

## 3D Tool High Pressure Water Cut Injury

### Description

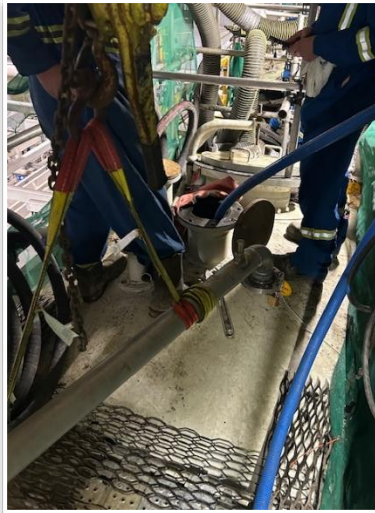
A CEDA crew was tasked with using a 3D high pressure tool to remove the rubber lining from a client's tank. A worker was directed by their supervisor to check whether the 3D tool was contacting I-beams inside the tank, and the worker unknowingly placed themselves in the line of fire by attempting to visually check inside the tank opening (port) while the 3D tool was energized. A stream of 7,000 psi water exited the tank port and struck the worker's hand, resulting in a high pressure water-cut injury.

### Immediate Actions Taken

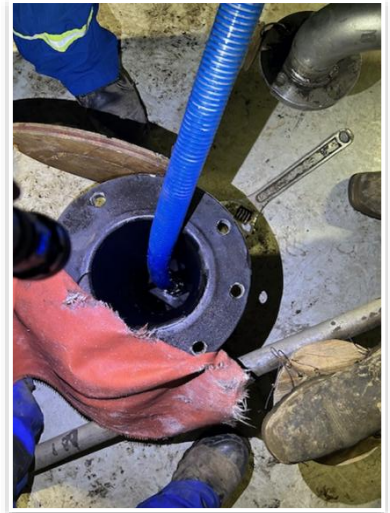
- Equipment was immediately shut down.
- Client EMS was contacted and responded to the scene. Worker was transported to the client's on-site medical center and then transported off-site to the hospital for further assessment.

### Findings

- A competent crew was available to perform the task; however, the crew was switched to an inexperienced crew.
- Inadequate communication between the leader and worker resulted in the worker attempting to perform a visual check of the 3D tool while it was energized. Clear direction was not provided on how to safely verify 3D tool rotation.
- The crew did not verify that the worker near the tank port was removed from the line of fire, before pressurizing the system.
- Neither the leader nor the crew had completed the required competency training to operate the 3D tool.
- The critical hazards and controls associated with 3D tool operation were documented in the Job Hazard Assessment (JHA) and Procedure; however, these requirements were not fully understood by the crew.



Job setup (3D tool and hose inside tank port)



Port where line of fire hazard existed

### Corrective & Preventive Actions

- A training audit was completed on high pressure technical training and field sign-offs for all FMM P&V personnel, identifying key gaps in competency training for the 3D Tool, Tube Lance Exchanger (TLE), and AutoBox (ABX) 500.
- All FMM P&V leadership at the worksite will be enrolled in CEDA's Leadership Development & Improvement Program (LDIP).
- For all high-pressure jobs, the supervisor or designate must verbally review the applicable Safe Work Procedure (SWP) with the crew.
  - This review must clarify task instructions and any industry terms or site-specific language to ensure all crew members, including less experienced workers and those from other sites, understand the SWP and required safety controls.
- Update the Leadership Kick-Off Meeting for Turnaround Events to include requirements for CEDA-specific and Alberta Occupational Health and Safety roles and responsibilities.

**For further information, please contact your regional HSE Advisor or [hse@cedagroup.com](mailto:hse@cedagroup.com).**