

The *Ohmsett* Gazette

Leonardo, New Jersey

Test with oil. Train with oil.

Fall/Winter 2008

Remote Sensing Technology Tested for Spill Detection

Ocean Imaging, a small California-based company, has developed a method to remotely detect and measure the thickness of oil on the water's surface using a portable aerial imager. Following tests conducted in their lab, Ocean Imaging continued their research during the week of June 16, 2008 at Ohmsett.

The tests conducted at Ohmsett were to determine the relationship between thermal infra-red (IR) emission and oil thickness during both day and night conditions; investigate diurnal heating effects on oil film IR emissions; validate multispectral thickness algorithm; determine terminal film thickness for various oil types; and to determine best imaging wavelength configuration for on-water detection of diesel and other refined oil products.

The remote sensing cameras were mounted on the Main Bridge crow's nest. The crow's nest provided an elevated view of the test, while the top rail of the crow's nest provided a solid surface to mount the cameras.

In preparation for testing, a blue-green

Remote Sensing continued on page 2

Large Volume Skimmer System Returns to Ohmsett for More Testing

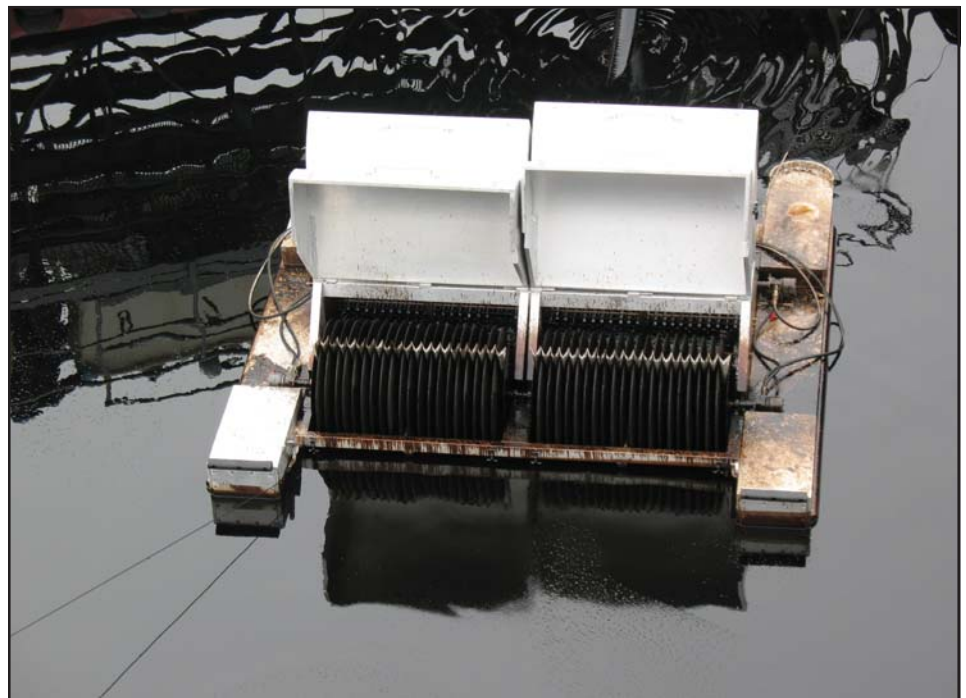
As the Prince William Sound Shippers search for ways to enhance their response systems for the region, they came to Ohmsett in November 2008 to conduct the third skimmer test, which was by far the largest oleophilic skimmer tested at Ohmsett.

The Prince William Sound Shippers include: Tesoro, Sea River Maritime Company Inc, Alaska Tanker Company, and Polar Tanker. Alyeska Ship Escort/Response Vessel System (SERVS) owns and operates the FRAMO Transrec 350 skimming system as part of their response inventory on behalf of the Prince William Sound Shippers. They came to Ohmsett because of their interest in

optimizing their response fluid storage capacity and effective oil recovery with a new skimmer. They currently use a weir type skimming head as the collection device.

