



Standard Guide for Describing Shoreline and Inland Response Techniques¹

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1. Scope

1.1 This guide describes methods to clean and remediate stranded oil on marine and lake shorelines, on river banks and other inland water body shorelines, and terrestrial habitats. The primary goal of any countermeasure is to aid recovery while minimizing additional impact.

1.2 This guide describes 22 different tactics that are available for consideration. These options range from natural recovery to active physical or biochemical intervention.

1.3 The tactics listed might not be appropriate under all possible circumstances, and multiple countermeasures could be appropriate on the same shoreline, river bank, lake shore or terrestrial habitat.

1.4 This guide describes technical considerations for selecting appropriate response countermeasures or techniques.

1.5 Selection of specific countermeasures for use during a spill response is guided by properties of the oil, degree of oiling, site accessibility, geomorphology, substrate and vegetation type, mobility of available equipment, hydrologic (coastal and inland) and meteorological conditions, and the presence of sensitive natural and archeological resources. It is advisable to consult with appropriate regulatory authorities since certain response options may require government authorization or approval, or both.

1.6 This guide does not address response to submerged, sunken or buried oil.

1.7 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.8 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appro-*

priate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 ASTM Standards:²

F1686 Guide for Surveys to Document and Assess Oiling Conditions

F1687 Guide for Terminology and Indices to Describe Oiling Conditions on Shorelines

F1872 Guide for Use of Chemical Shoreline Cleaning Agents: Environmental and Operational Considerations

F2205 Guide for Ecological Considerations for the Use of Chemical Dispersants in Oil Spill Response: Tropical Environments

F2532 Guide for Determining Net Environmental Benefit of Dispersant Use

3. Key Terms

3.1 *Shoreline and Inland Habitats*—For the purpose of this guide, marine and estuarine shorelines, river banks, and lake shores will be collectively referred to as shorelines, shores, or shore-zones. Shore types include a range of impermeable (bedrock, ice, and man-made structures), permeable (flats, beaches, and man-made), and coastal wetland (marshes, mangroves,) habitats. Other non-shoreline, inland habitats include wetlands (pond, fen, bog, swamp, tundra, and shrub) and drier terrains (grassland, desert, forests), and will be collectively referred to as either wetlands or terrains, respectively.

3.2 *Mixed Sediment Substrates*—These are described based on the size of the inorganic sediments (Guide **F1687**). The penetration and retention of oil is largely controlled by sediment size. Only light oils (for example, a diesel) can penetrate sand, whereas all but the more viscous oils can easily penetrate into pebbles and cobbles (“coarse sediment”). Substrates composed of mixed sands, pebbles, and cobbles are sometimes referred to as “gravel.” The surface layer often has predominantly coarse sediments with increasing amounts of sand in the subsurface. In mixed-sediment substrates, coarser fractions

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.