

**SCOUT CLASS SCORE SHEET**  
**ROVs in Extreme Environments: Science and Industry in the Arctic**  
**SCIENCE UNDER THE ICE**  
**SUBSEA PIPELINE INSPECTION AND REPAIR**

**SCHOOL NAME and # AS IT APPEARS ON THE OFFICIAL LIST:** \_\_\_\_\_

**Company CEO:** \_\_\_\_\_ **Product demonstration attempt #:** \_\_\_\_\_

**Product demonstration station officials:** \_\_\_\_\_

**Safety Check and Set-Up (up to 10 points total)**

- 5 points – Company presents signed safety inspection sheet.
- 5 points – Vehicle and control system present no safety hazards.

Examples:

- o All power cords are secured. Fuse and banana plugs are not in puddle of water.
- o Control box is closed and secured.
- o Motors are waterproofed and are protected inside the ROV.
- o No sharp objects that could injure a diver.
- o All pneumatics and hydraulics are hand powered.
- o Vehicle is hand-launched by team members in a safe manner.

Product demonstration official's notes: \_\_\_\_\_

**Company is cleared for demonstration:** \_\_\_\_\_ (official's initials) \_\_\_\_\_ total points (out of 10)

**Note: An official's decision to disqualify a company due to safety concerns is final. If there is a safety concern, please contact the lead safety inspector or competition coordinator.**

**Judges' Notes:**

**Penalty Points**

**Tether pulling:** Issue a warning for the first infraction. Begin deducting points AFTER the first infraction.

**Diver assistance:** Companies will be penalized for diver assistance during a product demonstration run. Diver assistance will be provided ONLY AFTER a company requests it. During a product demonstration run, the clock will not stop for diver assistance. Companies WILL NOT be penalized for diver assistance once the product demonstration time has ended. At this time the divers will assist the ROV to the surface as part of the company's 5-minute demobilization period.

**Fuses**

If a vehicle blows the MATE power supply in-line fuse, the company is allowed two spares. If the vehicle blows the third MATE fuse, the product demonstration performance period is over. The company will receive points for the product demonstration tasks that they have completed up to that point but will not receive a time bonus score.

**SCOUT Product Demonstration Task Scoring Breakdown:**

**Task #1: Science Under the Ice (up to 60 points)**

**Task #2: Subsea Pipeline Inspection and Repair (up to 60 points)**

<b>Task #1: Science Under the Ice</b>	<b>Scoring – up to 60 points</b>
<b>Judges' Notes:</b> Companies may complete the steps of Task #1, Science Under the Ice, in any order and may alternate between this and the Subsea Pipeline Inspection and Repair tasks.	
<b>1.1</b>	<b>5 points each (20 points total)</b> – collecting and returning four samples of algae _____
<b>1.2</b>	<b>5 points each (20 points total)</b> – collecting and returning four samples of urchin _____
<b>1.3</b>	<b>20 points</b> – deploying the passive acoustic sensor in the designated area _____
<b>TOTAL POINTS FOR TASK #1</b> _____	

<b>Task #2: Subsea Pipeline Inspection and Repair</b>	<b>Scoring – up to 60 points</b>
<b>Judges' Notes:</b> Companies must complete the steps of Task #2 in order. Companies may choose to skip a step and continue, but cannot come back and complete the skipped task. Companies may alternate between this and the Science Under the Ice tasks.	
<b>2.1</b>	<b>10 points</b> – turning the valve to stop the flow of oil through the pipe _____
<b>2.2</b>	<b>10 points</b> – removing the corroded section of pipe from the pipeline _____
<b>2.3</b>	<b>10 points</b> – returning the corroded section of pipeline to the surface _____
<b>2.4</b>	<b>20 points</b> – installing a new section of pipe into the pipeline _____
<b>2.5</b>	<b>10 points</b> – turning the valve to start the flow of oil through the pipe _____
<b>TOTAL POINTS FOR TASK #2</b> _____	

<b>SAFETY SCORE</b> (from page 1)	0	5	10
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<b>PENALTY POINT DEDUCTIONS</b>	
*Illegally pulling tether _____ infractions X - 5	
**Diver assistance _____ infractions X - 5	

<b>TIME BONUS</b>	
1 point for every minute and 0.01 point for every second under 15 minutes	
Duration of Product Demonstration: _____	
Minutes under 15 remaining: _____ X 1 point = _____	
Seconds remaining: _____ X 0.01 point = _____	
<b>Time bonus</b>	
<b>TOTAL PRODUCT DEMONSTRATION SCORE</b>	

**Official's initials:** \_\_\_\_\_

**Company CEO's initials:** \_\_\_\_\_