Ohmsett

The National Oil Spill Response Research & Renewable Energy Test Facility

API
Oil Spill Emergency Preparedness and Response Sub-committee
(Virtual)
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Topics

Ohmsett Overview

Tank Specifications

Technical Capabilities

Test Protocol Development

Research, Testing and Training

Ohmsett test facility

Operated by U.S. Department of Interior's Bureau of Safety and Environmental Enforcement (BSEE) and maintained through a contract with Applied Research Associates, Inc.
since September 2018

Largest outdoor salt water test tank in North America

- 203 meters (667 feet) long
- 20 meters (65 feet) wide
- 2.4 meters (8 feet) deep
- 10 million liters (2.6M gallons)
- Wave capacity: ~1 meter (~3 feet)
- Open ocean salinity (32 -35 ppt)
- Main Bridge capable of speeds up to 6 knots (3.1 m/sec)
- Two Secondary bridges that can move relative to main bridge

Located in Leonardo, New Jersey

- One hour south of New York City and easy access to regional airports

Ohmsett

Customers

Government agencies

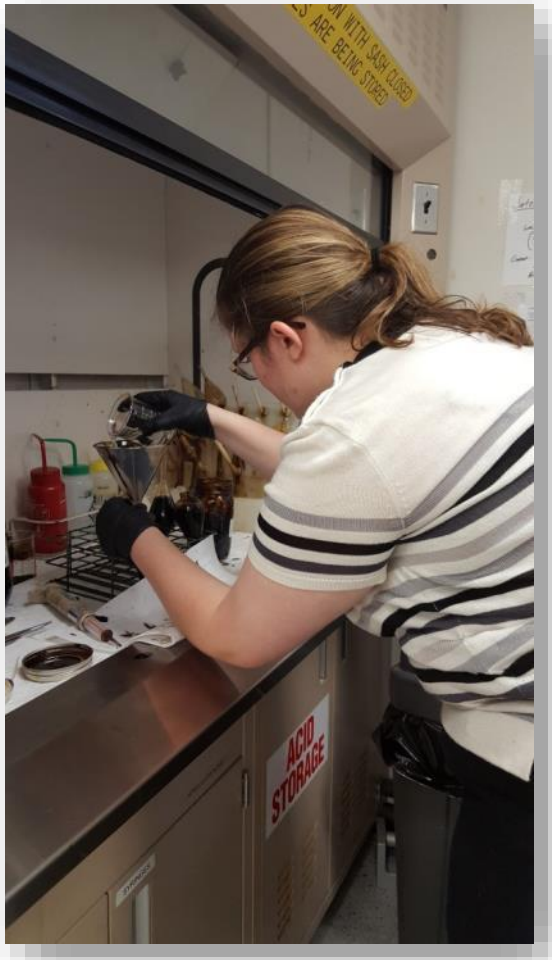
Academia

- Includes mentorship of local high school students enrolled in the STEM Program

Manufacturers

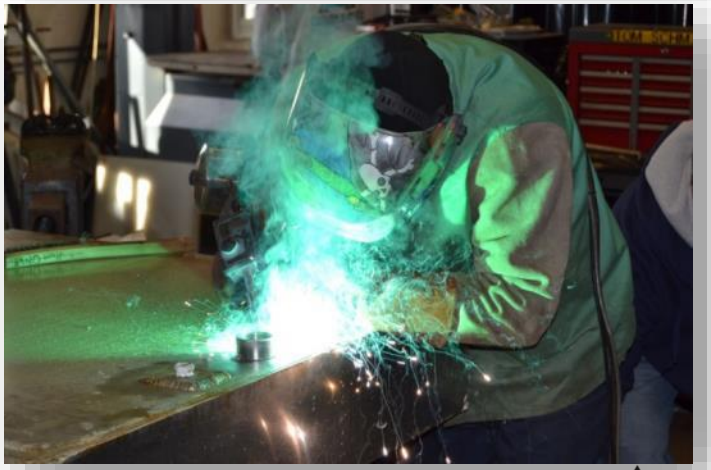
Researchers

Public and private companies



Technical Capabilities

- Engineering services
- Controlled repeatable test conditions
- Test protocol development
- Custom testing for new & unique technology
- HD underwater video/viewing
- On-site fabrication/work shop
- On-site oil chemical lab
- Certified welders



Standards Development

Active member of the ASTM F20 Hazardous Substances and Oil Spill Response committee to develop and improve standardized equipment testing protocols

Ohmsett has initiated, developed, and updated numerous ASTM testing standards

- Skimmer Nameplate Capacity (F2709)
- Skimmer Performance (F631)
- Advancing Booms Systems (F-2084)
- In-situ burns (Propane) for fire boom testing (F2152)
- Oil Spill Containment Boom B/W ratio (F2682)