During the November test, skimmer manufacturer Crucial, Incorporated brought their skimmer prototype to be tested for Recovery Efficiency (RE) and Oil Recovery Rate (ORR) using the newly adopted American Society of Testing and Materials (ASTM) stationary skimmer test protocol. The skimmer was tested using fresh and weathered Alaska North Slope (ANS) crude oil to simulate the increase in viscosity as spilled oil is

Continued on page 2



The Crucial prototype skimmer head was tested with fresh and weathered Alaska North Slope crude oil during the test funded by the Prince William Sound Shippers.

What's Inside

Spanish Language Training page 3

USCG NSF Training page 4

Dispersant Effectiveness page 5

Clean Gulf Conference 2008 page 7

Skimmer Systems Tested

Continued from page 1

exposed to the elements.

"This skimmer prototype is different than the one we used in July," said Wally Landry of Crucial. "This skimmer went from 50 discs to 80. This is the first test for the 80 disc skimmer which has a target capacity of 600 gallons per minute of pure oil."

According to Landry, the technology used for this prototype included redesigning the disc scraper and coating the discs with an oleophilic material to increase the surface area. This was done with the expectation that this will increase the recovery capacity, relative to a smooth disc, which is widely used within the industry.

"The same coating used on the disc can be wrapped and used on a smooth portable drum skimmer. We've had as much as four to five times increase in oil recovery with the coating versus the smooth drum," said Landry.

Remote Sensing

Continued from page 1

canvas tarp was weighted and placed on the bottom of the Ohmsett test tank to reduce reflection and mimic deep ocean water. A dozen 4' x 4' square targets were assembled using gray PVC pipe sanded to a dull finish. Once the targets were assembled in groups of four, they were placed on the surface of test tank and tethered to the Main Bridge beneath the crow's nest.

Oil was placed into each target to create oil slicks of various thicknesses. Test oils included Intermediate Fuel Oil (IFO) 180 (a blend of gasoil and heavy fuel oil); IFO 360; JP5 (aviation jet fuel); Hydrocal 300 (a medium viscosity lube stock); Heritage crude oil; and marine gasoil (diesel).

Once the measured quantities of oil were poured into the targets, the moveable Main Bridge passed over the targets as data was collected from the sensing equipment mounted in the crow's nest. This simulated data being collected by a small plane passing over an oil spill. All tests except for the final tests were conducted in calm conditions with the targets being used to confine the oil.

During the final test, the targets were re-

Before testing started, the Ohmsett engineering and technical staff designed and installed an additional recovery tank manifold required to safely handle the increased amounts of crude oils required during this round of tests.

"None of this could have taken place without Ohmsett." ~Eric Haugstad, Tesoro Maritime Company

More than 20 funding representatives attended the one week test: shipping companies, the purchasers and potential users of the skimmers (oil spill response organizations, consultants, and manufacturers), state and federal regulatory agencies and non-governmental organizations.

"We have invited the representatives here

to see what we are working on so that it is open and transparent test," said Eric Haugstad, director of contingency planning and response for Tesoro. "Our goal is to work with the best available technology for recovery, which is required by the State of Alaska."

Mike Crickard of the US Coast Guard National Strike Force Coordination Center attended the test as an observer and ASTM F20 committee member, to validate that the procedure was followed in accordance with the recently established protocol.

"The regulatory agency and the skimmer manufacturers now have an opportunity to obtain a realistic, best possible flow rate for skimming systems," said Crickard. "This protocol is repeatable for all skimmers and is a cornerstone procedure. You can accurately compare all your assets to maintain a proper spill response posture for planning purposes."

With the results from this test, Haugstad stated that the results showed a 46% increase in recovery capacity.

"With Crucial's modifications to the oleophilic recovery system, it has made a significant leap in both recovery rates and efficiency rates in ocean class skimmers. We have narrowed our selection to this skimmer and we will be working with Crucial on some other modifications."

"None of this could have taken place without Ohmsett," stated Haugstad. "It is this facility that allows us to consistently and effectively run the ASTM skimmer test."

moved from the area and Heritage crude oil was placed on the surface of the tank as a free slick. With the Ohmsett wave generator set to produce a harbor chop, the Main Bridge passed over the broken slick to collect data.



The remote sensing device was mounted on the Main Bridge crow's nest above the oil targets.

