



Standard Practice for Reporting Visual Observations of Oil on Water¹

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1. Scope

1.1 This practice covers methods of reporting and recording visual observations of oil on water and related activities and phenomena.

1.2 This practice applies only to visual observations of oil on water from an airplane or helicopter. While a similar set of codes could be used for classifying oil on beaches, this subject is not discussed in this practice. It does not cover the use of remote-sensing equipment from aircraft, which is discussed in a separate standard.

1.3 This practice is applicable for all types of oil under a variety of environmental and geographical situations.

1.4 Visual observations of oil on water from the air involve a number of safety issues associated with the operation of airplanes or helicopters at low altitudes. These are not dealt with in this practice, but the observer should be aware of the hazards of such operations.

1.5 *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 appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Significance and Use

2.1 This practice can be used by surveillance and tracking staff to report visual observations to the clients of visual observations. The data produced from such observations will provide the basis for preparing maps of the oil-slick location.

2.2 This practice provides a procedure for reporting the visual observation of oil on water in a systematic manner and in a common format that can be readily understood by both observers and users of visual oil-spill observation maps.

2.3 This practice deals with the possibility that materials other than oil might be confused with oil when using visual observation methods.

3. Observational Methods

3.1 The basic information needed from a visual observation program includes the slick size and location, as well as its

characteristics and shape. The location and some aspects of the effectiveness of a response operation can be easily determined from an aerial platform. Reports on the presence of wildlife and the proximity of oil to environmentally sensitive areas are useful information that can be generated from overflights.

3.2 Observers of oil on water will generally use either a helicopter or a small fixed-wing airplane. The planes shall be capable of slow-speed flight (120 to 240 km/h; 60 to 120 knots) for extended periods of time and have good forward and side visibility. The aircraft shall have adequate range and endurance consistent with the size and location of the spill.

3.3 If possible, two observers should be used, one on the port and the other on the starboard side of the aircraft. Provision shall be made for the two observers to communicate readily between themselves and with the flight crew. This can be accomplished by using standard aviation headphones and noise-cancelling microphones connected to an aircraft intercom system. Such equipment is readily available on the commercial market.

3.4 Standard maps shall be provided to the observers, so that their data can be easily transferred to a single map or map set for reporting and dissemination. These maps can be based on marine charts, topographic maps or special maps produced for the spill. Useful scales vary from 1:10000 to 1:50000. It is difficult to plot information to the required accuracy using maps of a larger scale.

3.5 The flight path shall be shown on all maps. An initial proposed flight path should be prepared prior to the flight. During the flight, deviations from this plan may be necessary in order to observe the total area of the slick.

3.6 Typical flight altitudes range from (100 to 1000 m (300 to 3000 ft) depending on the nature of the spill and on the cloud ceiling at flight time. There are flight safety considerations associated with low-altitude flying.

3.7 The best angle to observe an oil slick is directly above it looking straight down. This is known as a nadir observation. The flight path should be adjusted, wherever possible, to provide observers with a nadir view of the slick. For most fixed-wing aircraft, it is not possible to observe directly downwards, and therefore the flight path should be chosen to allow for observation of the spill at as near the vertical as possible.

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