



SAFETY ALERT

DATE: July 2026

SA: 0012

TITLE:

High pressure water jetting foot injury

TARGET AUDIENCE:

All water jetting contractors, managers, supervisors and operatives

INDUSTRY SECTOR:

Mining

ORIGINAL SAFETY ALERT ISSUED BY

Government of Western Australia,
Department of Mines and Petroleum
(Significant Incident Report 229)

WHAT HAPPENED

A worker in a confined space was cleaning demister pads using a hand-held high-pressure water jetting lance.

The worker had taped a torch to the end of the lance due to poor visibility caused by low light and water and particles from the cleaning process.

The worker stood upright, holding the lance between his legs, facing down and at 90° to the demister pads, allowing the water jet to strike his gum boot.

The water jet passed through the lining of the boot and penetrate the worker's foot, creating a fluid injection wound that entered and exited through the inner ball of his foot.



DIRECT CAUSES

The operating pressure of the water jet greatly exceeded the pressure rating of the protective gum boot.

The worker pointed the nozzle directly down to his feet.

The incident report upon which this safety alert is based was supplied to the WJA by the **Australasian High Pressure Water Jetting Association (AUSJET)**

CONTRIBUTORY CAUSES

- The pressure setting and water flow rate used during cleaning resulted in twice the recommended reaction force.
- Personal protective clothing and footwear capable of withstanding the force of the water jet were not worn.
- The torch attached to the lance partially obscured the worker's vision of the nozzle head and working area.
- There was insufficient lighting for the work task and environment.
- Intrinsically safe lighting available at the workplace was not used.



ACTIONS RECOMMENDED BY THE WJA – FOR UK WATER JETTING CONTRACTORS

Create a robust risk assessment and method statement (RAMS)

- Evaluate whether the task can be carried out using automated equipment. Automation should always be considered first to minimise direct operator exposure to hazards, reduce manual handling, and improve both safety and efficiency.
- Document the assessment, including reasons for or against automation, for each specific task.
- Confirm that lighting is sufficient throughout the task. Use intrinsically safe lighting in explosive atmospheres if required.
- If possible, consider using forced ventilation to improve visibility.

The Water Jetting Association is the UK trade body for contractors, manufacturers, equipment suppliers, equipment hirers, training providers, agencies and service users with an interest in water jetting

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Use safe and compliant equipment

Only use water jetting guns that comply with the WJA Code of Practice. The code stipulates that jetting guns shall have a minimum length of 1.1 metres, as measured from the centreline of the rear hand grip to the nozzle holder.

This measure is designed to prevent an operative from directing the nozzle of the gun at any part of their body when it is in held for conventional use.

Ensure all operators are adequately trained

Operators must be fully trained and competent in the use of water jetting equipment and familiar with the specific hazards associated with each task.

- Training should include emergency stop procedures and clear instructions to halt operations immediately if unforeseen issues arise. Operators must be encouraged to stop work and consult with supervisors or managers whenever safety is in doubt.

Select appropriate personal protective equipment (PPE)

- Specify required PPE (for example: cut-resistant suits, visors, gloves, hearing protection, safety boots), but reinforce that no PPE can provide total protection against high-pressure water jets.
- Emphasize the importance of risk reduction through safe systems of work, correct equipment selection, and operator vigilance over reliance on PPE alone.

Review and reassess

Continually monitor the work environment and procedures. If conditions change or unexpected issues are encountered, stop the task, reassess the risks, and update the method statement as needed before resuming work.

Be water jetting injury aware

Know what actions must be taken in the event of a fluid injection injury. They are detailed in the WJA Water Jetting Injury Treatment Algorithm, which can be accessed on the WJA website.

[View the algorithm here](#)

Scan to download
the WJA Water
Jetting Injury
Treatment Algorithm



An operative carrying out high pressure water jetting using a lance that is compliant with the WJA Code of Practice and wearing specialist PPE

RELEVANT GUIDANCE DOCUMENTS – UNITED KINGDOM

Water Jetting Association Code of Practice

First published April 2026

The WJA Code of Practice - known as the WJA Black Code - is recognised by industry bodies, including the Health and Safety Executive, as defining the standard for the safe use of water jetting equipment for all pressures and flows.

It replaces the WJA's three previous codes of practice, the Blue Code for high and ultra-high pressure water jetting, the Red Code for water jetting in drains and sewers, and the Purple Code, for pressure washers.

The WJA Black Code is made available free of charge to all WJA members and operatives who pass WJA City & Guilds-accredited training courses. It can also be bought via the WJA Shop.

[Find out more about the WJA Black Code](#) • [Go to the WJA Shop](#)