**Visit our website at
www.ohmsett.com
to view the Ohmsett testing and
training schedule.**

**To schedule a test at Ohmsett
call 732-866-7183 ext. 11**

Ohmsett Holds First Spanish Language Oil Spill Response and Strategies Training Course

Ohmsett held its first ever Spanish Language Oil Spill Response and Strategies Training August 11-15, 2008. Seven students from Panama, the Dominican Republic, and Chile attended the five-day course. The responder training course is a comprehensive program that emphasizes classroom exercises and practical hands-on use of full-scale equipment used in conditions that simulate an actual oil spill. During the training, students learned the decision-making and responder skills essential to efficient oil spill response/recovery operations. It is the

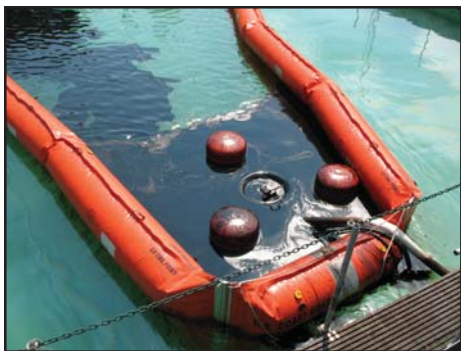
only program where students practice hands-on oil recovery operations using real oil. In addition to the Ohmsett hands-on training, students took a field trip along the Sandy Hook Gateway National Recreation Area and the Raritan Bay to learn the application of Geographic Information Systems (GIS) and Global Positioning Systems (GPS) for oil spill response.

The course was divided into two portions: classroom theory and hands-on training. The classroom portion of the course incorporated the National Incident Management System (NIMS) Incident Command System (ICS) training. Students learned about contingency plans, operational phases for oil spill response, spill documentation, how to establish a command post and assign roles and responsibilities, environmental fates and effects of oil spills, as well as spill response technologies and strategies. The last day of training was a mock tabletop response exercise where the students incorporated everything they had learned during the week. At the end of the course, the students received FEMA ICS- 100 and NIMS IS-700 certifications and the National Spill Control School certificate of completion, which includes the 8-hour HAZWOPER refresher.

Mr. Raul Ceballos, a boarding team officer with the Chilean Navy has been a first responder for one year. "This is my first time for [oil spill] training," said Ceballos. "[I'm] learning theory and practice at the same time, so it's very helpful." Ceballos commented that their Navy has an ICS system that is similar to the one he learned during the Ohmsett training. Armed with the skills he gained at Ohmsett, Ceballos will use this knowledge to train his team members.

For one student, Mr. Ramón Then, this was the first time he actually used a skimmer. Then is an Environmental Manager for Basic Energy in the Dominican Republic where he works with the spill brigades for first response. "This facility is great! I felt like I was at sea with the movable bridges and using oil. It's not possible in my country," Then said. "My country does not have many of these equipments, it would be important to increase response capacity."

With the success of the first ever Spanish Language Oil Spill Response and Strategies Training, Ohmsett plans to offer this training course on a yearly basis. MMS and Ohmsett will continue to reach out to those government agencies and private industry organizations that would benefit from this outstanding training program.



Above: Student Ramon Then at the skimmer controls skimming oil collected by an oil spill containment boom. Below: Students use NIMS ICS to manage a mock oil spill in Sandy Hook Bay, New Jersey.

US Coast Guard Trains National Strike Force Personnel

The United States Coast Guard (USCG), in partnership with Ohmsett, has developed a comprehensive oil spill responder training (OSRT) program. Four times a year Ohmsett hosts a five-day training course that provides Coast Guard personnel with both classroom and hands-on training using state-of-the-art response equipment currently in Coast Guard inventory. The curriculum includes actual oil spill recovery and viscous oil transfer techniques and procedures used on a variety of Coast Guard oil recovery and ancillary systems. The training is conducted using the test tank and other Ohmsett facilities.

Twenty members of the USCG National Strike Force (NSF) completed training at Ohmsett during the week of September 15, 2008. The NSF is comprised of three 45-member regional strike teams: Atlantic Strike Team (AST), Gulf Strike Team (GST), and Pacific Strike Team (PST). Their primary mission is to respond to oil and hazardous chemical incidents in support of the USCG and Environmental Protection Agency (EPA) Federal On-Scene Coordinators.

