

Investigation information release

Date: November 2024

Worker suffers serious burns while refuelling petrol-powered water pump

Incident date: 23 October 2024

Event: Worker suffers serious burn injuries while refuelling petrol-powered water pump

Location: Divall's Quarries – Carrick Hill, near Goulburn NSW

Overview

A worker suffered serious burn injuries to his legs and hands while refuelling a petrol-powered water pump that ignited.

The mine

Carrick Hill Quarry is an open-cut quarry near Goulburn in the Southern Tablelands region of NSW. The quarry is operated by Denrith Pty Ltd and produces road base, among other materials. As part of its operations, the quarry uses crushing and screening mobile plant and equipment. The company has a bulk haulage arm that uses a fleet of road trucks to transport extracted materials, employing around 300 workers across the full scope of its operations, including quarry operations, civil construction, transport, mechanical, retail and administration.

The task

As part of the quarry's normal operations, a small petrol-powered pump was used to transfer water from a dam within the quarry via an outlet hose to mobile plant comprising a screener, stacker-conveyor and impact crusher. The water supply served the dual process of suppressing dust and conditioning the road base material.

The pump would generally operate for about 2 hours before needing to be refuelled. Workers were alerted of the need to refuel by the cessation of the water supply to the screening and crushing plant. Refuelling was performed using a plastic jerry can and a funnel to transfer fuel into the fuel tank.

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The incident

Two workers (a supervisor and quarry worker) began operating the stacker-conveyor, screening and crushing plant to produce 40 mm road-base at 6.30am on 23 October 2024. At 6.45am, the supervisor drove to the dam area, fuelled and primed the water pump. He then started the pump, supplying water to the screen and crushing plant about 70 metres away.

Figure 1: The mobile screener, stacker-conveyor and impact crusher plant



Figure 2: The outlet hose, water pump and dam



At 11.00am, the supervisor left the area in a front-end loader to load a truck that had arrived at site. Shortly after, the other worker drove to the water pump to refuel it. During the refuelling process, the pump ignited unexpectedly. The worker called the supervisor via radio and requested assistance. When the supervisor arrived at the injured worker's location, the pump was alight and the worker had suffered serious burns to his legs and hands. Preliminary inquiries indicate the

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worker was wearing shorts at the time of the incident, which may have contributed to the severity of the burns sustained to his legs.

Figure 3: The fire-damaged water pump



Figure 4: Top view of fire-damaged water pump



The worker received first aid on site and emergency services were immediately called. The worker was treated at the scene by paramedics before being transported by air ambulance to Royal North Shore Hospital, where he was admitted for further treatment including skin grafts.

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The investigation

The Resources Regulator has commenced an investigation to determine the cause and circumstances of the incident that will explore, among other things, the:

- systems of work at the quarry for refuelling plant and the safe use and storage of hazardous chemicals
- configuration, operation and maintenance of the involved plant and equipment
- selection, provision and use of personal protective equipment (PPE) at the quarry, including mechanisms in place to ensure appropriate PPE suitable for specific works task was worn by workers
- instruction, training, experience and supervision provided to workers concerning the work task and involved plant and equipment
- adequacy of risk assessments, work instructions and procedures for the involved plant, equipment and work task
- adequacy of the quarry operator's safety management system including principal hazard management plans and associated control plans and procedures governing the management of hazards and risks associated with the refuelling of plant.

The quarry operator and involved workers are assisting with the investigation. A report will be published at the conclusion of the investigation.

Safety information

Quarry and mine operators are reminded of their duty to identify hazards and manage risks to health and safety in accordance with the provisions of the *Work Health and Safety Act 2011* and *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and Regulations.

In particular, quarry and mine operators must:

- prepare and maintain a register of all hazardous chemicals stored, handled and used at the mine
- obtain a copy of the relevant and current safety data sheet (SDS) and ensure that it is readily accessible to those workers involved in the storage, handling and use of hazardous chemicals at the mine
- identify and manage the risks associated with hazardous chemicals such as fuel vapours and fumes, including identifying ignition sources that have the potential to ignite flammable or combustible material
- ensure the safe storage of fuel in accordance with site risk assessments and relevant SDSs, including requirements to ensure that fuel containers are stored with compatible materials in designated areas that are suitably distanced from ignition sources, protected from direct sunlight, dry, cool and well ventilated
- develop and implement safe systems of work for refuelling plant, which incorporates appropriate controls to manage the risk of ignition, including ensuring fuel cannot contact hot surfaces or exhaust gases while refuelling is taking place

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- ensure the provision of appropriate information, instruction and training to workers in the safe systems of works for refuelling plant, with appropriate supervision provided to ensure compliance
- ensure the provision of appropriate PPE that is suitable for the nature of the work task and associated hazards, with suitable information, instruction, training and supervision provided to ensure workers compliance with PPE requirements.

Workers are reminded of their duty to take care for their own health and safety and that of their co-workers. They must also comply with reasonable work instructions, policies and procedures.

In particular, workers must:

- comply with site-specific procedures, hazard identification and risk management processes, governing the refuelling of plant and equipment and the storage, handling and use of hazardous chemicals
- only refuel petrol and diesel powered plant and equipment in circumstances where fuel cannot come into contact with hot surfaces and exhaust gases
- use and wear appropriate PPE while working within hazardous work environments, including while working with hazardous chemicals such as fuels, in accordance with site procedures and information, instruction and training provided.

Further information

Please refer to the following guidance materials:

- [Code of practice: Managing risks of hazardous chemicals in the workplace](#) (Safe Work Australia)
- [Guide: Storage of flammable liquids](#) (Safe Work Australia)
- AS 1940:2017 The storage and handling of flammable and combustible liquids
- AS/NZS 60079.10.1:2022 Classification of areas – Explosive gas atmospheres
- [Safety Bulletin SB21-01 Fire occurs while refuelling plant](#)

About this information release

The Regulator has issued this information to draw attention to the occurrence of a serious incident in the mining industry. Further information may be published as it becomes available.

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- learn more about our work on causal investigations and emergency response
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