

IMPROVING OFFSHORE OIL SPILL RESPONSE WITH DISPERSANTS



Offshore operators are developing resources safely and responsibly, and working to continuously improve offshore oil spill prevention and response. The companies operating in Atlantic Canada's offshore meet or exceed all environmental protection regulations and adhere to global best practices related to spill prevention.

Although preventing spills is the primary focus, it is also important to be prepared in the event of a spill. Operators have extensive emergency response plans, including oil spill response plans and access to equipment that provides a variety of options depending on the size and nature of a spill, weather conditions and other factors.

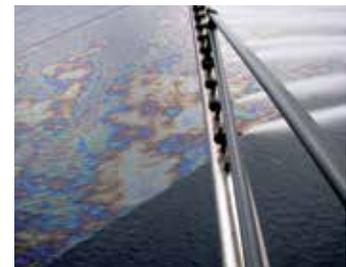
DISPERSANT USE IN OIL SPILL RESPONSE

One of the most important spill response strategies is the use of spill treating agents. In Canada, regulations specify the types of spill treating agents that can be used if there is a net environmental benefit in doing so. To date, there are two types of spill treating agents that can be used in Canadian Waters. All are types of dispersants. Dispersants are chemical agents specifically designed for use in marine environments to speed up natural oil dispersion.

Natural dilution processes occur rapidly in the ocean. The oil on the surface is broken into tiny droplets, diluted to very low concentrations, and biodegraded by bacteria that occur naturally in the environment. The concentration of oil droplets in the water are reduced to 10 parts per million within minutes, one part per million within hours and into the parts per billion range within a day. This rapid dilution reduces the geographic extent and potential impacts of oil on seabirds, other wildlife and shoreline habitats dramatically. Therefore, by accelerating the breakdown of the spill and availability of the oil to be naturally biodegraded, dispersants can significantly reduce the potential for environmental impact.

A SOLUTION USED WORLDWIDE

More than 75 countries around the world identify dispersants as a first or second response option. They are one of several tools that have been proven safe and effective in managing and mitigating spills.



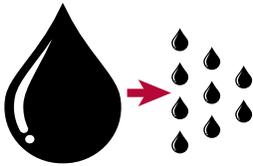
A SAFE SOLUTION

Dispersed oil is less toxic, and biodegrades more quickly, than untreated oil. Dispersants can be used in a wide variety of conditions, work quickly and have minimal environmental impacts when used appropriately. They have even been shown to work effectively in sea ice – conditions that reduce the effectiveness of mechanical recovery equipment. Dispersants also work well in energetic seas, conditions that are common in the Atlantic Canada offshore, because this energy helps to rapidly disperse oil, thereby reducing the environmental impacts from an oil spill.

Dispersants contain ingredients that are commonly found in skin cream, mouthwash, shampoo, air freshener and household cleaning products. These ingredients have been approved by the U.S. Food and Drug Administration for either human contact or consumption.

HOW DISPERSANTS WORK

Dispersants separate oil slicks into small droplets of oil.



Water turbulence breaks up droplets and disperses them further.



Oil droplets are consumed by naturally occurring bacteria.



IMPACTS ON THE ENVIRONMENT AND MARINE LIFE

Before dispersants are used, offshore operators conduct a Net Environmental Benefit Analysis (NEBA) or a Spill Impact Mitigation Assessment (SIMA). These are evaluation tools that allow spill responders and stakeholders to choose the response options that will result in the lowest overall negative impact on the environment.

The evaluation process considers a variety of factors in order to determine whether or not the use of dispersants in a particular area and on a particular spill would result in a net environmental benefit, including local conditions (oil properties, specific spill conditions, weather conditions, etc.) and potential impacts on commercial fisheries and other important species, such as marine birds, marine mammals, turtles, finfish and shellfish.

CHOOSING THE MOST EFFECTIVE METHOD

Having a variety of spill response tools to choose from allows responders to tailor their response to a spill, ensuring the most effective method is chosen based on the specific characteristics and conditions of that spill. Other response options include mechanical containment and recovery options, such as booms and skimmers, which are the most common response options, particularly for small spills.

The goal of a successful response is to apply the response technique(s) that will be most effective while also minimizing overall environmental and social impacts, and facilitating fastest ecosystem recovery.

FOR MORE INFORMATION:

Canadian Association of Petroleum Producers
atlanticcanadaoffshore.ca

Oil Spill Response Limited:
oilspillresponse.com

Spill Treating Agent Regulations
<https://laws-lois.justice.gc.ca/eng/acts/O-7>