

The Ohmsett Gazette

Leonardo, New Jersey

Train with oil. Test with oil.

Spring 2004

Army Reserves Not Just One Weekend a Month for Ohmsett Program Manager

Until recently, Ohmsett's program manager Bill Schmidt headed out to train with the Army Reserves one weekend every month.

Then, in December, 2003, Bill got the news that what he had been training for all those weekends was to become a reality.

Bill was called to serve in Kuwait with his unit, the HHC Eighth Medical Brigade, and headed to the Middle East in January, 2004.

He will be stationed there for a year.

Command Sergeant Major William Schmidt has served in the Army Reserves since 1974. Stationed at Fort Dix, New Jersey, he saw active duty during Desert Storm in 1991.

CSM Schmidt has thirty-three years of military service and was first on active duty in the early seventies, stationed stateside during the Vietnam War.

CSM Schmidt's military decorations include the Meritorious Service Medal, the Army Commendation Medal, the Army Achievement Medal, the Army Reserve Component Achievement Medal, the National

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New Series of Ohmsett Dispersant Tests To Correlate Open Ocean Results



Researchers Ken Trudel (left) and Randy Belore of SL Ross Environmental, Ltd. take measurements from a slick of dispersed oil in the Ohmsett basin.

In October 2003, scientists, spill responders, and regulators assembled again at Ohmsett to participate in a new series of dispersant effectiveness experiments.

The experiments were funded by the U.S. Minerals Management Service.

The objective of the experiments was to determine how well the results of dispersant effectiveness (DE) tests conducted in the laboratory, and in experimental test tanks, correlate with dispersant performance under real-world conditions.

The experiments also provided an opportunity for MMS to invite professionals in the oil industry to the Ohmsett facility for a

three-day opportunity to observe continuation of dispersant testing in the test basin.

This was the third visitor's event hosted by Ohmsett and MMS where responders could actually watch DE tests being conducted in the tank (see *Ohmsett Gazette Spring/Summer 2003.*)

More than sixty visitors from U.S. state and federal government, private industry, and academia, attended and had an opportunity to see full-scale DE testing.

The observers stood on the main bridge and on the side of the tank as dispersants were applied to slicks of fuel oil and watched as wave action dispersed the oil from the

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Dispersant

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water's surface into the water column.

Although dispersant use is not currently widespread in the U.S., its use is increasing.

However, questions arise even as dispersants become more widely accepted. How reliable are laboratory and mid-scale testing protocols at predicting dispersant performance at sea? How well do oils, particularly heavy fuel oils and crude oils, disperse?

In a collaborative multi-national project, scientists are addressing these questions.

Developing a reliable dispersant testing protocol for the Ohmsett facility was the first big step toward establishing the test tank as a reliable venue for DE testing.

The next step was to determine how the results from DE tests conducted in the laboratory, and from Ohmsett, scale to at-sea performance.

From June 23 to June 27, 2003, scientists from the United Kingdom government and industry conducted a series of offshore dispersant trials in the English Channel to determine the viscosity of heavy fuel oils that limits the dispersant effectiveness.

In these at-sea trials, a series of small oil slicks of different grade fuel oils were laid down on the sea and immediately sprayed with one of the three test dispersants at various dispersant to oil ratios.

The apparent effectiveness of the dispersant was judged by visual observations by a group of expert observers. MMS participated in these at-sea trials.

MMS funded a two-week series of dispersant experiments at Ohmsett to repeat the same U.K. at-sea tests under conditions similar to those at sea.

Researchers used identical oils (IFO 120, 180, and 380), identical dispersants (Agma DR 379, Corexit 9500, and SuperDispersant 25) and identical dispersant-to-oil ratios, water temperatures, and salinity.

The full U.K. at-sea test matrix was duplicated at Ohmsett. Five observers from the U.K. sea trials participated, including Alun Lewis, the U.K. consultant who managed the U.K. sea trials, Ken Trudel, prin-



Visitors observe the dispersant test from the Ohmsett basin-side.



Ohmsett technician Don Snyder adjusts oil application nozzles in the basin.



Ken Trudel of SL Ross measures oil temperature with a handheld IR thermometer.



Waves act upon the oil slick and dispersant in the Ohmsett basin.

principal investigator for the Ohmsett dispersant experiments, and two trained responders from Oil Spill Response Limited (OSRL), Southampton, U.K.

