



Working without a lockout/tagout when required has placed workers at risk.

Events

Site/Facility: Nevada Support Facility

Electrician Trips Circuit Breaker while Working on Energized Circuit -- Reference: [NVOO--GONV-NSF-2005-0001](#)

On February 2, 2005, a new electrician accidentally grounded a wire with his pliers while changing out lights and ballasts, tripping a main circuit breaker and causing a power outage that lasted two hours. The journeyman electrician was not shocked by the 277-volt circuit.

Important Points:	<ul style="list-style-type: none">• The electrician wore personal protective equipment and used an insulated tool, but performing the work on the circuit while energized violated procedures.• Despite this being the electrician's first day on the job, he was allowed to perform work without direct supervision or observation to ensure his compliance with facility procedures and work practices.
Contributors:	<ul style="list-style-type: none">• The electrician claimed that he had performed similar work at other job locations without having to de-energize and lockout the circuit.

Site/Facility: Savannah River H Tank Farm

Near Miss when Mechanic Removes Gauge on Pressurized System -- Reference: [SR--WSRC-HTANK-2004-0038](#)

On December 8, 2004, a mechanic was replacing a defective pressure gauge on a piece of breathing air equipment that was still pressurized. As he unthreaded the gauge it blew off, flew through the air, knocked off his hardhat and landed behind him. The mechanic did not lockout and vent the system as required by the site lockout/tagout process.

Important Points:	<ul style="list-style-type: none">• The gauge was replaced using a "Fix-It-Now" work scope code that did not require a formalized work release and hazards analysis.• The mechanic never positively verified that the system was depressurized by checking other pressure gauges or by venting the system.• A pre-job briefing for replacing the gauge was not conducted as required by the work release protocol.
Contributors:	<ul style="list-style-type: none">• The defective gauge did not have a deficiency tag or out-of-service tag, which might have alerted operators not to pressurize the equipment.• The standard work release protocol was not followed, which would have required a formal hazards screening and a lockout/tagout screening.

Site/Facility: Nevada Operations Office

Electrician Shocked while Replacing Ballasts in Lighting Fixtures -- Reference: [NVOO--GONV-GONV-2003-0001](#)

On February 10, 2003, a subcontract electrician received an electrical shock while replacing ballasts in the Nevada Support Facility cafeteria. The electrician's hand came in contact with 277 volts, resulting in burns on the little finger of his right hand, as well as exit burns on his right arm. The electrician failed to use a lockout/tagout as required.

Important Points:	<ul style="list-style-type: none"> • The electrician followed unsafe past practices of working on energized circuits. • The electrician did not follow OSHA standards for working on electrical equipment and failed to install a lockout/tagout as required.
Contributors:	<ul style="list-style-type: none"> • Electrician did not wear protective gloves because of limited space. • The subcontractor electricians were not trained on the OSHA standard (1910.147) for the control of hazardous energy. • The person charged with oversight was unfamiliar with the OSHA requirements and assumed those doing the work knew and followed them.

Site/Facility: Hanford Tank Farms

Electrician Burned by Electrical Arc Flash while Replacing Circuit Breaker -- Reference: [RP--CHG-TANKFARM-2002-0075](#)

On July 15, 2002, a subcontractor electrician received burns to his left forearm and left side of his neck when an electrical arc occurred while replacing a 60-ampere circuit breaker in a distribution panel. The panel was energized to 480 volts with no lockout/tagout or energized work permit controls in place. The electrician's screwdriver accidentally made contact between the breaker C phase line-side lug and the grounded mounting plate.

Important Points:	<ul style="list-style-type: none"> • The electrician did not lockout the electrical panel before performing the work in direct violation of the Job Safety Analysis, which requires a lockout or energized work permit. • The electrician used a metal screwdriver to align the circuit breaker.
Contributors:	<ul style="list-style-type: none"> • The electrician took inappropriate shortcuts. He intended to install the circuit breaker before pulling the wire to the load side of the breaker and de-energizing the panel.

Important Considerations for Using Lockout/Tagouts (Lessons Learned)

- Have a hazards screening and lockout/tagout screening been performed?
 - Are the policies and procedures that govern the control of hazardous energy understood by all workers who are involved in the task?
 - Is a lockout/tagout necessary to safely perform the work? Has the consequence of proceeding without hazardous energy controls been considered? Has the pressure to complete the task become a factor?
 - Has authorization been given to perform work without implementing hazardous energy controls?
 - Has the proper level of oversight/supervision been assigned for this task?
 - Who will verify that hazards have been properly isolated? Will isolation points be independently verified before start of work?
 - Has a zero-energy condition been verified and the re-accumulation of energy been prevented?
 - Has adequate and appropriate personal protective equipment been identified for this work?
 - Has the pre-job briefing discussed the hazards of the job and reviewed the tagout boundaries? Have all parties involved in the work attended the briefing?
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