

Conference Paper

Industrial Disaster: A Review of Oil Spill Response Readiness at Oil and Gas Company 'X' in Indonesia

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Abstract

In oil and gas exploitation, one of the most common accidents to occur is a spillage in the process of oil transportation. Sea pollution resulting from oil and gas exploitation does not occur only in the transport phase (from sea to land or land to sea). Indeed, often, it occurs in the middle of the sea at the exploitation stage—for example, when blowouts occur at offshore oil and gas platforms. This study, which covers a two-month period (June–August 2017), takes a qualitative approach, examining the oil spill response policies of company 'X' in relation to the Indonesian Government's regulations. The findings are that company 'X' has made preparations for emergency oil spills, which is positive and is in accordance with Government regulations. However, the response time (the time taken to reach an oil spill area) needs to be considered in more depth.

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1. Introduction

In oil and gas exploitation, one of the most common accidents to occur is a spillage in the process of oil transportation. In 1967, the Torrey Canyon oil tanker crashed into the Seven Stones Reef between the Isles of Scilly and Land's End, resulting in massive losses [1]. It should be noted, however, that sea pollution due to oil and gas exploitation does not occur only in the transport phase (the transfer of fuel from sea to land or from land to sea). Indeed, pollution often occurs in the middle of the sea at the exploitation stage—for example, blowouts can occur at offshore oil and gas platforms. The blowout at the Ixtoc One drilling rig in the Gulf of Mexico in 1979, for instance, is considered to have been one of the worst incidents of marine pollution in history. In general, spilled oil continues to flow for about nine months before the well can finally be closed. The impact of such disasters affects aquatic environments, the fishing industry, and even

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United States tourism [2]. Ten years after the 1979 disaster, the Exxon Valdez tanker spilled 240,000 barrels (11 million gallons) of oil in the Prince William Sound area of Alaska, causing massive marine pollution. The surrounding ecosystem was damaged significantly, affecting various species such as seals, salmon, and birds.

The physical process of cleaning up oil in the sea can be handled smoothly; often, however, from a legal standpoint, it is harder to resolve the problems associated with such occurrences. In the article "Mess of Lawsuits is a Proving Stickier of Valdez Oil Spill," Martha Williams [3] notes that, following the 1989 spill, over 100 law firms became involved in more than 200 lawsuits, with at least 30,000 claims being made. In response to the extensive marine pollution that occurred, the United States pressed five sets of criminal charges each against the Exxon Shipping Company (owner of the Exxon Valdez tanker) and its parent company, Exxon Corporation [4].

2. Methods

This study is a qualitative study, in which the responses and policies of company 'X' (an Indonesian business based in the field of offshore oil and gas mining) regarding oil spills are compared with the standards expected by the Government of Indonesia. The premise was to establish whether there were any differences in expectations between the company and the Government in order to determine if policy changes need to be made at the company to improve oil spill response readiness. The study was conducted at company 'X' over a two-month period (from June–August 2017).

3. Results

In terms of tackling the incidence of oil spills both offshore and on beaches, company 'X' has policies in place, including teams tasked specifically with handling such problems. The duties and responsibilities of each of these teams are designed so that emergencies can be handled well and efficiently. The names of the teams/roles are as follows:

1. ERT – Emergency Response Team (or *yang berada di lapangan*)
2. ICT – Incident Control Team (based in the field)
3. IMT – Incident Management Team (located in Jakarta)
4. MC – Mission Coordinator (Kesyahbandaran and Port Authority)

