

CWRUbotixCase Western Reserve Uni
Cleveland, Of2024 Jobsite Safety AnalysisObserving Our Oceans: Understanding Our World and Creating Our Future

Tasks	Hazards	Controls
Entering/Exiting the Operation Area	Slipping	Never run on the pool deck. Wear non-slip shoes
	Tripping	Avoid stepping over cables when possible. Walk slowly while carrying heavy loads.
Launch/Recovery	Tripping	Wear non-slip shoes. Tether manager ensures the tether does not become caught or left with too much slack
	Drowning	Wear a lifejacket or ensure that lifeguard is on duty
	Back injury/other lifting injuries	Lift with your legs, not back. Grip the ROV by the tether strain relief when launching or recovering the ROV.
	Cut/pinch hazards from thrusters	The operator disarms the ROV when the crew is working on it and only re-arm it after the poolside crew confirms all is clear and gives the "ready to arm" command to the operator.
Operation	Pinching/crushing from pneumatics	Clearly announce yourself before handling the ROV and give "engage" and "disengage" commands for pneumatics.
	Pneumatics explosion	Set the tank regulator to 100 psi and operating pressure regulator to 40 psi. Verify pressure ratings and inspect pneumatic components. Monitor the pressure in the tank at startup and use the dump valve if necessary.
	Electrocution	Any crew member can call "leak" to initiate the leak protocol in the ROV Operation Safety Checklist. Visually inspect the ROV and control box for wiring problems or water in the ebay before launch and during each period in which the ROV surfaces. Ensure the control box and power supply are properly secured away from the edge of the pool.
	Tripping	Wear non-slip shoes. The tether manager ensures the tether does not become caught or left with too much slack
	Drowning	Wear a lifejacket or ensure that lifeguard is on duty
	ROV interfering with diver in pool	The tether manager is responsible for ensuring divers' safety in regards to the ROV and tether. If a diver is too close to the ROV or on a collision course with the robot or the tether, either the diver or tether handler can command "disarm" to stop and disarm the robot. In case of emergency, the operator can push the E-stop button.
	Tether entanglement with diver in pool	The tether manager is responsible for ensuring the diver's safety. The handler must ensure the tether is not in the way of the diver and warn the diver or move the tether accordingly. The tether handler can command DISARM to stop and disarm the robot. In case of emergency, the operator or tether handler can push the E-stop button.