In addition to the DE experiments, the U.S. Coast Guard Atlantic Strike Team and OSRL used the tests as a training exercise for the special monitoring of applied response technologies (SMART) dispersant monitoring protocol and collected in-situ fluorescence data.

Chris Fuller from Texas A & M University brought the university's newly developed in-situ fluorometer (as well as their laser particle size analyzer) to test it next to the Turner fluorometer used by the USCG and EPA strike teams.

Ohmsett has shipped identical test oils and dispersants so identical experiments can be conducted in a smaller wave tank in Ottawa, Canada and at laboratory scale in Canada, France, and the U.S.

When all of these sets of DE experiments are complete, we will have a rare opportunity to get a better understanding of how experiments conducted in the laboratory and in test tanks correlate and scale with dispersant performance under at-sea conditions.

This project is part of MMS's long-term program to use the Ohmsett facility for further dispersant effectiveness testing, training, and research.

This article was contributed by Joseph Mullin, senior technical advisor for oil spill response research for MMS.



Researchers apply dispersant to a slick in at-sea trials in the United Kingdom.

Ohmsett Test Basin Drained for Upgrades

In July, the Ohmsett test basin was drained for yearly maintenance and repairs. The repairs were accomplished in two months of effort during July and August of 2003.

Ohmsett's primary asset is its 2.6 million gallon test basin. The basin is 667 feet long, 65 feet wide, and eleven feet deep.

The concrete basin is supported by pilings and is made up of twelve sections with eleven continuous rubber seals to make the basin water-tight.

Before draining, a certified laboratory tested the basin water to ensure the water quality met New Jersey Department of Environmental Protection discharge standards.

It did, and over two and a half million gallons of crystal-clear saltwater were discharged into Sandy Hook Bay.

Then the real work began.

Subcontractors hired by MAR, Inc. pressure-washed the basin walls, floor, wave-maker, and beach system at each end of the test basin.

Once the basin was empty, the test basin seals were removed. The surrounding concrete was scraped and sand-blasted, spalling and cracks were repaired, and new seals were installed.

The most significant cracks were found around the viewing window at the south end of the tank. The viewing window and loose concrete were removed and corrosion was cleaned down to the bare rebar.

Technicians installed new concrete and new viewing windows.

By August 2003, repairs were complete and the basin was refilled with water from the bay.



A technician peers through the gaping hole left when the old basin viewing window was removed.



Basin water flows into Sandy Hook Bay.



U.S. Coast Guard strike team members look through the new viewing window.

New On-Site Graphics Suite Opens Up Many Possibilities

A newly completed video and graphics suite at the Ohmsett facility will allow staff to create multimedia materials on-site. Work that was previously sent to outside contractors can now be done at the facility by Ohmsett staff.

The new graphics suite will also help Ohmsett staff produce on-site video/audio productions, work on website design, and create animated sequences for marketing or testing.

The suite also affords the capability to compress videos and test results to send to customers via the Internet.

According to Joanne Haberl, Ohmsett's graphics coordinator, "With the new suite, we will even be able to create a CD ROM that gives you buttons forwarding the viewer to a website...with graphics, flash animations, explanations, and live-streaming of a video to a website."

The new Ohmsett graphics suite represents a potential time and cost saving to the facility.

An in-house computer graphics station specifically intended for video and graphics materials means that Ohmsett will no longer have to hire outside contractors for its graphics needs.

The ability to create brochures, postcards, forms, questionnaires, and ad designs will

be available to Ohmsett staff and customers.

Ohmsett staff may also be able to develop and update the Ohmsett website in-house with audio, animation, and streaming video.

An enhanced graphics capability also enables Ohmsett staff to produce a video from concept to completion, including editing, audio capabilities, animation, and VHS duplication.

The graphics enhancements also allow staff to compress videos, creating a smaller file that can be copied to a CD or uploaded to a secure Internet site.

And to top it off, live tapings of meetings can be made available for Internet teleconferencing, and testing and training videos can be copied to CD's or dubbed to VHS.



A corner of the new graphics room.

2004 Ohmsett Video Out Soon

If you've seen the Ohmsett marketing video produced two years ago-or even if you haven't- get ready for the sequel.

A new Ohmsett video now in production and updated with new narration, music, and footage highlights the new capabilities developed at the Ohmsett facility in the last two years.

