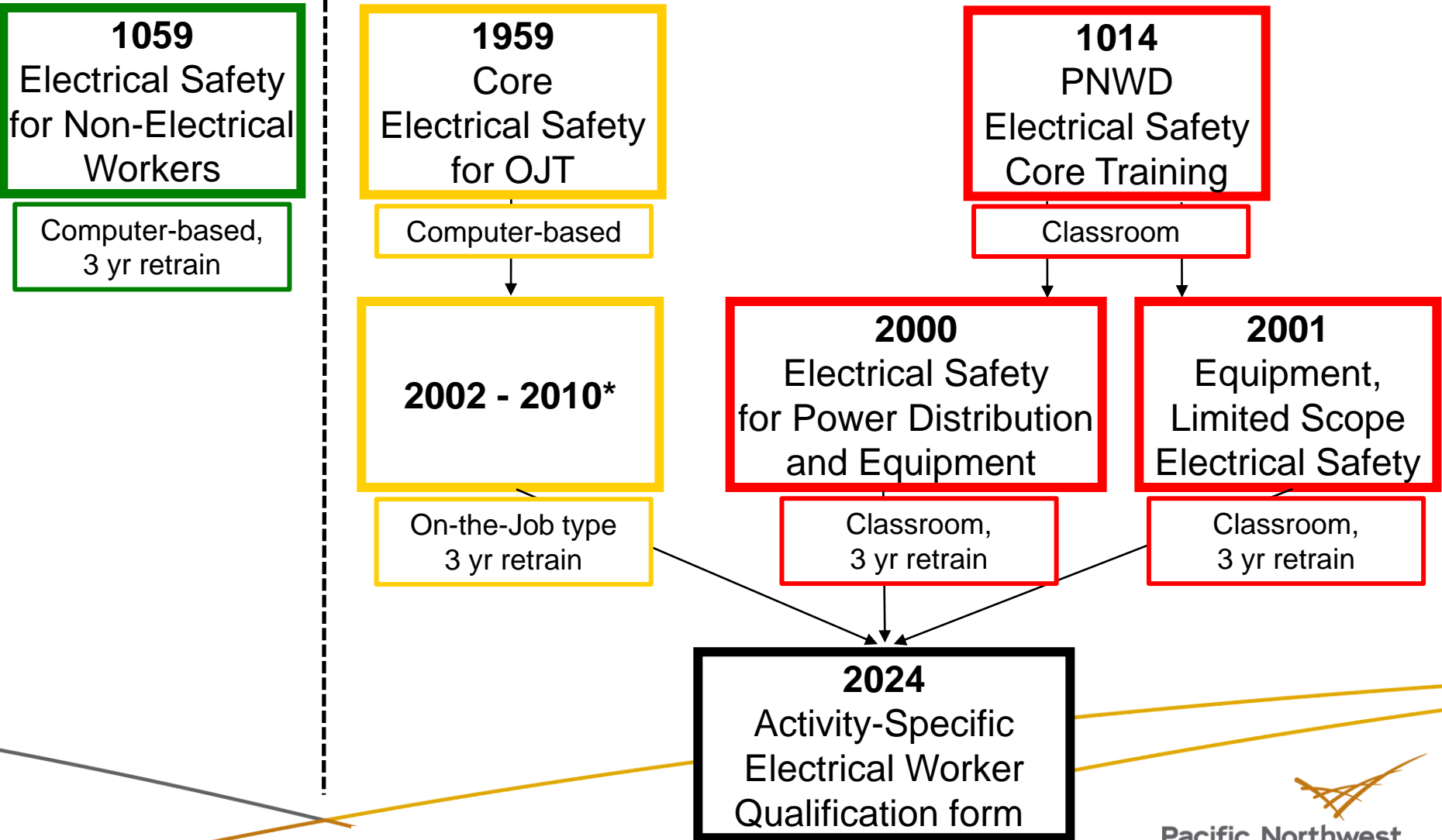
- ▶ There is always the possibility of creating hazards in the course of repair or maintenance.
- ▶ **Consequently, these activities, even performed on equipment that is de-energized, require a qualified electrical worker with safety training.**



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PNNL Electrical Safety Training courses



* for titles, see next slide

2002-2010 courses (simple, single tasks)

Course #	Course name
2002	Operation of furnaces with exposed energized elements
2003	Operation of helium analysis system power supply
2004	Operation of Electrical Equipment near Exposed Energized parts
2005	Diagnostic and Testing for single task
2006	Escorting Vendor working under EEWP
2007	Electrochemical Etching
2008	Connecting/Disconnecting batteries at < 50 V
2009	Hazard Recognition and Assessment of cord and plug connected 120 volt equipment
2010	Service, maintenance and repair of minimal risk or de-energized electrical equipment and systems



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Activity-Specific Electrical Worker Qualification form (2024)

With the completion of form 2024, a worker is considered a Qualified Electrical Worker, BUT ONLY for the items authorized by the manager on form 2024

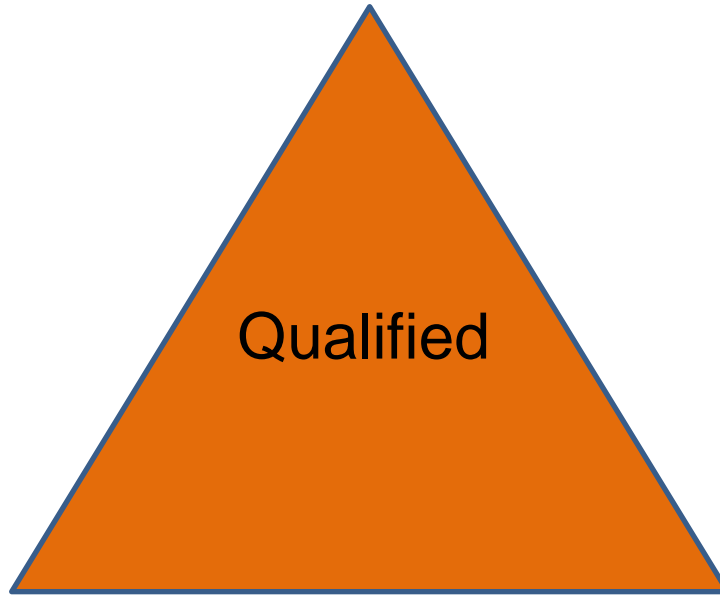


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Parts of the Qualified Electrical Worker

knowledge and
experience



hazard and
safety training

management
authorization
(2024)



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