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Safety management in hazardous materials logistics: a survey of firms' practices^{*}

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Abstract

Hazardous material location and routing problems have been extensively studied over the past three decades. However, in a context where organisational factors are now seen as the cause of most industrial accidents, very little is known about how firms manage hazardous materials logistics on a daily basis (safety management programs, risk analysis, formation, outsourcing, etc). In this paper we present a survey of firms' practices. We mailed a questionnaire to 490 facilities handling hazardous materials in the province of Quebec and received 106 answers. Results show that while most facilities seem to have appropriate safety management programs on-site, they tend to overlook important security aspects of transportation.

Key words: Logistics, Hazardous materials, Risk analysis

1 Introduction

In the last few years, there has been growing concerns about the risk associated with the use, storage or transportation of hazardous materials. Events such as Bhopal, Three Miles Island, or Chernobyl first come to mind, but numerous accidents of a smaller scales also affect public safety. In the province of Quebec alone, where this study takes place, the latest numbers show that in 2002, 41 hazmat transportation accidents have been reported to federal authorities. Most accidents involving such substances make it to the headlines, capturing the public and authorities attention, and new legislations are underway. In the academic field, there has been extensive research revolving around hazardous materials logistic: from risk analysis to routing, locations problems or emergency response.

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