Oil Dispersant Testing

Method

The IFO oil samples taken from the *M/V Sergio Zakariadze* grounding incident was treated with two (2) frequently used commercial dispersants, Corexit 9500 and Corexit 9527. A portion of oil was taken from each sample and split into two (2) separate two (2) gram aliquots, one being dosed with 0.1 gram of Corexit 9500 and the other with 0.1 gram of Corexit 9527. This mixture produced a 20:1 oil to dispersant ratio. An 1-ml aliquot of the oil/dispersant mixture was added to a flask containing 100 mls of seawater. The flask were placed on a orbital shaker(90 opm) for approximately 20 minutes. After shaking the samples were allowed to stand for 15 minutes. A reference oil, South Louisiana crude (SLC), was used as a control standard for the overall test. Additionally, an oil and water mixture was used as a control for the IFO and the SLC oil sample. The sample was evaluated on how well the oil dispersed after agitation for 20 minutes, as compared to the SLC control standard. The control standard, South Louisiana Crude, exhibits the highest degree of dispersion due to its low viscosity and low asphaltenene content. Table 1 displays the result from the dipersant testing.

	Sample Control	Corexit 9527	Corexit 9500
IFO (*M/V Sergio Zakariadze*)	-	3	4
South La. Crude	-	3	3

Scale: excellent (5)-poor (1)

Results

The moderately viscose IFO oil displayed moderate to good dispersion with application of Corexit 9500 and 9527 (20:1 ratio). The IFO oil treated with the Corexit 9500 displayed the greatest dispersion with little reformation of the oil slick after weathering. Both dispersants worked well on the IFO oil, but it is recommended that Corexit 9500 be used if available.