Hephaestus Robotics

Job Site Safety Analysis (JSA)

DESCRIBE JOB STEP (List the natural steps of the job. Do not make the steps too broad or too fine)	**POTENTIAL HAZARDS** (What are the potential hazards identified at this part of the jobs steps)	**RECOMMENDED RISK CONTROL MEASURES** (Describe how the identified hazards can be eliminated or reduced.)	**RESPONSIBLE PERSON(S)** (Implementing control)	**INITIAL** (Of the responsible person/s)
Entering/Exiting the pool deck area	Slipping/falling on the pool deck. Drowning	Employees must wear non-slip shoes and walk at all times in the pool area. Employees must be capable swimmers or wear a Personal Floatation Device. When practicing at the pool, a lifeguard is on duty.	Mission Director (Bennet Menzer)	BM
System setup up	Electric shock. Tripping	Power provided by 110V outlet is from a GFCI outlet and/or an additional GFCI device is connected to the extension cord that is plugged into the 110V outlet. Cables for the surface control system must be neatly organized to prevent tripping hazards	Tether Manager (Kai Herbst)	KH
Power up checks	Electric shock Leaks Thrusters Tether breaking	Check that the power supply is plugged into a GFCI outlet. Verify that a 25-amp fuse is installed. Check for leaks using a vacuum pump – verify that the watertight chambers can hold a vacuum at 15 inHg for 2 minutes Check the thruster shrouds are in good condition and securely attached. Verify that the steel cable in the tether is securely attached to the	Tether Manager (Kai Herbst)	KH

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		eye bolt on the frame of the ROV.		
Pool side operations	Miscommunications	The co-pilot is in charge of calling out the tasks for the other members of the deck team including the pilot, scientist and tether managers.	Mission Director (Bennet Menzer)	BM
	Drowning.	The employees working poolside that are launching the ROV must be capable swimmers or wear a Personal Flotation Device.		
	Injured lifting the ROV.	Launching and retrieving the ROV must always be done by two people.		
	Falling into the pool when attaching or retrieving props.	When attaching or retrieving props to/from the ROV, employees must be low to the ground and not too far over the edge of the pool deck.		
	Long hair caught in the ROV thrusters.	Employees with long hair must wear their hair up or in a ponytail.		
System break down	Electric shock and thrusters	In the event of a system breakdown, power to the ROV is cut off at the power supply and the ROV is brought to the surface by pulling on the steel cable. Once the ROV is on the surface, the ROV is removed from the water by two people.	Tether Manager (Kai Herbst)	KH