Task	Hazards	Precautions
Connecting tether to ROV	Potential electrocution risk, potential sharp edges	Double check that power to the ROV is off and make sure everyone knows to leave the ROV off until every plug is double checked. All tether connections must be checked by two people. All sharp edges are on the outside of the ROV frame, so you shouldn't come into contact with them while connecting the tether, just be aware of their location.
Disconnecting tether from ROV	Potential electrocution risk, potential sharp edges	Double check that power to the ROV is off. Make sure the pneumatic lines have been vented before disengaging them. Pneumatic lines are disengaged during the "pneumatic box take down" step, to vent the pneumatic lines refer to this task. All sharp edges are on the outside of the ROV frame, so you shouldn't come into contact with them while disconnecting the tether, just be aware of their location.
Connecting tether to control box	Potential electrocution risk	Make sure the power strip is off before plugging everything in.
Disconnecting tether from control box	Potential electrocution risk	Make sure the power strip is off before unplugging everything.
Power converter set up	Potential electrocution risk	Make sure nobody is touching the plug, everything on the ROV is plugged in, everybody handling the ROV both has been warned that power is being restored to the ROV and also that they aren't handling any of the electronics.
Power converter take down	Potential electrocution risk	Flip both switches to off before unplugging everything.
Pneumatic box set up	Potential injury from compressed air	Make sure claw position toggle is in the middle position. Make sure the variable bouyancy system control level is in the closed position. Then make sure to connect the air lines to the tether first before connecting the compressor. Make sure fingers are clear of the claw before connecting the pneumatics box to the compressor.
Pneumatic box take down	Potential injury from compressed air	After the ROV is out of the water, cut off air pressure from the compressor to first the compressor and then the in-line pressure regulator. Then verify fingers are clear of the claw and toggle the claw and variable bouyancy system controls to make sure all the air is out of the system, and then disconnect air lines to the tether, and finally disconnect the pneumatics box from the compressor.
Compressor Charging	Potential injury from compressed air	Make sure the air release/water release valve on the tank is sealed before charging the tank. Place the tank out of the way and arrange the power cord so that it doesn't creating a tripping hazard.
Compressor Discharge	Potential injury from compressed air	First, disconnect the compressor from the pneumatics box, as instructed in the "Pneumatics box take down" step. Then turn the air release/water release valve slowly, listening for a slight hiss of air. Do not open the valve rapidly. If the pressure stops decreasing then slowly give the valve a quarter turn to start the flow of air again. Repeat as necessary until the compressor reads 0 air pressure and the valve has stopped making noise.
Loading the ROV onto the cart	Potential lifting/back injury	The ROV is heavy and awkward to lift. Unless you have imperical evidence to suggest that you can lift it safely by yourself, make sure at least two people are lifting the ROV. Before attempting to lift the ROV make sure the tether is secure as it may move and hit someone, or be a tripping hazard if it is not secured before transport. Lift with your legs not your back, and make sure you know where you're going to put it before picking it up.
Unloading the ROV off the cart	Potential lifting/back injury	The ROV is heavy and awkward to lift. Unless you have imperical evidence to suggest that you can lift it safely by yourself, make sure at least two people are lifting the ROV. Before attempting to lift the ROV make sure the tether is secure as it may move and hit someone, or be a tripping hazard if it is not secured before transport. Lift with your legs not your back, and make sure you know where you're going to put it before picking it up.
Placing the ROV in the pool	Potential lifting/back injury. Potential electrocution risk.	Get verbal, direct, and recent confirmation that all wires are plugged in before placing the ROV in the water to avoid electrocution. The ROV is heavy and awkward to lift. Unless you have imperical evidence to suggest that you can lift it safely by yourself, make sure at least two people are lifting the ROV. Before moving the ROV, make sure the tether is arranged such that it won't hit anyone, and will not be a tripping hazard. Lift with your legs not your back. If the pool surface is below ground level, lift with at least two people, no exceptions. Get verbal confirmation from the co-pilot that they will not actuate the claw until all hands are off the ROV.
Removing the ROV from the pool	Potential lifting/back injury	The ROV is heavy and awkward to lift. Unless you have imperical evidence to suggest that you can lift it safely by yourself, make sure at least two people are lifting the ROV. Before attempting to lift the ROV make sure the tether is arranged such that it won't hit anyone, and will not be a tripping hazard. Have a plan for where you're going to move the ROV to before you start to lift it. If you're going to place it on the stand, make sure either that it is in position, or someone is ready to put it in position, before you lift it. Lift with your legs not your back. If the pool surface is below ground level, lift with at least two people, no exceptions. Get verbal confirmation from the co-pilot that they will not actuate the claw until all hands are off the ROV.
Adding or removing claw attachments	Potential pinch/finger injury	When adding or removing claw attachments, first verify which attachment you're changing, attaching, or removing before beginning. Then receive verbal confirmation from the co-pilot that they will not actuate the claw unless specifically requested to. Be careful not to drop attachment pins, and take your time. When requesting the claw to be open or closed, make sure that all apendages are clear of the claw. The water distorts things, so either leave a healthy margin or error, verify by touch that your fingers aren't in the way, or if necessary get a second person and have them help you remove the front end of the ROV from the water. Do not release props until you're sure it's secure in the claw. In the unlikely event that the claw does close on your finger, please shout "open claw" so that people know how to help you.