Skimming Systems

Evaluations

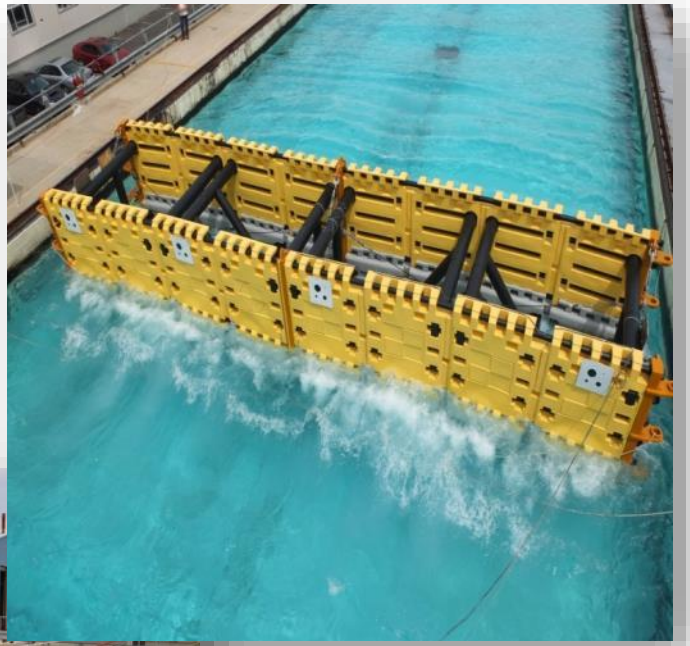
- Design characteristics
- Collection
- Throughput efficiencies
- Recovery rate
- Overall performance

Advancing Diversion Boom & Skimmer

Boom and Barriers

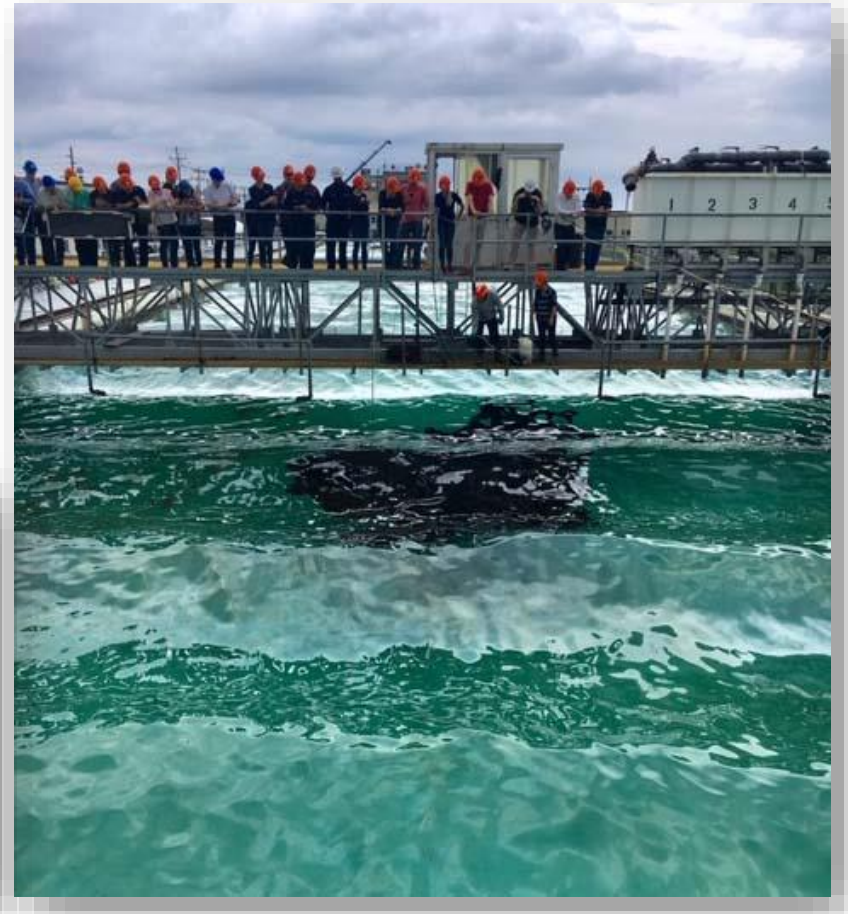
Structural Testing

- Design geometry
- Conformance to waves
- Seaworthiness
- Durability testing
- Connectors
- Towing



