



Investigation Report
Fatal Injury Incident – Worker Struck by Equipment
April 15, 2016

F-OHS-102433-96A70
January 2021
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The contents of this report

This document reports Occupational Health and Safety's (OHS) investigation of a fatal incident on April 15, 2016. It begins with a short summary of what happened. The rest of the report covers this same information in greater detail.

Incident summary

On Friday April 15, 2016, a worker conducting water line repairs in an excavation at the Calgary Plaza Hotel Limited in Calgary, Alberta was fatally injured when struck by an excavator bucket.

Background information

Calgary Plaza Hotel Limited

Calgary Plaza Hotel Limited (CPH) is a hotel owned by Atlas Capital Corporation. On or about April 7, 2016, CPH engaged the services of Amana Construction Services Limited to undertake the repair of a water main leak.

Amana Construction Services Limited

Amana Construction Services Limited (ACS) is a concrete, asphalt and general construction company. At the time of incident, ACS had engaged the services of RM Excavating in relation to the operation of ACS's John Deere 200 LC excavator.

RM Excavating

RM Excavating (RM) is a company engaged by ACS to provide excavation services. RM was the employer of the operator of the excavator at the time of incident.

Operator

The excavator operator (operator) of the incident excavator had over 20 years' experience operating powered mobile equipment at construction and oil and gas work sites including excavators similar to the incident equipment. The operator was the owner of RM, a company engaged by ACS to complete excavation work at the work site.

Worker 1

Worker 1 was 42 years old at the time of the incident, hired by ACS as an experienced worker in the replacement of buried utilities.

Equipment and materials

Excavator

The John Deere 200LC tracked excavator (excavator) was a piece of heavy construction equipment consisting of a boom, dipper, bucket and cab on a rotating platform known as the house. The house sat atop an undercarriage with tracks or wheels and was principally used for excavation.



Figure 1. The excavator used by RM at the incident location on or about April 15, 2016. The excavator was used in the excavation of the water line.

- A. Excavator
- B. Coupling from which the bucket detached

Coupler

The JRB Smartloc Coupler (coupler) was a quick coupler used on excavators to connect different types of attachments, including buckets. The benefit of such a device was that the operator could easily change between different types of attachments. The quick coupler could be either manual or hydraulic or a combination thereof.

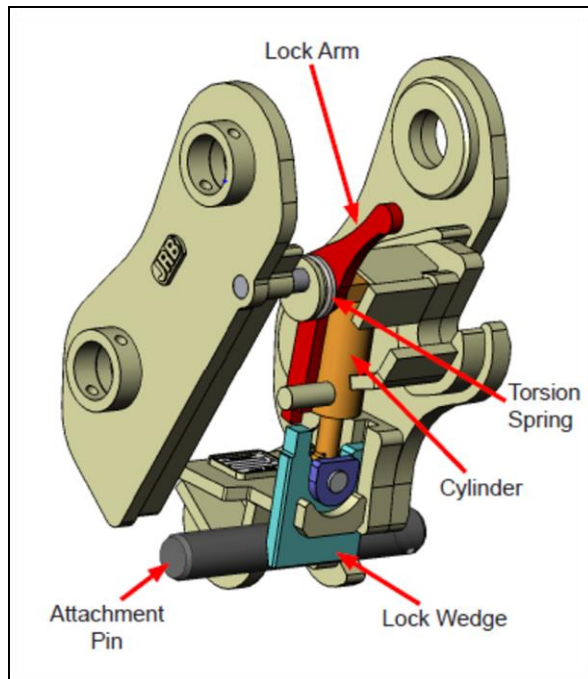


Figure 2. An accurate depiction of the JRB Smartloc Coupler used on the date of incident to attach the large and incident bucket to the excavator (captured from the manufacturer's website and equipment information catalogue).

Bucket

The C&P 24 inch digging bucket (bucket) was an excavator attachment manufactured by Palladin.



Figure 3. Photo was taken at the incident scene on April 15, 2016, of the bucket that detached from the excavator, rolled into the trench and struck the worker causing fatal injury.

A. Detached excavator bucket

Sequence of events

On or about March 25, 2016, CPH discovered a water line leak at or near the northwest corner of the hotel.

On April 2, 2016, ACS and CPH entered into an agreement to repair the leak.

April 7, 2016, work commenced on repair of the leak.

Between April 7 and April 10, 2016, work had exposed the existing water line, permitting workers access to the piping.

April 10, 2016, CPH and ACS revised the scope of work, moving from leak repair to main line replacement and installation of a fire hydrant.



Figure 4. Aerial photograph taken on April 20, 2016. The photo captured the incident excavation, the water line and approximate location of the deceased worker .

