

SECTION 1

INTRODUCTION

Over the past 20 years, especially in the past 10 years since the *Exxon Valdez* spill, there has been a tremendous investment in equipment and resources to respond to a large oil spill in both the open sea and nearshore environments. This paper examines whether the investment of money, time, and effort has been worthwhile: Have real improvements occurred, or has it been the world's most expensive public relations exercise?

This paper has been written to encourage discussion and analysis in the international response community about changes in oil spill capabilities and performance that have occurred during the past 20 years, and to critically challenge some of the current thinking. Using opinions of many professionals within the response community as a basis, this paper is intended to generate a dialogue within this community with the intent of identifying strengths and weaknesses in response capabilities and ultimately to initiate performance improvements. This paper also can be used to provide feedback to the research community on capability issues that warrant further examination.

1.1 OBJECTIVES

To determine what is reality and what is myth, this paper asks the following questions concerning oil spill response over the past 20 years:

- Have response capabilities to clean up large spills improved over the last 20 years?
- Have increased response capabilities resulted in improved performance?
- Has improved performance had a positive effect on political, media, environmental, and public perceptions?

The answers are intended to challenge existing national or international philosophies and encourage a critical review of these perspectives.

To achieve this objective, information from major spills is integrated with the practical experience and personal observations of spill response professionals. Whenever possible, the paper focuses on responses to large spills (>10,000 tonnes or 70,000 barrels); however, smaller spills also are used to illustrate particular issues because of the lack of detailed information on many spills.

Much of the information in this paper is derived from personal interviews with spill response professionals throughout the world, supplemented by the author's personal knowledge from almost 20 years' experience in the industry, in addition to

an extensive literature review. Because of the scarcity of reliable information on many spills, the author has relied on the judgment, perceptions, and opinions of response professionals and regulators, as well as on personal observations and necessarily subjective opinions.

1.2 ORGANISATION OF THIS REPORT

This paper examines capabilities around the world in the areas of equipment, infrastructure, and planning and the resulting reactions.

Section 1. Introduction. This section identifies the paper's objectives and introduces the critical issues to be addressed.

Section 2. Myth or Reality? Have Response Capabilities to Clean Up Large Spills Improved Over the Last 20 Years? This section discusses whether changes in response capabilities in specific countries and regions have resulted in significant improvements in these capabilities. Worldwide implementation of the tiered response concept also is analysed.

Section 3. Myth or Reality? Have Increased Response Capabilities Resulted in Improved Performance? This section discusses whether national and international agreements, contingency planning, and response strategies have resulted in improved oil spill response performance.

Section 4. Myth or Reality? Has Improved Performance Had a Positive Effect on Political, Media, Environmental, and Public Perceptions? Building on the previous section, Section 4 discusses whether increased capabilities and improved performance have been perceived positively outside of the response community.

Section 5. Conclusions and Recommendations. This section summarises the major conclusions regarding the critical issues and recommends direction for future efforts to further improve response capabilities and performance.

Appendix A. International Agreements Following Major Spills. A summary of national and international conventions and agreements is presented.

Appendix B. Summary of Significant Spill Events. This appendix provides brief, descriptive case studies of major oil spills, which constitute much of the reference material for this paper.

1.3 CRITICAL ISSUES

HAVE RESPONSE CAPABILITIES TO CLEAN UP LARGE SPILLS IMPROVED OVER THE LAST 20 YEARS?

There is no simple answer to this question. The answer ought to be "yes," given the enormous investment in equipment. In

some ways and in some places, particularly in developed and advanced developing nations, the answer is yes. In many developing countries, however, the answer is likely to be “no.” Any improvement in response capability often is hampered by higher priorities such as national survival and population welfare, which compete for the limited funds and management effort available.

Improvements in response capabilities have not only occurred over the past 20 years. Indeed, international cooperation began in the late 1960s, particularly in Europe, with the signing of the Bonn Agreement and the Helsinki and Barcelona Conventions (see Appendix A). When France suffered the 223,000-tonne (1,561,000-bbl) spill from the *Amoco Cadiz* in 1978, little oil was removed at sea, and overly aggressive shoreline cleaning caused severe shoreline damage, particularly in marshes. In the aftermath of the *Amoco Cadiz* spill, an upsurge of interest in oil spill response and various additional improvements occurred. Interest in spill response then began to wane until the *Exxon Valdez* spill (1989) became a catalyst for a frenetic expansion of response capabilities worldwide. Although there is a general international determination that this capability improvement should be maintained, the pressure of low oil prices and general downturn in the world economy are having an adverse effect on maintaining improved response capabilities.

HAVE INCREASED RESPONSE CAPABILITIES RESULTED IN IMPROVED PERFORMANCE?

The first criterion by which any performance improvement should be judged is whether any subsequent responses were

technically better than before improvements were made. Since there has been considerable investment in contingency planning, equipment, and training, as well as international cooperation, there should have been significant improvements. Response professionals, however, recognise the limitations of oil spill response. Despite best efforts, a well-rehearsed contingency plan, ample personnel and equipment resources, and a well-managed response, oil is likely to come ashore. Oil on the shoreline introduces the second criterion: Was the response perceived to be successful?

HAS IMPROVED PERFORMANCE HAD A POSITIVE EFFECT ON POLITICAL, MEDIA, ENVIRONMENTAL, AND PUBLIC PERCEPTIONS?

In today's unforgiving media-driven society, it is essential not only to perform well but also to be perceived to perform well. This is important, because otherwise, the fires of perception — lit by the media, kindled by environmental groups, stoked by politicians, and fanned by the public — can easily consume a Responsible Party (RP) and responders. The twin criteria of effectiveness and perception are not necessarily mutually exclusive, but great care is needed so that media pressure does not force responders to conduct actions that conflict with the best environmental and technical advice.