



Manta rays Job Safety Analysis (JSA)

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No.	Action	Risk	Precautions	Consequence Rating (1 - 10) (See scale Below)	Persons Responsible.
1	Piloting	Electrocution due to possibly exposed wiring.	No exposed wiring. Use of strain relief. Taping of loose connections and exposed wiring with electrical tape.	6	
2	Retrieving ROV	Falling in the body of water, possible hypothermia or electrocution.	Wearing a Life Vest on deck, tether management, and deck support.	6	
3	Creating connections in electronics	<ul style="list-style-type: none"> a. Shorting of wires. b. Incorrect connections leading to 	<ul style="list-style-type: none"> a. Isolation of ground wires and power wires. b. Labeling and 	4	

		dysfunctionality.	organization of wires.		
4	Communication	False signals leading to incorrect idea of position leading to collision or damage to ROV.	Set roles and communication standards or conventions.	3	
5	Dropping tools or heavy objects.	Injury of foot or leg.	Use of closed toed shoes. Practice of caution when using tools.	5	

Consequence Rating Details:

(Based on a scale of 1 to 10)

<p>1. Not noticeable to all members.</p> <p>2. Is easy to fix; it does not cause damage or causes very minor damage.</p> <p>3. Is a cause for concern, but is not a major issue.</p>
<p>4. Can cause various issues for the ROV build.</p> <p>5. Causes one or more team members to be harmed, although damage is very minor OR causes damage to ROV which is moderately easy to repair, but is concerning.</p> <p>6. Causes one or more team members to be harmed, although the damage is not permanent OR causes damage to ROV which is difficult to repair, although its functionality is stable.</p> <p>7. Causes one or more team members to be harmed, with the damage causing an inability to complete tasks OR causes ROV's functionality to be severely hindered.</p>
<p>8. Damage to team member(s) is permanent and causes an inability to do their tasks OR causes damage to ROV which requires replacement of many parts and severely hinders functionality.</p> <p>9. Damage to team member(s) is life-threatening OR causes damage to ROV that is irreparable.</p> <p>10. Major damage to team member(s) or ROV resulting in an inability to compete.</p>