- A. Incident worker position
- B. Water line

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On April 15, 2016, workers continued to expose the existing water line using the excavator and hand tools. At approximately 1:00 p.m., worker 1 entered the trench to direct the excavator operator as well as use hand tools to remove soil at or near the water line.

During work, the excavator bucket was removed and a smaller 24 inch bucket attached. Shortly after the bucket exchange, the operator moved the excavator arm towards the excavation. During movement the bucket detached, rolled into the excavation, striking worker 1 causing a fatal injury.

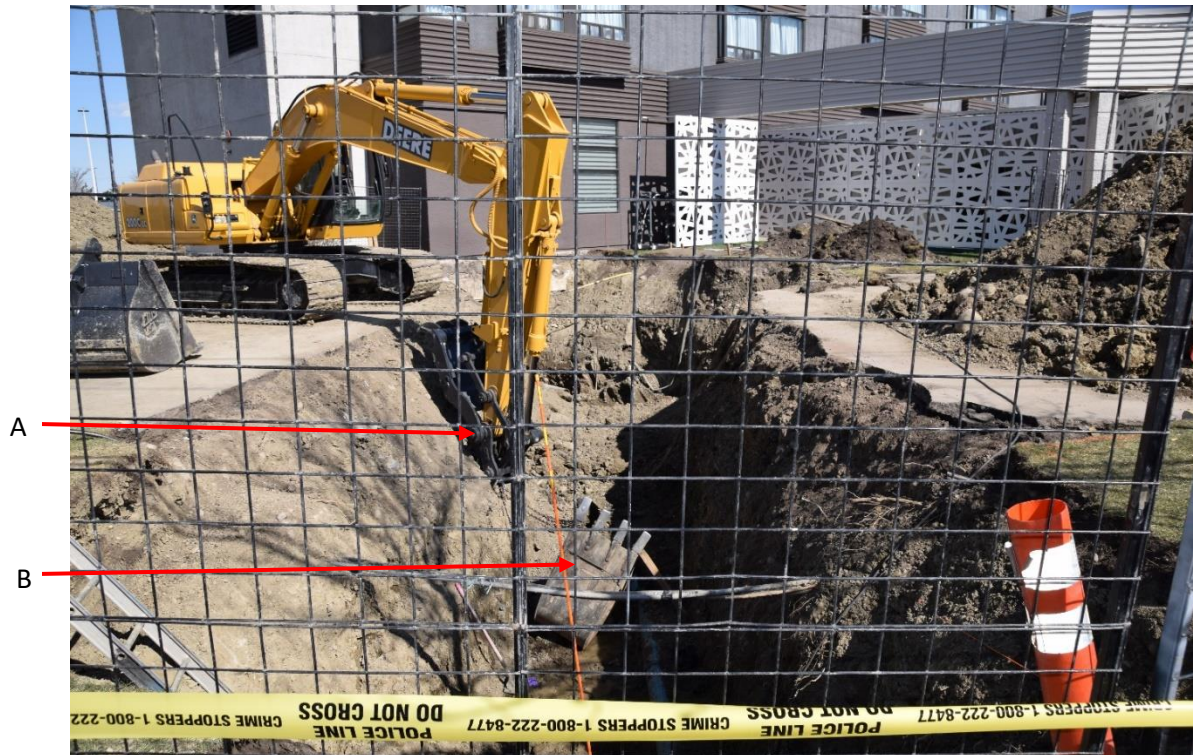


Figure 5. Photo was taken on April 15, 2020, capturing the incident excavator arm and coupler and the detached excavator bucket.

- A. Excavator arm and bucket coupler
- B. Excavator bucket that detached from the coupler and struck worker 1

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Completion

A review for enforcement action was completed on May 16, 2017, and it was determined that the file would be referred to Alberta Justice for review. The entire file was sent to Alberta Justice on August 2, 2017. After Alberta Justice conducted a thorough review, charges were laid on March 29, 2018.

On November 29, 2018, Amana Construction Services Limited pled guilty to Section 12(d) of the OHS Code for failure to ensure equipment, a JRB Smartloc Coupler, was operated in accordance with the specifications certified by a professional engineer or with the manufacturer's specifications. The court ordered a fine of \$200,000 plus the 15% Victim Fine Surcharge of \$30,000 for a total fine of \$230,000. Probation conditions of 1.5 years were imposed via the *OHS Act* Section 75 on December 10, 2018.

This investigation was closed on March 30, 2020.

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Signatures

ORIGINAL REPORT SIGNED

November 6, 2020

Lead Investigator

Date

ORIGINAL REPORT SIGNED

January 8, 2021

Manager

Date

ORIGINAL REPORT SIGNED

January 6, 2021

Director

Date