THE BOUCHARD-120 AND CHALK POINT SPILL RESPONSES: OBJECTIVES AND PERFORMANCE METRICS

S.P. TULER, T.P. SEAGER, R. KAY
Social and Environmental Research Institute
278 Main Street, Room 404, Greenfield, MA 01301 USA

I. LINKOV
Intertox
83 Winchester Street, Suite 1, Brookline, MA 02446 USA

Abstract

Oil spills present a chronic threat to the environmental security of most major ports. While mitigation of the risk of oil spills should include prevention, major oil spills remain periodic occurrences. Consequently, spill preparedness and response are critical aspects of minimizing the damage caused by spills. Nonetheless, any major spill response engages multiple stakeholder and public groups that may have different objectives. Currently, spill managers must balance conflicts in the midst of a crisis using ad hoc or heuristic approaches that may be difficult to justify or communicate. Public expectations are particularly challenging to manage. In some cases, the spill response may be perceived as a failure despite the response agency's best efforts. A systematic approach to stating varied spill objectives and tracking progress may result in better management and communication and improve the credibility of spill managers. This research studies two separate spill incidents to reveal the different types of objectives held by engaged personnel and the ways that they assess the progress of the response. A total of 30 interviews are conducted and interpreted using a grounded theory approach to reveal salient objectives. Where possible, metrics relating to these objectives are elicited and the results for each spill compared. Although the quality of the study metrics is not examined in detail, we find that some spill objectives are more readily stated in terms of performance metrics than others, suggesting that spill managers may benefit from greater guidance on how to gauge progress or set goals in areas such as protection of public health and safety or mitigation of sociopolitical or economic impacts.

1. Introduction

Oil spill response is defined as encompassing all activities involved in containing and cleaning up oil spills in ways that achieve the following overarching goals [4]:

© 2007 Springer.
Maintaining safety of human life.

Stabilizing the situation to preclude it from worsening.

Minimizing adverse environmental and socioeconomic impacts by coordinating all containment and removal activities to carry out a timely, effective response.

To achieve these goals, oil spill response efforts must include a variety of participants. They can include: federal, state, and local officials (e.g., US Coast Guard, US Environmental Protection Agency, US Department Of Energy, local fire chiefs, harbormasters, state environmental officials), the responsible party and its contractors, non-local clean-up crews hired by private contractors, environmental and community advocates at the national, state, and local levels, and community residents who have an important stake in the response, (i.e., business- and homeowners, and beach associations). Because so many different and interested parties are affected, there is a potential for conflicting ideas about how a response should be organized and implemented to achieve these goals. Different groups may have different assessments of oil spill response success because they have different objectives and some may be in conflict with others. Response strategies are always dependent on the priorities placed on protecting specific resources in the context of a particular spill. Therefore, decisions made about priorities are to a very large extent political or social as well as technical. Consequently, measuring the success of any response (for example, in accordance with the Governmental Performance Results Act of 1993) is a significant challenge. To capture potentially disparate views and to facilitate management decisions, multiple performance metrics must be employed. However, good metrics for capturing the nuances of the decision process are not always available.

This chapter addresses the question of what objectives and performance metrics are used by key stakeholders to assess two recent oil spill responses:

1. The Bouchard-120 spill response that began on April 27th, 2003 as the tugboat Evening Tide ran its tanker aground and released No. 6 home heating fuel just at the entrance to Buzzards Bay, Massachusetts. (See www.buzzardsbay.org for further details.)

2. The Chalk Point spill response that began on April 7, 2000, when an intrastate pipeline that transports oil from the Potomac Electric Power Company’s (PEPCO) Chalk Point electrical generating facility to residents in Prince George’s County released No. 2 and No. 6 home heating fuel oil into Swanson Creek and subsequently the Patuxent River. (See www.darrp.noaa.gov/-northeast/chalk_point/index.html for further details.)

The full details of each case study are more completely described in Tuler et al. [6].

2. Oil Spill Response

Within several hours of a reported spill, an Incident Command System (ICS) incorporating federal, state, and local authorities is mobilized at the scene. Among