

Company CEO: _____

Company Name

Product demonstration station officials: _____

Safety Check and Set-Up (up to 10 points)	Points	
Company presents safety card or signed safety inspection sheet.	0	5
Vehicle and control system present no safety hazards.	0	5
Examples: <ul style="list-style-type: none"> o All power cords, power bars, pressurized cylinders, etc. are secured. o No hazardous materials are leaking onto the pool deck. o Vehicle is hand-launched by team members in a safe manner. 		
Company is cleared for demonstration: _____ (official's initials)		
Total Safety Check and Set-Up (out of 10)		Total
<i>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.</i>		

Organizational and Operational Effectiveness (up to 10 points)	Points	
Up to 2 points – Organization		
Chain of command evident	0	1
Roles clear and executed well	0	1
Up to 2 points – Task Plan		
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 – Time Management		
Awareness of time	0	1
Adjusting timeline to adapt to situations	0	1
Up to 2 points – Team Cooperation		
Composure under pressure	0	1
Supportive of each other and communicate well with each other	0	1
Up to 2 points – ROV Deployment and Control		
ROV deployed by the end of the 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 size	Points	
Size bonus (up to 10 points)	0	5
ROV is less than 48 cm – 10 bonus points		10
ROV is within 48.1 cm and 60 cm – 5 bonus points		
ROV is greater than 60.1 cm – 0 bonus points		
	Judge initials: _____	Total
	CEO initials: _____	

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: Ensuring Public Safety - Dam Inspection and Repair (up to 60 points)	Points				
Judges' Notes: Companies may complete the steps of this task in any order.					
1.1 5 points each, 20 points total – inspecting the four pipes for muddy flow	0	5	10	15	20
1.2 up to 20 points – inspecting and repairing a trash rack					
10 points – removing the damaged screen of the trash rack		0		10	
10 points – installing a new screen		0		10	
1.3 5 points each, 20 points total – inserting grout into four voids underneath the dam	0	5	10	15	20
Total Task # 1 (out of 60)					Total

Task # 2: Maintaining Healthy Waterways (up to 80 points)	Points				
Judges' Notes: Companies may complete the steps of this task in any order.					
2.1 up to 30 points – monitoring water quality					
o measuring the water temperature		0	5	10	
10 points – temperature measurement within 2 C of benchmark					
5 points – temperature measurement between 2 and 4 C of benchmark					
0 points – temperature measurement is not within 4 C of benchmark					
10 points - collecting a water sample from the bottom		0		10	
o using a water monitoring kit to					
5 points – measure the pH of the water sample		0		5	
5 points – measure the phosphate levels of the water sample		0		5	
2.2 up to 20 points – determining habitat diversity					
5 points – lifting a rock from the bottom		0		5	
5 points – using a handbook to determine the number and type of benthic species underneath the rock		0		5	
o up to 10 points - recording the temperature, pH, phosphate, and species diversity on a data sheet		0	5	10	
10 points – recording all four data points					
5 points – recording 2 or 3 data points					
0 points – recording 1 or fewer data points					
2.3 5 points each, 10 points total – transporting and releasing trout fry	0	5	10		
2.4 up to 20 points - restoring fish habitat					
5 points each, 10 points total – removing two degraded rubber tires	0	5	10		
5 points each, 10 points total – installing two new fish/reef balls	0	5	10		
Total Task # 2 (out of 80)					Total

Task # 3: Preserving History (up to 60 points)	Points				
Judges' Notes: Companies may choose to recover the cannon or mark the location of the cannon shells first. Once companies begin lift operations on the cannon, they cannot receive further points for any calculations.					
3.1 up to 40 points – recovering the Civil War era cannon					
o Calculating the amount of force needed to lift the cannon					
o up to 15 points - calculating the volume of the cannon					
o Length measurement	0	5			
5 points – within 2 cm of true length					
0 points – not within 2 cm of true length					
o Outer diameter measurement	0	5			
5 points – within 1 cm of true length					
0 points – not within 1 cm of true length					
o Bore diameter measurement	0	5			
5 points – within 1 cm of true length					
0 points – not within 1 cm of true length					
5 points - Volume calculation within 50 cm ³ of actual	0	5			
10 points - attaching a lift bag to the cannon and inflating the lift bag	0	10			
10 points - returning the cannon to the side of the pool	0	10			
3.2 5 points each, 20 points total – identifying and marking the location of metal cannon shells / non-metal debris	0	5	10	15	20
	Total				
Total Task # 3 (out of 60)					

Penalty Points (deduct 5 points for each infraction)	No. of Infractions				
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.	a				
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.	b				
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 when product demonstration time ends.	c				
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.	d				
	(total a + b + c + d)				
Total Penalty Points	X	5	=	Total	

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

Official's initials: _____

Company CEO's initials: _____