Resources Safety and Health Queensland Summary Report regarding the fatality of

Connor-Shaye Campbell Milne

At Fairfield Quarry, Clermont, QLD on 15 November 2018

Mining and Quarrying Safety and Health Act 1999

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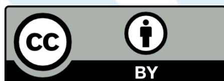

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Summary

This report is a summary of Resources Safety and Health Queensland's (RSHQ) investigation into the death of Connor-Shaye Campbell Milne in 2018. Mr Milne was a quarry worker who had been working at the Fairfield Quarry site for two weeks at the time of his accident. He was 21 years old at the time of his death.

At approximately 11:17 on Thursday 15 November 2018, Mr Milne received fatal injuries when he was pulled into the rotating tail pulley of a conveyor at Fairfield Quarry, Clermont.

At the time of the accident, Mr Milne and another quarry worker were removing rocks from the return side of a moving conveyor belt. They removed a guard and used their hands to clear rocks from the tail pulley while the conveyor was operating. This was a practice at Fairfield Quarry.

While clearing the rocks, Mr Milne's arm was caught and pulled into the tail pulley where he received fatal injuries. At 11:40, Queensland Ambulance Service declared Mr Milne had succumbed to his injuries.

Purpose

RSHQ believes providing information relating to fatalities and incidents on mine and quarry sites is an important part of continuous improvement in mine safety and health.

This report has been published to provide everyone who works with mines and quarries — owners, operators, supervisors, workers and suppliers — with an understanding of the events leading to the death of Mr Milne; to share information about why it happened and what needs to be done to reduce the likelihood of it happening again.

Events leading up to the accident

On the day of the accident 10 workers were on site, including a site supervisor who conducted a site safety meeting at approximately 06:00. The supervisor discussed tasks the workers would be doing for the day. Mr Milne was working in the Fixed Plant area which included crushers and conveyors.

When the plant was operating, rocks spilled over the conveyor and into the tail pulley area, this was due to a blocked crusher being cleared onto the screen feeding the conveyor. A surge of rock from the screen overfilled the conveyor feed chute. An impact roller under the conveyor, below the feed chute, was missing and the skirting rubber to contain the rocks on the belt was worn. These maintenance issues contributed to the spillage.

With the conveyor still operating, Mr Milne and a co-worker removed the tail pulley guard to clear the spillage. They removed rocks using their hands - a practice at the quarry.

Photo of the Fixed Plant at Fairfield Quarry

Site safety practices

Safety Management System (SMS)

Our investigation found there were multiple versions of the SMS on site with different printed and electronic versions. The site did not have a documented hazard 'action plan' to record identified hazards and their controls. As a result, there were no records of hazards identified/reported or what action was taken to address them. Workers had raised issues relating to safety hazards prior to the accident, but these issues had not been addressed.

Site induction and training

No site induction was conducted with Mr Milne, only a site familiarisation had been conducted. An assumption was made he would be familiar with the practices at Fairfield Quarry through having worked at another quarry belonging to the operator.

There were no training records available to demonstrate Mr Milne's competency to operate the equipment. Furthermore, Mr Milne was being familiarised how to operate the Fixed Plant by a worker who didn't hold the required trainer/assessor qualifications.

Removing rocks from the tail pulley

As a result of ongoing spillage, the plant required rocks to be removed from the affected area several times a week. The site did not have a documented procedure for safely removing rocks from the tail pulley area. It was a practice at Fairfield Quarry to remove rocks by hand, without a guard and with the conveyor still operating.

