

CHAPTER 5

CONCLUSION

5.1 Summary of main findings

The natural environment is rapidly becoming one of the primary concerns of many organisations, as our past and current relationships with nature have contributed significantly, if not caused entirely, numerous wide-scale problems that threaten the well being of the world's ecosystems. As concern grows for maintaining and improving the quality of the environment and protecting human health, environmental considerations are likely to be a source of quite profound changes in business practices. Hence, organisations of all sizes are increasingly turning their attention to the potential environment impacts of their activities, products or services. The environmental performance of an organisation is of increasing importance to internal and external interested parties. One of the ways to achieve sound environmental performance requires an organisation's commitment to a systematic approach and to continual improvement of the environmental management system.

This study looked into the methodologies for identifying significant impacts in the ISO 14001 EMS. It identifies the level of significance impacts in a selected electrical/electronic industry. Three methods, which have been developed, are used for this purpose. Each method has its strengths and weaknesses in determining the significant impacts. The results obtained by each method is not consistently the same, yet, do not differ much.

Method A is a relatively simple and quick way to get a good overview of the status of the significant impacts. It is less rigorous than the other two methods. The assessment results obtained through this method are rather accurate to the actual situations. Method A does not involve any numbering prioritisation but identifies the significance of impacts as "top", "high", "medium" or "low". Therefore, the prioritisation of significance impacts is clustered into four groups only. Nevertheless, Method A can serve as an overview assessment for continuous improvement in the EMS.

Method B and Method C are both quantitative assessment, which involve a numerical rating system to enable prioritisation of each impact. However, the rating system differs from method to method, what more the key criteria used. For Method C, in addition to the numerical prioritisation, this method categorised the significance level into three groups, namely, "very significant", "significant" and "non-significant". This method uses two main criteria, the frequency and seriousness of impact, as the driving force of assessing the significant. However, these two criteria are not well defined and are bound to be prejudiced by personal interpretation.

Method B places greater concern on the environment than the on business criteria. This method is deemed to be more suitable for assessing the significant impacts in Company X, as the description and usage of the key criteria are more applicable to the activities, products and services of Company X. However, this method can be further improved by including the range of classification for actions to be taken, such as the grouping in Method A and C. In other words, the management will have to develop the short term or long term targets to address these significant impacts. This is related to the setting of objectives and targets of the EMS.

While these three methods have been assessed, none of them is comprehensive enough in determining significant impacts significantly. These three

methods should be incorporated to become a more comprehensive method. Both qualitative and quantitative assessment shall be integrated when developing a method. Besides, each issue shall possess a set of criteria with the scopes and descriptions that suitable to it. The descriptions of the criteria have to be specific to the issue. When determining significance, at a minimum, consideration should be given to the severity of the impact, probability of occurrence, scale of impact, duration of impact, legislative requirements, community concerns, public image, level of control, management cost, technical feasibility, the level of difficulty associated with mitigating the impact. Other key criteria to consider are the relative risk encountered, policies /directives, international issues.

Then again, the ISO 14001 standard does not prescribe a method for determining the significance of an environmental impact; every organisation is responsible for devising its own criteria. While the criteria, ranking and scoring method may work for one organisation; it may not accurately reflect the environmental considerations of another. The specific criteria, the number of criterion and the scoring system need to be determined by each organisation. The suggestions stated above, however, are few parameters that can be taken into consideration when developing a suitable method for identifying significant impacts.

The methodology to be chosen for selecting significant aspects should be consistent with the environmental policy of the organisation, and should reflect the principles stated in the policy. For every environmental impact identified as "significant," an appropriate objective and target must be set to establish specific areas for improvement. In addition, because the course of day-to-day activities can vary at a moment's notice, the identification of environmental aspects must be an ongoing process. Hence, the methodology for determining the significant impacts has to be amended and updated continuously in order to suit the changes of the organisation's

activities, products and services, what more the criteria applied shall be in line with the changes in the regulatory, alternative technologies or even the concerns of the interested parties. All in all, the methodology to be developed must be thorough, yet flexible and practical.

5.2 Implication of findings

The implication of this study is that it provides a few guidelines that can be considered when developing a method for identifying significance. Those criteria discussed, at a minimum, shall be included in the method. It is important that the scope of descriptions should also be specific to each issues of concern. Nevertheless, each organisation still has to consider its activities, products, services and aspirations. Whichever method to be developed should be objective, thorough, yet flexible and practical to be used.

5.3 Limitations of the study

This study is limited to examine only one company's significant environmental impacts due to the difficulty of getting approval from more companies. Hence, the findings might not be convincing enough to prove that a method that suits an organisation may not accurately reflect the environmental considerations of others. The methods used in this study are general enough and can be applied to any process within the organisation. However, it is still not comprehensive enough in certain aspects. For example, in the issue of occupational safety and health, the criteria used in those methods could not clearly reflect the exact situation of the issue. In addition, the evaluation of significant impacts in this study may be bound to be biased by personal experience, background and knowledge on the environmental issues. Furthermore,

there is lack of accessible information and former research as well as the problems encountered on the matter of determining significant impacts. Consequently, this study is not exhaustive since it only hypothesized certain key issues based on the available information and derived analysis.

5.4 Recommendations for further research

This study might serve as baseline information for developing a method in determining the significant impacts. For future research, a more specific method to identify significant impacts can be developed. The future research can look into different issues and understand the requirements or factors that influence the level of significance. In other words, explore each issue by identifying the relevant criteria, and then create a set of criteria with its very own scope of descriptions.