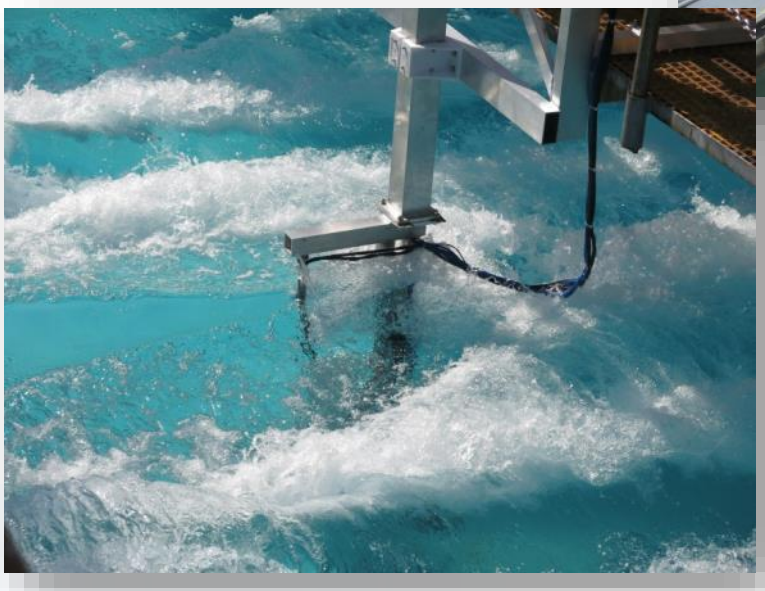
Chemical Treatments

- Dispersant testing
- Herding agent testing



Sensor/Sensor Evaluations

- Measurements of oil spills
  - Detection
  - Slick thickness
- Measurements of waves

