Job Safety Analysis

The Corporation of Offshore Reconnaissance & Polar Submersion is presenting their ROV, The General, to complete the numerous tasks at the ports of Seattle Washington. The following is the JSA meant for this mission:

Steps	Hazards	Recommendations
Task 1: Aircraft 1. Using flight data to determine the search zone for the wreckage 2. Identifying the aircraft using the tail section 3. Removing debris from the engine using a lift bag 4. Attaching the lift bag to the debris 5. Inflating the lift bag to raise debris 6. Moving the debris from the wreck area 7. Releasing the lift bag from the debris 8. Returning the engine to the surface side of the pool using a lift bag 9. Attaching the lift bag to the engine 10. Inflating the lift bag 11. Returning the engine to the surface, side of the pool 12. Returning all lift bags to the surface, side of the pool	1. Flight data getting corrupt 2. Aircraft loses its tail section 3. Wrong flight data 4. Pre inflating the lift bag stopping the ROV from being able to submerge 5. Not being able to release the lift bag 6. Lift bag not being able to inflate 7. Getting the calculations of the flight data wrong	1. Have extra copies of data in case of emergency 2. Check the lift bags before for holes or anything else that will stop it from inflating 3. Make sure the lift bag is deflated before submerging 4. Make sure to do each calculation twice in order for the most accurate numbers
Task 2: Earthquakes 1. The OBS, connector, anchor, and release will be deployed by divers before the product demonstration run	1. The Bluetooth release not working 2. Cable connector not disconnecting	1. Check the Bluetooth release beforehand to make sure it is working properly

2. Disconnecting the OBS cable connector from the power and communications hub 3. Placing the cable connector in its holder 4. Closing the door of the power and communications hub 5. Releasing the OBS from the anchor using a Bluetooth release 6. Returning the OBS to the side of the pool	from hub and not allowing it to be placed in holder 3. Door of communications getting stuck	2. Get everything ready before the product demonstration run 3. Have an extra OBS cable connector just in case the first one stops working
Task 3: Energy 1. Using tidal data and nautical chart to determine the optimum location for a tidal turbine 2. Installing an array of tidal turbines in the optimum location 3. Installing an Intelligent Adaptable Monitoring Package to monitor the area 4. Placing a mooring a given distance from the base of the tidal turbine 5. Suspending an Acoustic Doppler Velocimeter at a given height on the mooring line 6. Measuring the given distance from the bottom 7. Collecting two samples of eelgrass for topside analysis 8. Transplanting two eelgrass frames to a previously disturbed area	1. Not being able to latch the array in place due to something blocking it 2. Distance of Acoustic Doppler not being within 10 cm 3. Installing the Intelligent Adaptable Monitoring Package in the wrong place	1. Try to suspend the Acoustic Doppler as close as possible to stay within 10 cm 2. Make sure all equipment is secure and not in the way of anything 3. Correctly identify the distance from the bottom