Ohmsett: Capabilities and Recent Testing and Research

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Ohmsett
The National Oil Spill Response Research & Renewable Energy Test Facility
An OHMSETT Primer
Brief History

- 1974—1987  Facility Operated by the EPA
- Mission: Waterborne Oil Spill Research & Testing
- 1989—Exxon Valdez grounding in the Prince William Sound
- 1990—Reopening of Ohmsett mandated by OPA-90
- Annual O&M Funding through the Oil Spill Liability Trust Fund
- Management of Ohmsett was charged to BSEE of DOI
- Operator/Engineer: MAR (MD), LLC in Rockville, MD
Ohmsett’s Mission

- To Improve oil spill response through testing, training, and research & development

- Provide performance testing of marine renewable energy systems

 Operated by U.S. Department of Interior's Bureau of Safety and Environmental Enforcement (BSEE) and maintained through a contract with MAR (MD) LLC
Where is Ohmsett?

- Located on NWS Earle in Leonardo, New Jersey
- One hour south of New York City
- Nearby airports:
  - Newark
  - LaGuardia
  - JFK
203 meters (667 feet) Long
20 meters (65 feet) Wide
3.5 meters (11+ feet) Deep

10 MM liters saltwater (2.6 MM Gal.)
Salinity = 28-35 ppt
Water Depth = 2.44 m (8 ft.)

Bridge Speed to 3.1 meters/sec
Wave Generator

- Bottom Hinged, Dual Flap
- Electric over Hydraulic Drive System
- Programmable High Performance Cylinders
- Regular (Sinusoidal) Waves with Variable Height, Frequency and Wavelength
- Programming Capability for Spectral Waves and Frequency Slide Mode
- Energy Damping Beach System
ALSO

On-Site Chemistry Lab

Conference/Classroom, Work Shop, Storage Spaces
What Ohmsett Does

Waterborne Oil Spill Recovery Equipment

Containment and Temporary Storage Devices
What Ohmsett Does

Dispersants and Herders

Subsurface Releases
What Ohmsett Does

In Situ Burning

Ice
What Ohmsett Does

Remote Sensing

Marine Hydrokinetic Devices (MHK)
What Ohmsett Does

Testing Standards

- Ohmsett collaborates with other organizations to help develop and improve equipment testing standards
- Organizations include:
  - ASTM F20 Subcommittee
  - U.S. Coast Guard

Training

- US Coast Guard
- Alaska Clean Seas
- Texas A&M
- Conoco Phillips
- Chevron
- American Petroleum Inst.
Recent Activities at Ohmsett
BSEE
Dispersant Comparison Testing:
Cold Water & Warm Water
BSEE Dispersant Comparison
Testing-Cold Water & Warm Water
BSEE Dispersant Comparison Testing - Cold Water & Warm Water
BSEE Dispersant Comparison Testing - Cold Water & Warm Water
BSEE Dispersant Comparison Testing-Cold Water & Warm Water
BSEE Dispersant Comparison Testing-Cold Water and Warm Water
API/SINTEF Large Scale Subsurface Release
API/SINTEF Lg. Scale Subsurface Release
API/SINTEF Lg. Scale Subsurface Release
API/SINTEF Lg. Scale Subsurface Release
API/SINTEF Lg. Scale Subsurface Release
API/SINTEF Lg. Scale Subsurface Release
API/SINTEF Lg. Scale Subsurface Release
API/SINTEF Lg. Scale Subsurface Release
NOAA/WHOI/NSB

Whale Baleen
Hydrodynamic & Oil Exposure Testing
NOAA/WHOI/NSB Whale Baleen Exposure Testing
NOAA/WHOI/NSB Whale Baleen Exposure
NOAA/WHOI/NSB Whale Baleen Exposure
NOAA/WHOI/NSB Whale Baleen Exposure
NOAA/WHOI/NSB Whale Baleen Exposure
Diminishing Slick Thickness

BSEE Sponsored
ASTM Draft Method
Diminishing Slick Thickness
A Look Into the Future
· Refined Dispersant Testing Protocol

· Wave Making and Beaches

· Remote Sensing

· Emulsions

· Vertical Subsurface Release Tank

· Indoor, Controlled Scale Flume/Wave Tank

· Enhanced Laboratory Capabilities
The National Oil Spill Response Research & Renewable Energy Test Facility
Operated by the Department of the Interior – Bureau of Safety & Environmental Enforcement

Thank You

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