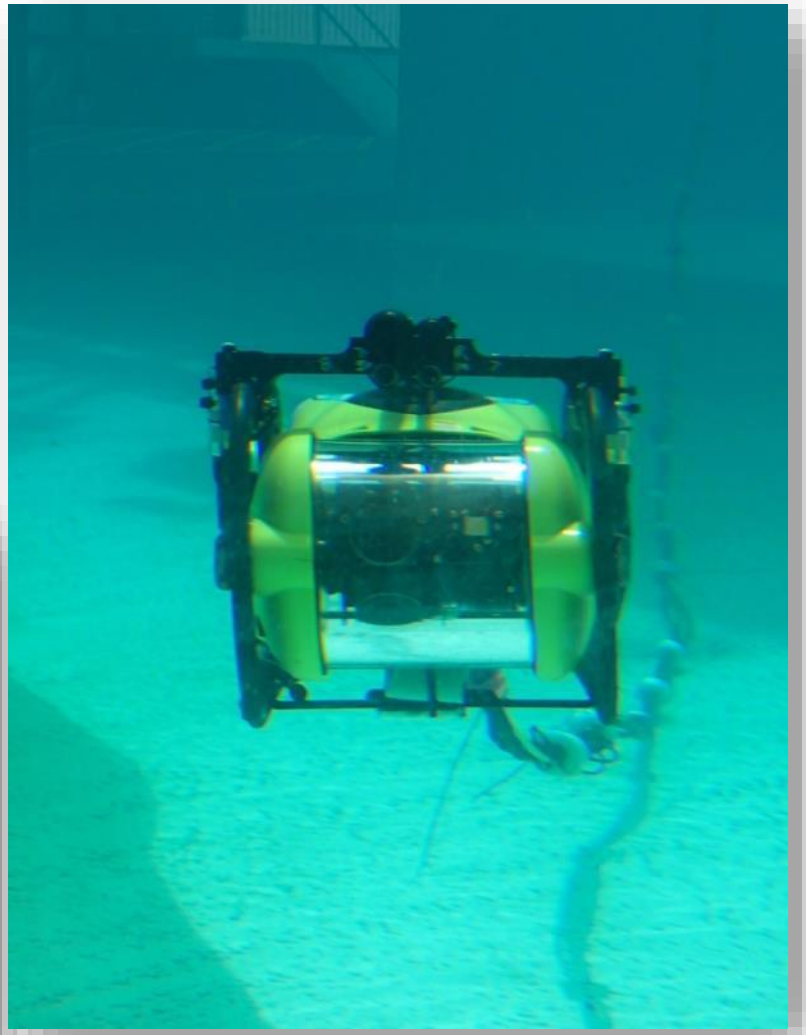


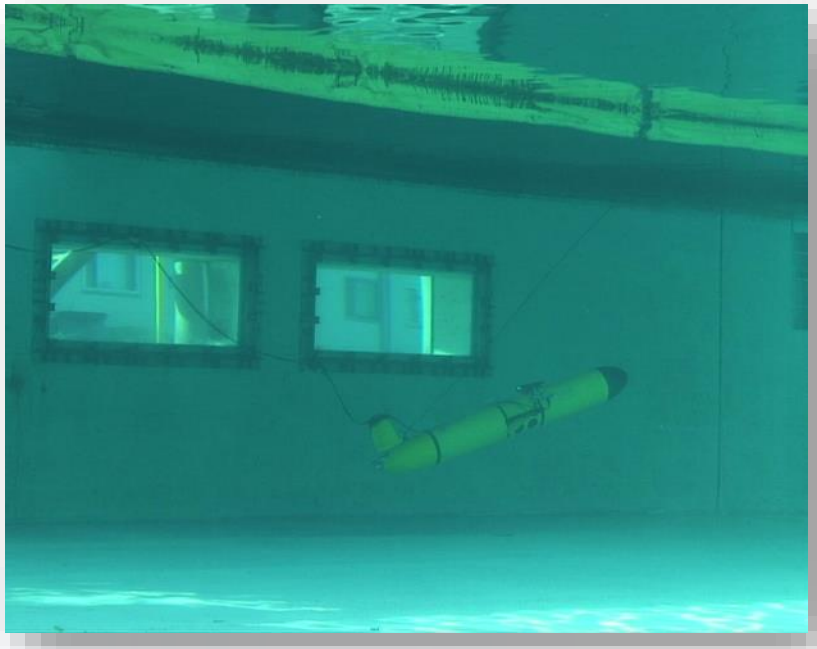
Amphibious Vehicles

- Hydrodynamics study
- Performance in waves
- Ability to maneuver remotely

UUVs and ROVs

- Oil slick thickness measurements
- Ocean floor mapping
- Subsurface characterization





Hands-on Oil Spill Response Training

- Classroom and Hands-on
- Recovery of real oil, not a surrogate material
- Students use full-scale oil spill recovery equipment
- Customized classes to meet customer-specific training needs

Thank You

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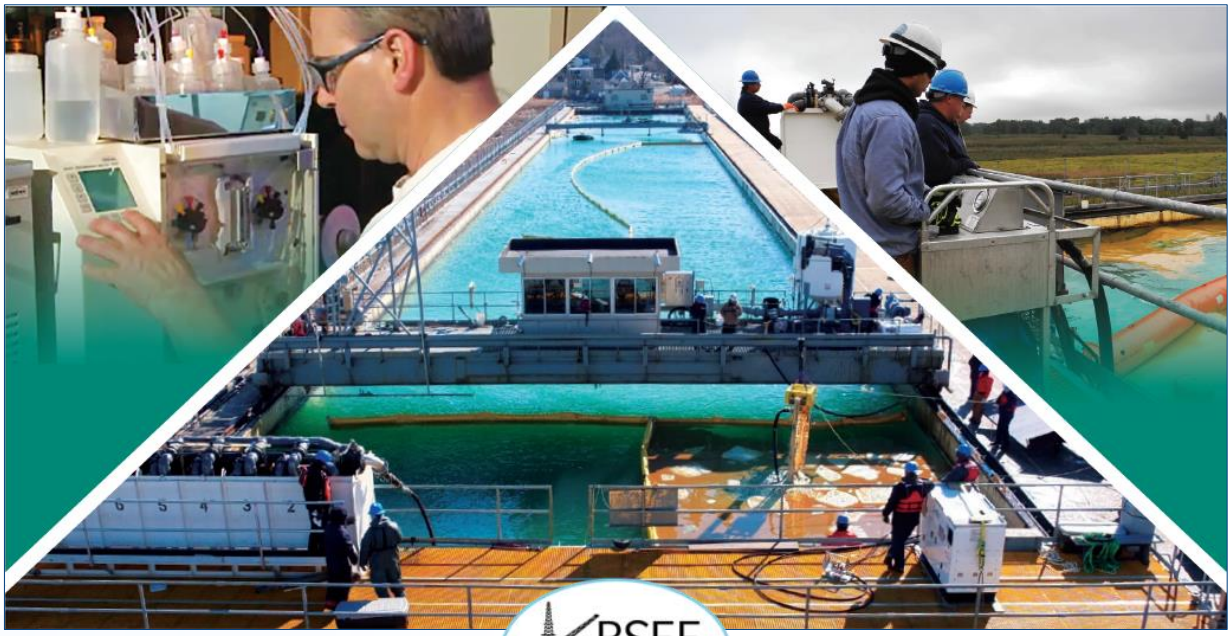

ARA

BSEE Bureau of Safety and Environmental Enforcement

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