

INCIDENT FACTS

REPORT #:
71-204-2021

REPORT DATE:
February 2, 2021

INCIDENT DATE:
August 15, 2020

VICTIM:
27 years old

INDUSTRY:
Potato and corn farming

OCCUPATION:
Irrigator operator

SCENE:
Corn field

EVENT TYPE:
Electrocuted



Pivot water main with broken pressure switch and water flow regulator.

Operator Electrocuted while Performing Maintenance on Center Pivot Irrigation System

SUMMARY

A 27-year-old irrigator operator was electrocuted after touching an energized pressure switch of a center pivot irrigation system.

His employer was a potato and corn grower. He had been employed as an operator for six days and was being trained on the job. He had two years' experience with a previous employer working on irrigation systems. This irrigation system was self-propelled by a motor around a center pivot point. It had drop sprinklers installed along horizontal pipes supported by steel towers that had wheels. The system had 480 volt, 30 amp, 3-phase power.

On the day of the incident, the operator was working with a coworker performing maintenance activities on the farm's irrigation systems. At about 3:30 p.m., the operator and coworker were at the end, or gun, of the irrigation system circle. The coworker asked the operator to drive back to the pivot and turn on its power so that they could check the system's rotation. The operator drove the company truck in reverse 1200 feet from the end of the circle to the pivot. As he approached the pivot, the rear of the truck struck the system's above ground water main, breaking off its flow regulator and the water pump's energized pressure switch (though the pivot's power was off, the pump's power was on.) This caused water to be released from the main. The operator called the coworker to let him know what had happened. The coworker told him they would make repairs in the morning.

The coworker went to another location and manually turned off the water. He called the operator, but received no response. He then drove his truck to check on the operator. When he arrived at the pivot, he saw the operator unresponsive on the ground behind his truck near the water main still clutching the energized pressure switch. He then turned the power off at a nearby panel. He called 911 and began CPR. Emergency services and the county coroner arrived. He was declared deceased at the scene. The cause of death was "electrocution."

REQUIREMENTS

Employers must establish a written energy control program consisting of: (1) An energy control procedure; (2) Employee training; and (3) Periodic inspections. The purpose of the program is to ensure that before any employee services or maintains a machine or equipment where the unexpected energizing, start up, or release of stored energy could occur and cause injury, the machine or equipment is isolated from the energy source, and rendered inoperative. See [WAC 296-307-32007](#)

RECOMMENDATIONS

FACE investigators concluded that, to help prevent similar occurrences:

- Always shut off and lock the master electrical control switch before servicing the machine.
- Train workers on the electrical hazards associated with an irrigation system, including:
 - The risk of electrocution from an electrical power source is increased when water is present.
 - Holding an electrified object can cause your muscles to contract, making it impossible to let go of the object as long there is electric current. This may cause serious injury or death.



The operator backed into the system's water main, breaking off its flow regulator and pressure switch. This caused water to be released. The operator was electrocuted when he picked up the electrified switch.

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