The NSF is also requested by the District Response Assist Team (DRAT) to train the Coast Guard Buoy Tender, Coastal (WLM), and Coast Guard Buoy Tender, Seagoing (WLB) crews in Vessel of Opportunity Skimming System (VOSS) and Spilled Oil Recovery System (SORS) equipment deployment and operation, as well as Oil Spill Removal Organization (OSRO) contractor oversight activities. According to Dale Hemenway, logistics specialist and instructor from the USCG National Strike Force Coordination Center, the Ohmsett training course provides an introductory overview for new strike team members in NSF on District Preposition Response Equipment (VOSS) and Spill Oil Recovery System (SORS).

The Ohmsett course curriculum includes classroom training which focuses on general Coast Guard oil spill response, safety, and specific SORS/VOSS oil spill response equipment systems, and hands-on practical training where students are divided into groups and rotated through five equipment stations.

One of the stations requires the students to complete hands-on training in the

Ohmsett tank. There they practice recovering oil with spill equipment used in the field under conditions that simulate an actual oil spill. "The teams practice with three wave types; calm, harbor chop, and sinusoidal (sea state 2). As the students become more proficient in skimming techniques, the training exercises takes on a competitive nature," stated Hemenway.

For students MSTC Robert Birdwell, chemical officer for the Atlantic Strike Team and MST1 Sean Hawes, chemical shop supervisor for the Gulf Strike team, they believe the Ohmsett training provides the hands-on confidence to work with the crews aboard the buoy tenders.

"I've done skimming before, but not in such a controlled environment. The [Ohmsett] tank gives us a sense of reality for skimming ops," said MSTC Birdwell. "We can introduce waves and get underway with the system, a capability we don't have in training back at the unit."

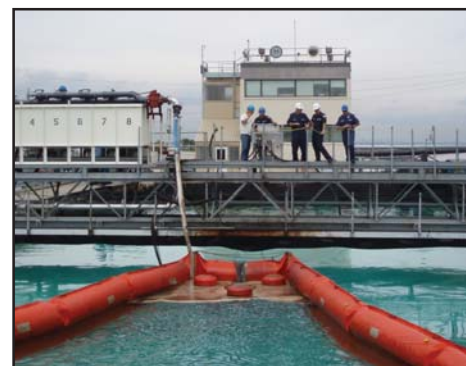
"The instructors have had years and years of use and real life experience with all of the equipment," MSTC Birdwell said. "Because of this expertise, JJ [Dec] and Dale are able to demonstrate system proficiencies that I'll take back with me so that we can use the systems more efficiently," added MST1 Hawes.

MST1 Hawes stated that the Ohmsett train-

ing reinforced the response techniques he and his team members used in the oil spill recovery efforts during the barge accident that occurred in the Mississippi River earlier this year.

"It was a larger incident than I had ever been to; with the Unified Command and every contractor I can think of there to respond," said MST1 Hawes. "In areas where there are natural collection points, we modified the VOSS systems due to the vessels we had available. With this technique, responders recovered approximately 80,000 gallons."

Ohmsett is recognized by the USCG as the premier training facility for providing outstanding hands-on training instruction on full-scale equipment in real oil.



Students pump oil out of the containment boom during the hands-on training session.



USCG Students set up an inflatable oil barge during the USCG NSF training.

Scientists and Observers Visit Ohmsett For Dispersant Effectiveness Tests on Heavy California Crude Oil

On bright and sunny June 25, 2008, more than 60 scientists, managers, and decision-makers from private industry, state and federal agencies including observers from Brazil and Canada, gathered at Ohmsett to observe dispersant effectiveness (DE) testing on heavy California crude oils and to tour the facility.

The Ohmsett visitor's day was part of a one week test program funded by the Minerals Management Service (MMS) to determine the dispersibility of crude oils produced offshore California using Corexit 9500 dispersant.

During the first experiment, a control test, Ohmsett technicians discharged approximately 20 gallons of Eureka crude oil onto the waters' surface without dispersants being applied. Everyone watched as the oil spread out on the water while the wave action moved the slick up the tank. After 30 minutes the waves were stopped. Technicians recovered approximately 13 gallons of the 20 gallons of crude oil. Of the remaining seven gallons that were not recovered, some evaporated, some adhered to the side walls, containment booms and hoses, and the rest was naturally dispersed.

