

Workplace Fatality Summary Report:

Worker Fatally Injured While Repairing Excavator

The Contents of this Report

This report summarizes the Ministry of Labour Relations and Workplace Safety's Occupational Health and Safety Division investigation of a fatal incident. The information contained is intended for educational purposes only.

Incident Summary

The incident occurred while two workers were function testing an excavator to locate a fluid leak. Worker 1 determined the excavator needed service after finding a puddle of hydraulic fluid in the area where the machine was being operated. When the heavy equipment mechanic (worker 2) arrived, the excavator was parked in front of a pile of steel. Worker 2 began troubleshooting to determine how to repair the equipment. After a while a truck driver pulled into the lot with a load of scrap steel. The driver asked worker 2 to move the excavator because it was blocking the area where the steel was to be unloaded. Worker 2 parked the excavator and service truck in a different location on the lot. Then worker 2 asked worker 1 to assist with locating the leak. Worker 2 would lay on the ground under the excavator and Worker 1 would move the equipment in several directions. Per worker 2's instructions, worker 1 got into the excavator's cab and began moving the machine forward and back, the outriggers up and down, and the boom left and right. At the moment when Worker 1 lifted the boom and rotated it to the right, its knuckle (the part where it bends) struck an overhead power line. Worker 2, still on the ground beneath the excavator, was electrocuted and fatally injured.

Background Information

Worker 1:

Worker 1 was certified in operating backhoes and front end loaders, but was not certified in operating the type of excavator that was under repair that day. Worker 1 had received a workplace orientation when hired, but was later moved to a different location. Worker 1 did not have training for the worksite where the incident occurred.

Worker 2:

Worker 2 was an apprentice heavy equipment technician who had completed all of the required education, but did not yet have a journeyman certificate.

Equipment and Materials

Excavator:

The excavator – a Millyard Wheel Material Handler – and the service truck were parked beside power lines on the lot. When worker 1 rotated the large excavator's tall boom to the right, its knuckle struck one of the power lines. Worker 2, who was lying on the ground under the excavator, was electrocuted. The power line fell and landed on another excavator parked nearby (see Figure 1).

Sequence of Events

Worker 1 arrived at the worksite at 8:00 a.m., unlocked the gates, got the keys for the excavator and set up for the day.

During the routine circle check of the excavator, worker 1 noticed a puddle of hydraulic fluid on the ground. Worker 1 re-filled the tank and then used the machine to load some railway cars with steel.

After a short break, worker 1 returned to the excavator, examined the ground and found more hydraulic fluid that had leaked from the equipment. At that point worker 1 contacted the employer's head office for mechanical assistance.

The excavator was parked in front of a large pile of scrap metal when the heavy equipment mechanic (worker 2) arrived. Worker 2 immediately began troubleshooting to determine how to repair the machine. Worker 1 performed other tasks around the lot.



Figure 1

After a while, a truck with a load of scrap metal pulled in. The driver asked worker 2 to move the excavator because it was blocking the spot where the scraps needed to be unloaded.

Worker 2 parked the excavator and the service truck in another location near another excavator on the lot. Worker 2 then flagged worker 1 down and asked for help with locating the leak. Worker 2 would lay under the machine while worker 1 would move the machine and its parts in several directions.

Worker 2 slid under the excavator and was positioned between the front and back tires. Per worker 2's instructions, worker 1 started moving the machine forward and back, the outriggers up and down and the boom left and right. At the moment when worker 1 moved the boom to the right, its knuckle struck a power line. The line fell and landed on an excavator that was parked nearby. Worker 2, who was still beneath the machine, was electrocuted and fatally injured.

Completion

The employer pleaded guilty to clause 19(1)(b) of *The Occupational Health and Safety Regulations, 1996* (being an employer, failed to ensure that a worker is trained in all matters that are necessary to protect the health and safety of the worker when the worker is moved from one work activity or worksite to another that differs with respect to hazards, facilities or procedures, resulting in the death of a worker). The employer was fined \$90,000 plus a victim surcharge of \$36,000.