Ohmsett's graphics coordinator Joanne Haberl is producing the 2004 Ohmsett video, with scripting help from MMS's Jim Lane and Joe Mullin.

Testing and training video footage illustrates Ohmsett's upgraded capabilities for dispersant research and cold weather and ice testing and training.

The video also features the new training programs offered by Ohmsett.

The state-of-the-art training and conference rooms in Ohmsett's renovated multi-use building, and Ohmsett's new office space, are highlighted.

The video should be available in June 2004 as a VHS tape or as a CD.

To request your copy of the 2004 video, please call Joanne Haberl at (732) 866-7197.

CSM Schmidt

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Defense Service Medal, the Armed Forces Reserve Medal, the Noncommissioned Officer Development Program Ribbon, and the Army Service Ribbon.

Ohmsett, Mar, Inc., and Minerals Management Service staff are proud of Bill, and our best wishes go with him.

Anyone wishing to send regards to Bill may contact Ohmsett at (732) 866-7183.



CSM William Schmidt in the Middle East.



The Ohmsett staff express their support for our troops, thank all families of military personnel for their sacrifices, and wish everyone a safe return.



Boom Buoyancy-to-Weight Ratio Tests Conducted at Ohmsett

Several studies of boom performance indicate that increases in buoyancy-to-weight ratio may improve boom performance.

Minimum values of buoyancy are specified in several guidelines, including U.S. Coast Guard regulations and an American Society for Testing and Materials (ASTM) selection standard for booms. However, no *standard* methodology currently exists for measuring or calculating a boom's buoyancy.

The (ASTM) F20 subcommittee on booms has set out to create a standard methodology for estimating buoyancy-to-weight ratios. The subcommittee has already prepared a draft based on results from Minerals Management Service-sponsored containment boom studies for smaller-scale booms.

In February of 2004, SL Ross Environmental, Ltd., funded by MMS, conducted full-scale boom testing in a tank at Ohmsett to enhance data gained from previous smaller-scale tests. These test results were intended to improve the accuracy of the draft methodology, and to verify the calculations used in the standard to measure a boom's buoyancy.

Researchers tested booms in a range of sizes, buoyancy, and buoyancy-types to verify procedures.

The ASTM's F-20 subcommittee will use



Ohmsett engineer Dave DeVitis, and Ohmsett technicians Rich Naples and Dave Knapp place a boom for testing in the tank.

the October Ohmsett boom test results in its review of the draft methodology. The subcommittee will also solicit comments

from users and manufacturers and edit accordingly. The review will be managed through balloting within the ASTM.

Ohmsett Trainings Continue

The U.S. Coast Guard oil spill responders were at Ohmsett from June 2 through June 6, 2003 for an oil spill responder training.

After the Ohmsett test basin had been drained, repaired, and refilled, the USCG returned with more students for an oil spill responder training from August 25 through August 29.

Ohmsett conducted the last training of the season from October 20 to October 24 with an oil spill S & T training.

Check the test calendar at www.ohmsett.com for the 2004 training dates!



Coast Guard strike force team members learn about oil transfer pumps.

News Briefs

Russian Delegation Visits Ohmsett

On September 18, 2003, delegates from the Special American Business Internship Training Program (SABIT) visited Ohmsett.

The group was comprised of oil and gas company managers from the former Soviet Union who were visiting the United States for one month to learn about the work conducted in our oil and transportation industry. The group was escorted by the U.S. Department of Commerce's International Trade Administration officer, Benjamin Chapman, and two interpreters.

Ohmsett program manager Bill Schmidt presented a video, answered questions, and conducted a tour of the facility for the Russians. During the tour, Schmidt discussed the facility's capabilities, testing and training activities, and spill response devices and equipment, and gave an overview of the test basin and its systems.

This article was contributed by Joyce Rosenberg, Ohmsett administrator.



Ohmsett program manager Bill Schmidt and Russian representatives pose in front of the Ohmsett basin

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

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Catch Us At These Conferences!

Interspill 2004

June 14 - 17, 2004

Trondheim, Norway

Clean Gulf Conference

November 17 - 18, 2004

Tampa, Florida

International Oil Spill Conference

May 15-19, 2005

Miami, Florida



High school interns Mike Benedetti, Joe Norcio, and Kevin Ganascioli get some real-world work experience painting at the "beach" last summer--the beach end of the Ohmsett test basin, that is.

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