Following the control test, visitors divided up into groups to tour the Ohmsett facility. "I was extremely impressed by the size of the facility and the testing, training and research that is conducted at Ohmsett," said Jerry Conrad, U.S. Coast Guard (USCG), Philadelphia, PA.

During the second experiment, with visitors on the main bridge and tank deck, 20 gallons of Eureka crude oil was sprayed onto the waters' surface and was followed by a 1:20 dosage of Corexit 9500 dispersant. Within minutes, the observers could see the interaction and effects of the dispersant on the oil slick. They watched as the wave energy dispersed the crude oil from the waters' surface into the water column and the 2.5 million gallons of crystal clear water in the tank began turning coffee brown color indicating that the dispersant was working. The observer's consensus was that these experiments accurately simulate real-world conditions.

David Westerholm, Chief of the Office of Restoration, National Oceanic and Atmospheric Administration (NOAA) was on the main bridge during the experiments. "The Ohmsett experiments are an excellent opportunity to see dispersant effectiveness testing up close," commented Westerholm. "These experiments are also a great training tool for our NOAA Scientific Support Coordinators who will provide technical support to the U.S. Coast Guard in the event of a real spill."



Visitors gather on the deck of the Ohmsett tank to observe the application of dispersant on an oil slick.

Train With The Experts!

The Ohmsett Oil Spill Response and Strategies Training is taught in conjunction with Texas A&M University's National Spill Control School, the leading specialists in hazardous material spill training.

2009 Training Schedule

May 18-22, 2009

August 10-14, 2009 (En idioma Español)

September 21-25, 2009

For more information and registration, call the Ohmsett Training Coordinator at 732-866-7183 ext. 12 or email scunneff@ohmsettnj.com.

News Briefs

MMS Sponsors ICRARD Meeting At Ohmsett

The offshore oil and gas industry is an international organization. Major companies operate in many countries, and in each, certain organizations assess and ensure the use of sound technological developments. The International Committee on Regulatory Authority Research and Development's (ICRARD) function is to coordinate research activities, to exchange information, and to promote research cooperation between these organizations.

On October 7 and 8, 2008, the U.S. Department of the Interior, Minerals Management Service (MMS) hosted the 11th Annual ICRARD meeting at Ohmsett. Representatives of ICRARD included Sharon Buffington and Matthew Quinney from MMS, Steve Walker of Great Britain's Health

and Safety Executive (HSE), Walter Bobby of Canada, Newfoundland & Labrador Offshore Petroleum Board, Eirik Bjerkebaek and Oyvind Tuntland of Norway's Petroleum



ICRARD committee members tour the CHC facility in Linden, NJ.

Safety Authority. Each country member attending the meeting presented their strategic research planning methods, as well as, current and future research projects. Also up for discussion were ways to coordinate future research among member countries, and suggested improvements for the ICRARD website.

While at Ohmsett, members of ICRARD were able to tour the facility and observe the Alaska Clean Seas training class. In addition, they toured the Clean Harbors Cooperative (CHC) facility located in Linden, New Jersey, where the ICRARD members received a final research project report on Risk Assessment for Managed Pressure Drilling, presented by Ken Malloy of Stress Engineering Services.

ConocoPhillips Conducts Oil Spill Course at Ohmsett

For three days in September 2008 ConocoPhillips conducted their annual Corporate Oil Spill School training at Ohmsett. This course consisted of classroom training and discussion, with hands-on training exercises and demonstrations in the Ohmsett tank.

"This is the school's third year at Ohmsett," said Marty Cramer from ConocoPhillips. "It gives us the ability to operate a variety of response equipment in the tank to recover oil in real world conditions, and provides an excellent, and very unique, learning opportunity for the students," said Cramer.

