Jet City: Aircraft, Earthquakes and Energy

Company CEO: _____

Product demonstration station officials: _____

Company Name

ety Check and Set-Up (up to 10 points)	Poi	ints	
Company presents safety card or signed safety inspection sheet.	0	5	
Vehicle and control system present no safety hazards.	0	5	
Examples: 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)]		Tota

Bonus points for size	Points	
Size bonus (up to 10 points)	0 5 10	
ROV is less than 48 cm – 10 bonus points		
ROV is within 48.1 cm and 60 cm – 5 bonus points	Judge initials:	
ROV is greater than 60.1 cm – 0 bonus points		Tota
	CEO initials:	

Fuses: If a vehicle blows the MATE power supply in-line fuse, the company is allowed one spare. If the vehicle blows the second 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.

Task # 1: Aircraft (up to 60 points)		Points		
Judges' Notes: Companies must complete the steps of this task in order. If they skip task 1.1, or 1.2, they can go on, but cannot return to these steps at a later time.				
1. 1 10 points – using flight data to determine the search zone for the wreckage	0		10	
1.2 5 points – placing a marker buoy at the wreck site	0		5	
1.3 up to 20 points – removing debris from the engine				
o 5 points each (10 points total) – lifting two pieces of debris from the aircraft	0	5	10	
o 5 points each (10 points total) – moving two pieces of debris from the wreck area	0	5	10	
1.4 up to 20 points – returning the engine to the surface side of the pool using a lift bag				_
o 1 0 points – inflating the lift bag	0		10	
o 10 points – returning the engine to the surface, side of the pool	0		10	
1.5 5 points – identifying the aircraft using the tail section and serial number	0		5	
				Tota
Total Task # 1 (out of 60)				

Task # 2: Earthquakes (up to 60 points)	Po	ints	
Judges' Notes: Companies may deploy the seismometer first, or connect the seismometer to the power and communications hub first.			
The four steps of deploying the seismometer must be done in order.			
Companies may open the door of the hub first, or may lay the cable through the waypoints first.			
2.1 up to 30 points – deploying the ocean bottom seismometer (OBS)			
o 5 points – Pulling the pin to release the OBS from the elevator	0	5	
o 5 points – removing the OBS from the elevator	0	5	
o 10 points – deploying the OBS into the designated area on the seafloor	0	10	
o 10 points – leveling the OBS	0	10	
2.2 up to 30 points – connecting the seismometer to the power and communications hub			
o 10 points – opening the door of the power and communications hub	0	10	
 up to 10 points (5 points each) – laying the seismometer through one waypoint 	0	10	
 10 points – inserting the seismometer cable connector into the port on the hub 	0	10	
Total Task # 2 (out of 60)			

Task # 3: Energy (up to 70 points)		Points]
Judges' Notes: Companies must first use the tidal data to determine the optimum location for the tidal turbine. Companies may skip this step, but may not come back and complete it at a later time. Eelgrass tasks can be done at any time.				
3.1 5 points – using tidal data and nautical charts to determine the optimal location for a tidal turbine	0		5	
3.2 10 points – installing an array of tidal turbines at the optimum location	0		10	
3.3 up to 15 points – installing an I-AMP to monitor the area				1
10 points – installing the I-AMP onto its stand	0		10	
5 points – locking the I-AMP onto the stand	0		5	
3.4 10 points – placing a mooring on the bottom	0		10]
3.5 10 points – attaching an Acoustic Doppler Velocimeter (ADV) onto the mooring	0		10	
3.6 up to 20 points - eelgrass habitat monitoring and restoration				
up to 10 points (5 points each) – collecting two samples of eelgrass and returning them to the surface, side of the pool	0	5	10	
up to 10 points (5 points each) – transplanting two eelgrass frames to a previously disturbed area	0	5	10	
				Total
Total Task # 3 (out of 70)				

Penalty Points (deduct 5 points for each infraction)		No. o	f Infrac	tions	
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.		а			
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.		b			
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 during diver assistance.					
······································		С			
	(total a + b	o+c)			Total
Total Penalty Points		х	5	=	

Duration of Product Demonstra	ion:	
Vinutes under 15 remaining: _	X 1 point =	
Seconds remaining:	X 0.01 point =	Total

TOTAL PRODUCT DEMONSTRATION SCORE

Official's initials: _____

Company CEO's initials: _____

Grand Total