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Unified Command: PWS Tanker Drill - Alaskan Maiden

FACT SHEET – IN SITU BURNING

What is in-situ burning?

In situ (Latin for "in place") burning involves controlled burning of oil that has spilled from a vessel, at the location of the spill. Typically, the oil is contained within a boom and ignited using a hand-held igniter or an igniter suspended from a helicopter. The burn will continue only as long as the oil is thick enough—usually about 1/10 of an inch or 2 to 3 millimeters. When conducted properly, in-situ burning significantly reduces the amount of oil on the water and minimizes the adverse effect of the oil on the environment.

Why conduct in-situ burning?

The primary spill response method in Alaskan waters is to launch mechanical recovery immediately, using booms, skimmers, and other equipment. In-situ burning provides another response tool to help minimize the spread of the oil slick. Under favorable conditions in-situ burning is a fast, efficient, and relatively simple way of removing spilled oil from the water. Furthermore, it greatly reduces the need for storage and disposal of the collected oil and the waste it generates. In-situ burning, however, should complement, not exclude, other means of spill response.

How is in-situ burning done?

On open water, in-situ burning is likely to be done by two boats towing fire-resistant boom in a U-configuration. The open end of the U is maneuvered through the oil slick and oil is collected. The boom is towed away from the main slick and the oil is ignited. During the burning, the towed boom slowly advances ahead to ensure that the oil is concentrated at the back end of the boom and maintains maximum thickness to sustain the burn. After the collected oil is burned, the process may be repeated for as long as in-situ burning is feasible. It is possible to stop the burn by releasing one end of the boom, or by towing it faster so that the oil is no longer contained within the boom.



Human health concerns

One of the main concerns for conducting in-situ burning is the smoke generated could affect the health of the general public downwind of the burn. The health and safety of the responders conducting the burn is also a consideration. These issues are addressed in detail in the *In Situ Burning Guidelines for Alaska* (see below for the weblink).

Summary

Like any spill response method, in-situ burning can offer important advantages over other response methods in specific cases, and may not be advisable in others, depending upon the overall circumstances. In the case of a major oil spill, the Unified Command will use all available methods to minimize the impact of the release, and one additional response tool may be in situ burning.

The following website contains the Coast Guard, DEC, and EPA approved version of the *In Situ Burning Guidelines for Alaska*. http://www.dec.state.ak.us/spar/perp/docs/isb_rev1.pdf

For further details on this specific tactic, refer to the *Spill Tactics for Alaska Responders (STAR) Manual* at the following website: <http://www.dec.state.ak.us/spar/perp/star/25insituonwater.pdf>