5. BST – Business Support Team (located in Jakarta).

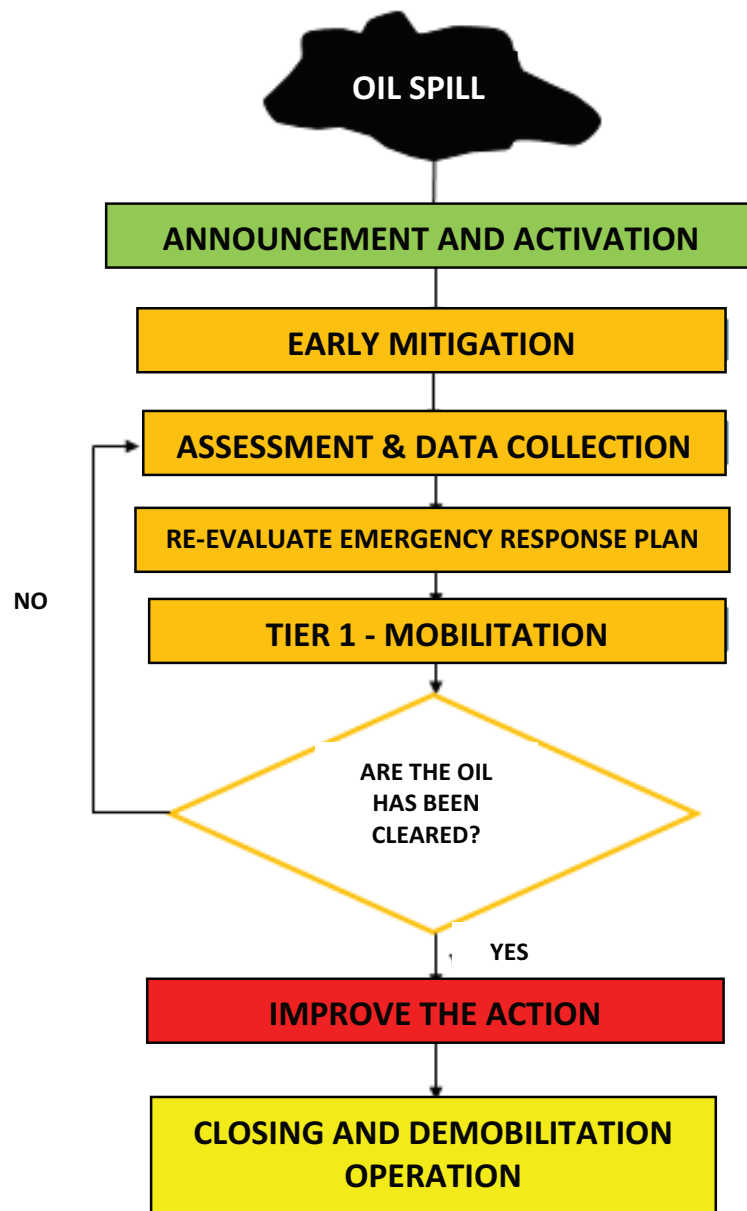


Figure 1: Oil Spill Control, Reporting and Escalation Procedure in Company "X".

In addition, company 'X' also has procedures for mitigation, reporting, and escalation, which are intended for use during emergency responses to oil spills. The countermeasures, reporting procedures, and exclusion procedures in place are listed in Figure 1. It should also be noted that at company 'X', oil spill handling is divided into three stages – named Tier 1, Tier 2, and Tier 3 – with each involving a specific procedure.

4. Discussion

When one compares the actions of company 'X' with the Indonesian Government's regulations on responses to oil spills (such as Presidential Regulation no. 109 of 2006 on the Emergency Response of Oil Spill at Sea; Government Regulation no. 21 of 2010 concerning Maritime Environment Protection; Regulation of the Minister of Transportation no. 58 of 2013; Regulation SKKMIGAS PTK-005/BP00000/2011 [rev 01] on Oil Spill Response [ref SOP No.0156/BP0000/2011/SO, dated 5 Dec 2011]), then it is clear that company 'X' has addressed Governmental requirements by putting procedures in place to overcome oil spills both offshore and on beaches. Importantly, the policies include the naming of specific individuals and teams with certain responsibilities, thus enabling the spread of oil spills to be minimized. Moreover, the company's procedures are reviewed and improved upon on an ongoing basis, with lessons being learned from oil spills that have occurred both at company 'X' and at other companies with similar core business interests.

However, it can be suggested that a more in-depth review is needed of the time taken to respond to oil spills. In this research, company 'X' is not yet working optimally because the ships designed to respond to oil spills are located at the company's offshore platforms, which take some time to reach in emergencies, thus lengthening the response time.

5. Conclusion

The readiness of company 'X' in anticipating and dealing with oil spills both offshore and on the beaches reflects Government regulations, as well as the company's internal standards. This can be seen via the roles, functions, and responsibilities that have been defined for all of the stakeholders in the company. Additionally, the division of oil spill has also been classified by the company to prevent the spread of oil spills larger. As such, company 'X' has already exceeded the regulations set out by the Indonesian Government via its internal standards and procedures.

Nonetheless, some elements still need to be improved, such as the response time for tackling oil spills both in the high seas and on the beaches. As shown by discussions with some of the stakeholders at company 'X', some obstacles remain, in terms of reaching the location of the oil spill in a timely fashion. Resultantly, there is a need to review the time taken for the company's vessels to reach the location of an oil spill.

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