During the training program students learned oil spill equipment set-up, operation, demobilization, and decontamination. The classroom portion of the course included topics such as booming and oil recovery strategies, shoreline cleanup, dispersants, oiled wildlife, spill response/incident management, and others. Course instruction was provided by Marty Cramer, Mitch Istre, and Rob Yarbrough from ConocoPhillips, with additional classroom instruction provided by Rick Case from Clean Harbors Cooperative

(CHC), Tom Coolbaugh from ExxonMobil, and John Sweeney, Rich D'Allassandro, and Rex Prosser from Marine Spill Response Corporation (MSRC).

In the Ohmsett tank, students participated in hands-on exercises using real oil with full-scale equipment provided by CHC and Ohmsett. This gave the students an opportunity to put to use the skimming and booming strategies they learned during the classroom portion of the training.

"Most people only get classroom instruction on the basics of spill response, but this format consisting of classroom training, hands-on equipment operation using real oil, and apply the classroom instruction during the field exercises," said Cramer. "It enables the students to fully understand and appreciate the level of effort involved in implementing a variety of response techniques, as well as managing a response which, in turn, better prepares them to respond to an actual incident".

In conjunction with the three days of training at Ohmsett, students traveled to Linden, New Jersey to participate in two days of field activities at the CHC facility.



Hands-on training in the Ohmsett tank using full-scale equipment.

News Briefs

Alaska Clean Seas Trains Responders at Ohmsett

In October 2008, Alaska Clean Seas (ACS) held two one-week advanced training sessions for experienced oil spill responders at Ohmsett and assisted in field exercises with the Marine Spill Response Corporation (MSRC) New Jersey Responder which is home ported in Perth Amboy. The program gave responders hands-on practice with oil spill equipment set-up, recovery, maintenance and decontamination.

Alaska Clean Seas has been conducting training at Ohmsett for over five years. Each week students participated in classroom time and three days of skimmer exercises in the

Ohmsett test tank. During the classroom portion of the program, students focused on all areas of spill response including fast-water inland spills, delta, offshore, river and land spills. During the hands-on portion, emphasis was on students participating in tank exercises to reinforce what they learned in the classroom.

After the students completed the Ohmsett training sessions, they traveled to MSRC in Perth Amboy to continue hands-on exercises on board the New Jersey Responder.

"Crews from the New Jersey Responder and ACS jointly deployed ocean boom and

a TRANSREC skimmer in the Hudson River with Manhattan as a back drop," explained Gary Stock, training specialist for ACS. "The joint training deployment was highly coordinated and a great opportunity for oil spill responders to share their expertise."

"The hands-on training for the arctic responders from ACS, with the skyline of New York City in the background, was extremely successful and valuable," commented Mr. Stock. "Many thanks to the entire staff at Ohmsett and crew of the New Jersey Responder. We shall return in 2009!"

Ohmsett Staff Attends The 18th Annual Clean Gulf Conference

Ohmsett was recently one of more than 200 exhibitors participating at the 2008 Clean Gulf Conference in San Antonio, Texas in October.

The Clean Gulf Conference provides updates and discussions on the latest developments in regulatory and operational issues.

Ohmsett staff members Bill Schmidt and Jane Delgado attended the conference and participated in the Poster Session entitled "Development of an ASTM Skimmer Test Protocol - Phase 2 Development."



Pictured left to right: Bill Schmidt, Ohmsett Program Manager, Randall Luthi, Minerals Management Service Director, and Jane Delgado, Ohmsett Marketing Specialist.

The Ohmsett Gazette is published by Ohmsett - The National Oil Spill Response Test Facility to update our readers on activities at the facility.

Editor & Graphics Jane Delgado
Technical Editors Dave DeVitis,
..... Alan Guarino, Paul Meyer,
..... Susan Cunneff

The opinions, findings, conclusions, or recommendations expressed in this report are those of the authors, and do not necessarily reflect the views or policies of the MMS. Mention of trade names or commercial products does not constitute endorsement or recommendation for use. This document has been technically reviewed by the MMS according to contractual specifications.



Test With Oil! Train With Oil!

*Ohmsett is managed by the U.S. Minerals Management Service
and operated by MAR Incorporated.*

*For more information call (732) 866-7183
or visit our web site at www.Ohmsett.com*



Train with oil

Test with oil

*Ohmsett Facility
MAR, Incorporated
PO Box 473
Atlantic Highlands, NJ 07716
(732) 866-7183*