

Oil Spill Response Challenge Point Breakdown

Team Name: _____

Challenge Objectives and Scoring (100 points total):

TOTAL SCORE: _____/100

Task 1: Perform scouting mission to search for pools of oil trapped under the ice Task 1 Points: _____/5

Drive ROV back and forth 20 feet out and back (5 points)

Task 2: Take a sample from a pool of oil in the ice Task 2 Points: _____/5

Surface ROV inside a large floating ring and hold position for 5 seconds (5 points: 1 point/second)

Task 3: Return sample and have it analyzed Task 3 Points: _____/10

Position ROV in front of a stationary underwater square and hold position for 5 sec. (10 points: 2 pts/sec)

Task 4: Deliver a piece of equipment inside an underwater work station Task 4 Points: _____/20

Fly ROV back and forth through a large stationary underwater ring (5 points) _____

Pick up an underwater small ring (5 points) _____

Deposit the small ring on a piece of anchored PVC pipe (10 points) _____

Task 5: Transport floating equipment Task 5 Points: _____/10

Throw beach ball onto surface of pool and return it using ROV (10 points: 5 points for engaging ball, 5 points for returning to side of pool)

Task 6: Respond to an open water surface oil patch in a polyana Task 6 Points: _____/25

Throw popcorn onto surface of pool and gather it using ROV (25 points)

Teamwork Teamwork Points: _____/25

All team members participate in design, build, and break down ROV (10 points: 2 pts/student) _____

All team members drive ROV during challenge (5 points: 1 point/student) _____

Team members give each other positive encouragement (5 points: 1 point/student) _____

Team members observe and obey all safety rules (5 points: 1 point/student) _____

Demerits Total Demerits: _____

Team member bickers, argues, or acts with disrespect (-5 points) _____

Pool-side modification (-5 points) _____

Team pulls tether to move ROV (-5 points) _____

Use of pool "seal" (-5 points) _____

Participation:

Each team member must drive the ROV for a minimum of 2 minutes or complete one task. Teams are expected to help breakdown their machines after the pool competition.