

## **DISPERSANT EFFECTIVENESS EXPERIMENTS CONDUCTED ON ALASKAN CRUDE OILS IN VERY COLD WATER AT THE OHMSETT FACILITY**

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**Abstract\*** In the winter of 2003, five Alaskan crude oils were tested in very cold water with Corexit 9527 dispersant at Ohmsett – The National Oil Spill Response Test Facility located in Leonardo, New Jersey. Ohmsett is a large outdoor, above ground concrete test tank that measures 203 m long by 20 m wide by 3.4 m deep. The tank is filled with 9.8 million litres of crystal clear salt water. At the south end of the tank there is a wave generator capable of producing waves 1 m in height and at the opposite end there is a moveable beach. The tank is spanned by a bridge system capable of towing full size oil spill response equipment at speeds up to 6.5 knots and is equipped to distribute test oils on the surface of the water at reproducible thicknesses. The National Academy of Science (NAS 2005) reviewed the test methods and results of the 2003 Alaskan Cold Water dispersant experiments (DE) and recommended that the U.S. Minerals Management Service (MMS) repeat the test program utilizing the improvements that have been made in the testing methods, protocols and instrumentation at Ohmsett. In February–March 2006, MMS repeated the (DE) experiments in very cold water using four Alaskan crude oils (Alaska North Slope, Endicott, Northstar and Pt.McIntye) and Corexit 9527 dispersant. Oils were tested fresh, weathered by removal of light ends using air sparging and weathered by placing the oils in the tank in both breaking wave conditions and non-breaking waves. Results from these experiments will be presented that show in all DE tests Corexit 9527 dispersant was more than 90% effective in dispersing the crude oils tested in very cold water.

**Keywords:** wave tank, oil spill response, Ohmsett, dispersants

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\* Full presentation available in PDF format on CD insert.