

CHAPTER 1

Introduction

Industries are becoming progressively more aware of the environmental liabilities pertaining to their operations and products (EPA, 2000a). These liabilities include impacts on the natural environment; conveyed through the three principal media: air, water and soil; and its associated financial effects. These financial effects are lately more often portrayed in corporate images and reporting (Goodstein, 2002). However, some companies still find it difficult to relate environmental liabilities to financial effects (Carter, Perruso and Lee, 2001). This is primarily due to inherent uncertainties in measuring these liabilities, and in ways of expressing them as part of corporate financial evaluations (Hayden, 1989).

Uncertainties in measuring environmental liabilities can be addressed by using environmental evaluation and accounting techniques, such as qualitative matrix evaluation and streamlined life cycle analysis methods (Labuschagne, 2002); and quantitative methods including quantitative life cycle analysis, life cycle costing and total cost assessment (Veefkind, s.a.). Environmental accounting can be used to demonstrate the potential for environmentally beneficial investments to yield significant financial pay-offs, through the avoidance of environmental liabilities (Hayden, 1989). While environmental accounting now forms part of industrial decision making in first world countries, there is a lack of similar commitment to the environment in South Africa (Labuschagne, 2002).

The objective of this dissertation is to evaluate environmental accounting systems currently available in the world market and customise an environmental accounting model appropriate for South Africa. The results of an existing life cycle analysis for a chosen process, the production of cigarettes, will then be used to evaluate the model, especially to determine the impact of external costs on a company's production costs.

In this dissertation the evaluation of existing systems and terminology was conducted via a literature survey and is presented in Chapter 2. The customised environmental accounting model is set out in Chapter 3, followed by the case study for the production of cigarettes, in Chapter 4. Conclusions and recommendations are presented in Chapter 5.