

Company CEO: _____

Company Name

Product demonstration station officials: _____

Safety

Check here if the company has their PASSED safety inspection card

Companies without their safety inspection PASSED card cannot participate in the product demonstration.

Check here if tamper seal on fuse is still intact

Companies with a broken tamper seal on their fuse must see the safety inspectors before their ROV enters the water.

Check here if the company presented you with a JSA (Jobsite Safety Analysis)

Check here if vehicle (and float) matches photo taken at safety inspection

Companies must use the same vehicle, float, and other devices that went through the safety inspection.

Organizational and Operational Effectiveness (up to 10 points)	Points	
Up to 4 points - Teamwork/Collaboration & Communication		
Chain of command evident	0	1
Roles clear and executed well	0	1
Composure under pressure	0	1
Supportive of each other and communicate well with each other	0	1
Up to 2 points - Project Management		
Task plan is well thought out to maximize score	0	1
Alternate plans available and all team members are aware of the plan	0	1
Up to 2 points - Problem Solving & Ability to Deal with Obstacles		
Awareness of time	0	1
Adjusting timeline to adapt to situations	0	1
Up to 2 points - System Design & Control/Electrical		
ROV deployed by the end of the 5-minute set-up period	0	1
ROV is under control of pilot and prepared to perform tasks	0	1
Total Organizational and Operational Effectiveness (out of 10)		Total

Bonus points for weight	Points		
Weight bonus (up to 10 points)	0	5	10
ROV is less than 15 kg – 10 bonus points			
ROV is between 15.01 kg and 20 kg – 5 bonus points			
ROV is between 20.01 kg and 25 kg – 0 bonus points			
Vehicles heavier than 25 kg may not compete			
	Judge initials: _____ CEO initials: _____		Total

Fuses: ROV systems are allowed one replacement fuse during the product demonstration. In the event that the ROV system blows the second fuse during the demonstration, time will stop, the demonstration run will be over, and no additional points will be earned. Companies should have adequate replacement fuses on hand, MATE will not provide replacements.

Task # 1: OOI: Coastal Pioneer Array (up to 50 points)	Points		
1.1 up to 50 points – Release the multi-function node			
10 points – "trigger" the release of the multi-function node	0	10	
5 points – visually determine that the recovery has failed	0	5	
10 points – pull a pin to release the failed recovery float to the surface	0	10	
5 points – return the failed recovery float to the surface, side of the pool	0	5	
20 points – connect a recovery line to the bale on the multi-function node for manual recovery	0	20	
Total Task # 1 (out of 50)			Total

Task # 2: SMART Cables for Ocean Observing (up to 70 points)	Points		
2.1 up to 70 points – Deploy a SMART Cable			
up to 20 points – deploy SMART cable through three waypoints			
5 point each – deploy SMART cable through two waypoints located on the bottom of the seafloor	0	5	10
10 points – deploy SMART cable through a waypoint located on top of a seamount	0		10
10 points – place the SMART repeater in the designated location	0		10
5 points – return the ends of the cable to the surface, side of the pool	0		5
up to 15 points – measure the temperature to check the SMART cable sensor readings			
15 points – within 1 degree C	0	5	15
5 points – between 1.01 and 2 degrees C			
up to 20 points – connect the AUV docking station to the SMART cable repeater			
5 points – retrieve the power connector from the AUV docking station	0		5
15 points – install the power connector	0		15
Total Task # 2 (out of 70)			Total

Task # 3: From the Red Sea to Tennessee (up to 160 points)	Points	
3.1 up to 30 points – Probiotics 2		
10 points – place a probiotic irrigation system in the designated area	0	10
10 points – deploy the probiotic sprinkler on the coral head	0	10
10 points – activate the irrigation system	0	10
3.2 up to 40 points – Coral Restoration		
10 points – transplant branching coral	0	10
up to 30 points – transplant brain coral	0 10 30	
30 points – autonomously		
10 points – manually		
3.3 up to 40 points – 3D Coral modelling		
up to 40 points – via photogrammetry, autonomously create a scaled 3D model of the coral restoration area		
20 points – create a 3D model of the coral restoration area	0	20
10 points – measure the length of the coral restoration area (within 5 cm)	0	10
5 points – scale the 3D model using the length of the coral restoration area	0	5
5 points – use the properly scaled 3D model to estimate the height of the coral restoration area (within 5 cm)	0	5
or		
up to 30 points – manually (CAD) create a scaled 3D model of the coral restoration area		
10 points – measure the length of the coral restoration area (within 5 cm)	0	10
10 points – measure the height of the coral restoration area (within 5 cm)	0	10
10 points – create a scaled 3D model of the coral restoration area displaying the length and height measurements	0	10
or		
up to 20 points – manually (paper) create a 3-view technical drawing of the coral restoration area		
5 points – measure the length of the coral restoration area (within 5 cm)	0	5
5 points – measure the height of the coral restoration area (within 5 cm)	0	5
10 points – create a technical drawing on paper of the coral restoration area, including the measured length and height measurements with at least 3 views (top, front, and side)	0	10
3.4 up to 50 points – Determine the location of sturgeon spawning grounds		
10 points – recover an acoustic receiver	0	10
up to 20 points – determine the location of a potential spawning site		
15 points – create a graph of sturgeon locations from the acoustic receiver data	0	15
5 points – determine the potential spawning site	0	5
up to 20 points – characterize the habitat at potential spawning site		
10 points – place an ADCP	0	10
10 points – recover a sediment sample	0	10
Total Task # 3 (out of 160)	Total	

Task #4 has been removed to a separate score sheet. RANGER teams will do Task #4 at a separate mission station.

Penalty Points (deduct 5 points for each infraction)	No. of Infractions		
<p>Safety: Product demonstration officials may deduct points for safety violations. Minor violations are a 5 point penalty. Major violations may be 10 or more points. Product demonstration officials may also disqualify a company for extreme safety violations. 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.</p>			
<p>Tether Pulling: Company members cannot pull on the tether to assist in moving or turning the vehicle. Judges should issue a warning for the first infraction and begin deducting points AFTER the first infraction.</p>	a		
<p>Illegal communication: Company members at the side of the pool may not communicate visual evidence of the ROV status such as location of vehicle, need to turn, that the vehicle is stuck, etc.</p>	b		
<p>Debris: Companies that leave debris (e.g. parts of their ROV, including weights and flotation) in the pool at the end of the product demonstration time, or leave debris that a diver must retrieve will receive penalty points. Product demonstration props are NOT considered debris. A company constructed collection basket is considered debris if it is still in the water, not under control of the ROV, when product demonstration time ends.</p>	c		
<p>Diver Assistance: Any diver assistance (if available) must be requested by the company and will result in a 5 point penalty. The clock does not stop during diver assistance.</p>	d		
<p style="text-align: right;">Total Penalty Points</p>	<p>(total a + b + c + d) plus safety violations</p>	Total	
		<p><input type="text"/> X 5 =</p>	

TIME BONUS (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 = _____			
Time bonus			Total

TOTAL PRODUCT DEMONSTRATION SCORE	Grand Total
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Official's initials: _____

Company CEO's initials: _____