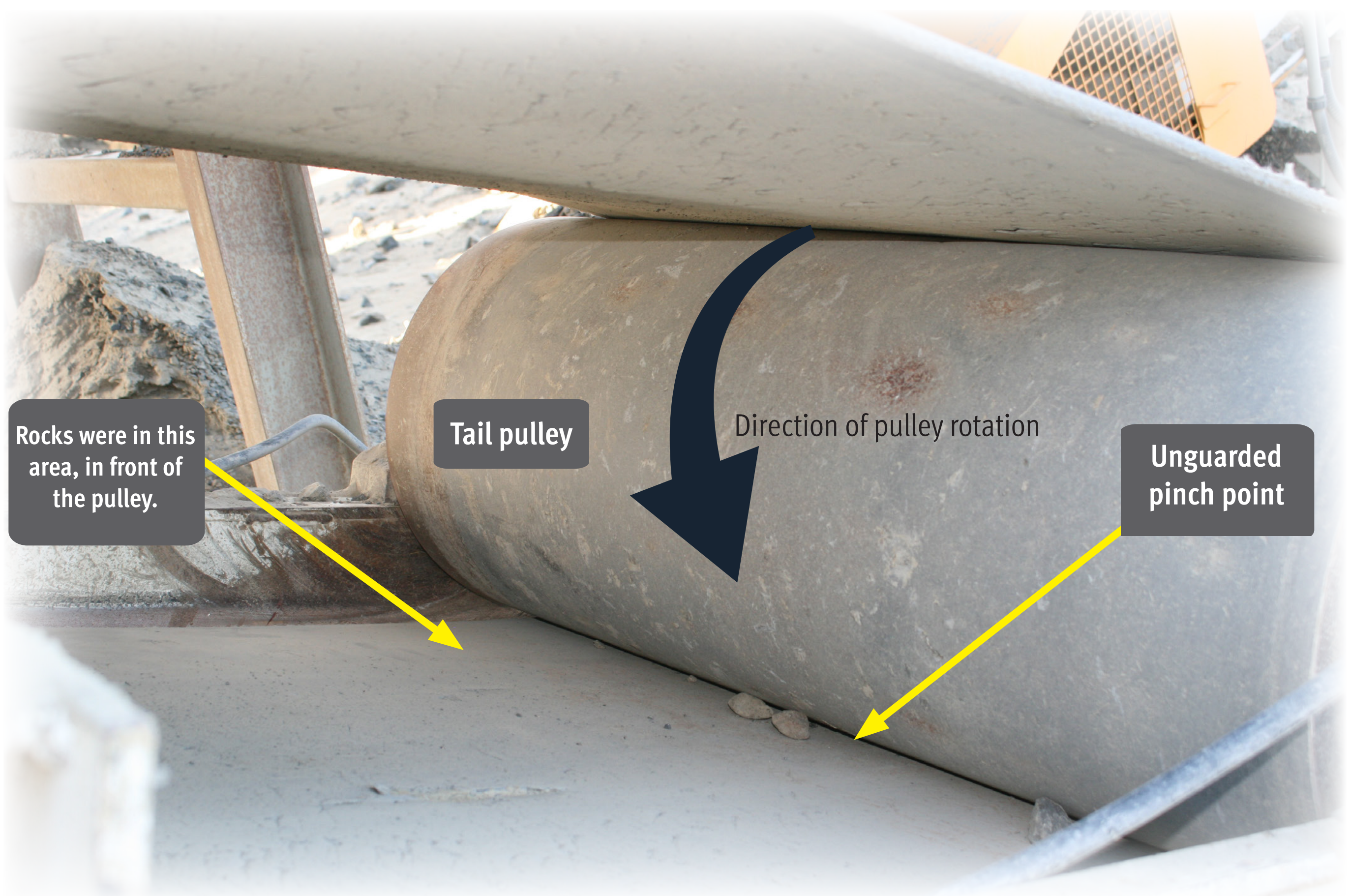

Photo of the tail pulley pinch point

18 Why - Cause map

FATALITY
Why?

- Pulled into conveyor tail pulley and recieved crushing force (Why?)
  - Clearing rocks on a moving conveyor (Why?)
    - **Mechanical** — Conveyor still operating and not isolated (Why?)
      - Conveyor operation for production
      - Isolation procedures not followed
    - **AND**
    - **Controls** — Reached into the conveyor tail pulley area to clear rocks (Why?)
      - Open access to the conveyor tail pulley area (Why?)
        - No guard on the equipment
        - No process to clear rocks from the conveyor tail pulley area
      - Excess rocks required clearing (Why?)
        - Surge of rocks
        - Poor maintenance
      - Following site practices (Why?)
        - No induction
        - Familiarisation only
        - No formal training
        - Lack of supervisor oversight
        - Multiple Safety Managment System documents

This 18 Why cause map is used to identify the root causes of a problem. In each section we ask "why did this occur?" The diagram is to be read left to right.

The causal diagram demonstrates two important direct factors:

1. If the equipment had been isolated and locked out, or
2. If the guard had been on the equipment preventing access

The accident would not have happened.

The other factors all contributed.

Photo of the Fixed Plant at Fairfield Quarry

Key takeaways

Never operate plant with guards removed or incorrectly fitted.

Always isolate and lock out plant before working on it.

Always personally verify that equipment is isolated before working on it.

Workers must be inducted into the workplace. The induction must include details of hazards present, the risk, policies and procedures that need to be in place to control the risk.

Plant must be designed, operated and maintained so that it does not present an unacceptable level of risk to workers.

Risk controls must be regularly reviewed to ensure they are in place and effective.

Supervisors must:

- ensure workers are trained for the tasks they are undertaking
- ensure that workers are following procedures and applying risk controls
- validate that plant is safe to operate. If not, stop and isolate the plant until it is safe to operate
- encourage workers to report hazards and incidents and promptly attend to hazards and risks that have been identified by workers
- actively encourage workers to report hazards.

Regulatory outcome

Following the investigation by Resources Safety and Health Queensland Mines Inspectorate, charges were laid against the quarry operator, its site senior executive and a supervisor.

On 25 February 2021, the quarry operator and two of its employees pleaded guilty and were sentenced in the Emerald Industrial Magistrates Court for offences relating to failing to ensure risk to persons from quarrying operations was at an acceptable level.

The industrial magistrate imposed a fine of $180,000 on the quarry operator and fines of $45,000 and $10,000 on the site senior executive and supervisor respectively.

In sentencing, the magistrate made mention of the complacency at the quarry site and inadequate attention to safety.

The penalties imposed highlight the seriousness with which the law treats employers' and their officers' obligations to ensure the safety and health of their workers.

Links to safety alerts and bulletins

Safety Alert 359 Fatality involving a quarry plant operator
Safety Alert 334 Worker injured due to ineffective isolation
Safety Alert 291 Fatality on a mine site

Safety Bulletin 133 Preventing serious hand injuries
Safety Bulletin 49 Isolation of plant containing stored energy
Safety Bulletin 48 Isolation facilities for equipment operated by electricity

Contact

As expressed in the summary, this report is a brief outline of the events around Mr Milne's fatal accident. If you require more information, please contact the Chief Inspector by email - rshqmmq.corro@rshq.qld.gov.au

General enquiries

Contact the general enquiries numbers or your local Mines Inspectorate office.

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