# RAISING THE STANDARD ON OIL SPILL RESPONSE EQUIPMENT

As the knock-on effects of the oil spill at Prudhoe Bay are still being felt, Queensboro Marine Equipment Ltd's **Ralph Payment** addresses the importance of selecting proper response equipment.

Over the past two decades, we have witnessed remarkable advances in many fields of study such as communications, computing, and alternative energy. However, despite the best efforts of governments, organizations and individuals to develop and promote alternative sources of energy, our insatiable appetite for oil has yet to be curbed. Today, this demand is driven by several factors including India's and China's growing economies, political instability in known oil producing regions as well as a push by many developing countries to become energy efficient. As a result, production and exploration has been rising steadily ever since the Asian economic downturn over 10 years ago. Unlike in the past, however, much of the newly discovered fields and areas of exploration are located in significantly deeper and rougher waters.

While this global diversification of reliable oil producing fields has many benefits, we must also pay close attention to some of the downfalls of such rapid and widespread development. Naturally, one of the biggest concerns would be the risk of an oil spill. Although governments and oil companies alike enforce and exercise precautionary measures to avoid such a scenario, accidents do happen. More unfortunately, the personnel responding to a spill often find themselves ill-equipped and sometimes inadequately trained to handle such an emergency. As a result, the window of opportunity for minimizing the effects of a spill is lost as personnel struggle to organize a recovery effort, and, at the same time, reacquaint themselves with the equipment.

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The reason some oil spill recovery operations are ineffective is because the wrong equipment is being used, and this is simply due to the large amount of misinformation that exists within the small but important oil spill recovery industry. It is often that smaller operational divisions of oil companies or government organizations will turn to what they believe are reputable equipment suppliers for technical advice in order to establish a reference when drafting requests for quotations. Consequently, equipment specifications are usually biased and not in the best interests of the buyer.

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However, fault should not be found in the purchaser – one would imagine the purchaser is responsible for a wide range of equipment of which emergency response equipment makes up only a small fraction. Thus, expertise in oil spill response cannot be expected. One of the challenges faced by purchasers is the lack of objective literature that explains the principles and performance characteristics of spill response products. An excellent example would be information on transfer pumps found on oil skimmers for moving oil from the skimmer head to a storage tank. Since there are very few specialized pumps for oil spill recovery, manufacturers have to adapt other pumps for their oil skimmers. Consequently, the performance data on these pumps is out of context as it is based on pumping water, and the consumer is often misled when these nameplate ratings are quoted directly by manufacturers in their spill response equipment specifications.

Furthermore, the characteristics of different types of pumps that may not be significant in pumping water become important factors for consideration when the pumps are applied to oil and water mixtures. However, manufacturers often hesitate in clarifying these points because such components are often selected based on price rather than on proper function.

Even if consumers were to recognize the above problem, they are faced with another often misinterpreted piece of information. This happens when they look to third party verified performance figures of oil skimmers. Since there are very few accepted guidelines for testing oil skimmers, most, if not all, tests are done according to the only applicable ASTM standard, ASTM F631-93. While this standard establishes a clear guideline for quantifying oil recovery rates, it does not make any provisions for testing the skimmer under conditions that will simulate its intended operating environment. As a result, figures obtained from testing in accordance to this standard are usually high and do not reflect the effective capacity of a skimmer. It is therefore important to question test conditions, and whenever possible, to obtain performance data that is verified by testing facilities where actual spill conditions are simulated. One of such facilities would be the Oil and Hazardous Simulated Environmental Test Tank (OHMSETT) in New Jersey.

In short, the overall effectiveness and speed of an oil spill response operation can be improved by educating personnel that are involved at all levels of the process starting from equipment selection. Furthermore, training should be done under realistic conditions in facilities such as OHMSETT. This will give personnel a better understanding of the mechanics of a spill and thus offer invaluable insight into the proper selection and use of recovery equipment. Ultimately, appropriate training will not only help in better protecting our environment, it will also reduce the costs associated with inefficient oil spill cleanups. ■