

Ohmsett

The National Oil Spill Response Research
& Renewable Energy Test Facility



Testing • Training • Research

Full-scale testing for accurate and reliable results

FACILITY CAPABILITIES

- Controlled reproducible conditions
- Equipment tow bridges
- Data collection and video system
- Fully equipped machine shop
- On-site oil/water laboratory
- Oil distribution and recovery system
- Water filtration and chlorination systems
- Dispersant application system



Skimmer evaluations

Ohmsett is the only facility in North America where full-scale oil spill response testing, training, and research can be conducted with oil in a realistic marine environment. It's what has made Ohmsett the test center for some of the most innovative spill recovery technologies in use today. If it's used in oil spills, it's been tested at Ohmsett.

No scale modeling or oil substitutes. At Ohmsett, you can test your equipment using real oil in a realistic simulated controlled environment. Various oil spill recovery technologies can be realistically assessed and compared with each other. The large wave/tow tank allows full-scale evaluation of containment booms and skimmers using a wide range of oil viscosities. Our facility has proven to be ideal for testing equipment, evaluating acquisition options, and validating research findings.

Only a full-size facility can give you the most accurate and reliable results. From sorbents, chemical treating agents and dispersants to containment booms, skimmers, pumping systems and temporary storage devices – you can test them at Ohmsett.



On-site Chemistry Lab



WAVE CHARACTERISTICS

- Regular waves as high as one meter (3 feet)
- Simulated harbor chop waves (randomized waves)
- FM Slides with selectable slew rates, start, and stop
- Pierson-Moskowitz & JONSWAP spectra parameterized by wind speed & scale
- Wave spectra
- A movable, wave-damping artificial beach



Dispersant effectiveness testing

Testing marine renewable energy devices

In recent years, substantial progress has been made in harnessing marine renewable energy resources; including offshore winds, tidal currents and wave energy. Ohmsett provides you with a facility for testing and R&D of large to full-scale equipment processes for ocean wave and current technologies, in a controlled environment. The wave generator creates realistic sea environments, while state-of-the-art data collection and video systems record test results.

Ocean wave and current technology testing



Training in a realistic environment

TRAINING ADVANTAGES

- Increase proficiency using booms and skimmers
- Practice removing spilled oil in harbor chop and waves
- Analyze performance after collecting and measuring recovered oil
- HAZWOPER certification

Confidence comes from knowing you can handle just about anything that happens during a spill. That's because you have tried it and experienced it at Ohmsett.

At Ohmsett you will train in realistic spill conditions to learn how to recover more oil efficiently. You will increase your proficiency using full-size booms, skimmers and related equipment while experiencing the challenges of removing oil under conditions that simulate an actual spill.

Our training facility includes a classroom that can accommodate up to 25 students, with state-of-the-art audio-visual equipment where you can conduct interactive sessions to complement the tank exercises. Training is conducted by leading specialists in hazardous material spill response.



Responders learn spill response technologies and strategies



Hands-on oil spill response training using full-scale equipment and techniques



U.S. Coast Guard training includes oil spill recovery and ancillary systems operation

Research possibilities that rise to the challenge

Oil spill response testing opportunities at Ohmsett are virtually endless. Recent research projects include testing concepts for new products not yet in production, innovative studies of oil emulsions, mechanical containment and recovery equipment designed for use in cold and ice-infested water, the development of an aerial oil spill thickness and mapping system, testing capabilities for dispersant effectiveness on various crude oils, and the use of oil spill herders to improve response countermeasures.

We can assist you with the research and development of equipment processes for ocean wave and current technologies. The wave/tow tank is equipped with three movable bridges with tow speeds of up to 6 knots, programmable to 1/100th knot increments to simulate ocean current flow. The robust tow bridges are able to accommodate the torque and forces of the largest current turbines and wave energy converter (WEC) equipment.

The experienced staff at Ohmsett is available to help with acceptance testing of your equipment, and assist in existing product evaluation and improvement recommendations.

RESEARCH OPPORTUNITIES

- Test protocol development
- Remote sensing equipment
- Containment booms and skimmer systems
- Dispersant effectiveness testing
- Cold water and broken ice conditions
- Fire-resistant containment booms
- Sorbents
- Behavior of dispersed, weathered and emulsified oils
- Temporary storage devices
- Current turbines
- Wave energy converter equipment



Skimmer protocol development



Oil in ice testing



Marine renewable energy device and system testing



Ohmsett

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Ohmsett is operated by the U.S. Department of the Interior's Bureau of Safety and Environmental Enforcement (BSEE).

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