

Case 518. 25-year-old electrical maintenance worker died when a pipe cap he was removing from a pressurized pipe struck his head.

A 25-year-old male electrical maintenance worker died when a pipe cap he was removing from a pressurized pipe struck his head. Approximately two months prior to the incident date (04-09-18), the employer tasked employees with removing a section of the sprinkler/fire main pipe and capping the ends as part of a maintenance operation. Various valves were closed and tagged out to perform the removal of the pipe. At that time, the tagout position of the drain valve was in the open position. Worker 1 was then instructed to remove the tag and return the valve to its normal (closed) position because another valve was leaking nearby, causing a turbine and generator parts to get wet. The line pressure of the sprinkler system was 150 psi. On the date of the incident (06-14-18), the decedent and his two coworkers were tasked with re-installing the approximate 10-inch diameter, 17-foot long section of the replacement sprinkler/fire pipe. The decedent was standing on an approximate 8-foot step ladder attempting to remove the steel pipe cap from the pressurized pipe while his coworkers were preparing the replacement pipe to be installed. The pipe the decedent was working on was under pressure and when the flange coupling was loosened, the 10-inch diameter pipe cap struck the decedent's head, causing him to fall to the cement floor.

MIOSHA General Industry Safety and Health Division issued the following Serious citations at the conclusion of its investigation.

Serious: 1910.269(d)(6)(vi): GI PART 86, ELECTRIC POWER GENERATION, TRANSMISSION, AND DISTRIBUTION [REF 408.18602]

If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed or until the possibility of such accumulation no longer exists.

Verification of energy isolation was not performed prior to employees attempting to install a section of fire main pipe in the crane bay. The fixed fire suppression system was effectively tagged out and isolated during the removal of the pipe on 04-09-2018. After the completion of work performed the drain valve used to relieve the system of hazardous energy was closed due to water leaking on the floor. On 06-14-2018, an employee suffered fatal injuries while attempting to remove a pipe cap from the fire suppression system. The pipe was under pressure and when the flange coupling was loosened up, the approximate 10-inch diameter pipe cap struck the employee.

Serious: 1910.147(d)(5)(ii): GI PART 85, THE CONTROL OF HAZARDOUS ENERGY SOURCES (LOCKOUT/TAGOUT) [REF 408.18502]

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Serious:1910.269(d)(6)(vii): GI PART 86, ELECTRIC POWER GENERATION, TRANSMISSION, AND DISTRIBUTION [REF 408.18602]

Before starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and deenergizing of the machine or equipment have been accomplished. If normally energized parts will be exposed to contact by an employee while the machine or equipment is deenergized, a test shall be performed to ensure that these parts are deenergized.

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