

Environmental Procedure

Identification of Environmental Aspects and Significance Evaluation

(EP-01)

Date : 01-01-2006

Approved by : Ma Hung
(Executive Director)

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1.0 Purpose

This procedure describes the method for identifying and evaluating environmental aspects related to the **PCB manufacturing** carried out by **SZEPCB** respectively and determining the significance of these aspects. The procedure also applies to those indirect aspects arising from works carried out by **SZEPCB's** suppliers and contractors.

2.0 Scope

This procedure applies to all operations and activities, under normal conditions and reasonably foreseeable situations, in the **Factory and Facilities** of **SZEPCB**.

3.0 Reference Documents

Section 4.3.1, EMS Manual

EAR-01	Register of Environmental Aspects
LR-01	Register of Legal and Other Requirements
EP-02	Review of Legal and Other Requirements
EP-04	Control of Documents
EP-08	Control of Records

4.0 Definitions

EMS Committee	– Environmental Management System Committee
EMR	– Environmental Management Representative
SEA	– Significant Environmental Aspects

5.0 Responsibility

5.1 EMS Committee

The EMS Committee shall identify the environmental aspects of all activities, product and service of **SZEPCB** and its suppliers and contractors, and evaluate the significance of the environmental aspects.

The members of EMS Committee / EMR shall prepare and maintain the Register of Environmental Aspects such that it contains the most up-to-date information.

5.2 Executive Director

The **Executive Director** shall review and approve the Register of Environmental Aspects.

6.0 Procedure

6.1 Basis for Aspect Identification

SZEPCB's environmental aspects include those direct aspects arising from their activities, products and services; those indirect aspects that can be influenced, such as arising from the activities of their suppliers and contractors working on **SZEPCB's** activities, and from customer use of product (wherever reasonably practicable). Aspects within the defined scope of the EMS with regards to resource inputs to each process / activity, the intermediate effects, and the outputs for past, present and future activities, under normal operating conditions and any reasonably foreseeable situations shall be considered e.g. planned or new developments, or new or modified activities, products and services.

6.2 Identification of Environmental Aspects

The environmental aspects of **SZEPCB** shall be identified with respect to its major work activities. The aspects identified from business activities and office activities are consolidated to form the Register of Environmental Aspects.

Information reviewed for aspect identification shall include but is not limited to the following:

- Work process flow and procedures
- Legal requirements / non-statutory guidance notes
- General specifications and Particular specifications;
- Design reports
- Observations in site inspections;
- Records of complaints and/or non-compliance;
- Past monitoring records; and
- Records for past management reviews and/or environmental audits.

6.3 Identification of Environmental Impacts of Aspects

The environmental impacts of each aspect shall be identified with regards to:

- Resources utilisation (including use of raw materials, energy, etc);
- Energy utilisation
- Solid waste;
- Chemical waste;
- Air pollution
- Water pollution;
- Noise and vibration nuisance;
- Land contamination;
- Indirect impacts caused by **SZEPCB**'s suppliers or contractors or customers; and
- Flora and Fauna

6.4 Significance Evaluation of Environmental Aspects

The environmental aspects shall be evaluated for their significance according to the following criteria for consideration in procedure. A schematic diagram shown in Appendix 1 illustrates the evaluation process for determining significance.

a) Legislative Control

The environmental aspects, which are controlled by existing legislation are deemed as significant, e.g. disposal of chemical waste and discharge of wastewater are controlled by Waste Disposal (Chemical Waste) Regulation and Water Pollution Control Ordinance.

b) Company Policy

All aspects with company policy in place are deemed as significant, e.g. electricity and water consumption are specified in company policy.

c) Top Ten Largest Raw Chemical and Material Consumption

The aspects, which are involved in the top ten largest consumption of raw chemicals and material in terms of monetary value are deemed as significant.

d) Environmental Consideration

In Environmental Consideration criteria, significance was determined by assigning a score (1, 3 or 5) to three different categories for each aspect. They are classified as Severity, Frequency and Quantity. Severity quantifies severity of the impact. Quantity defines the scale of the impact. And, Frequency indicates the probability of occurrence or duration of impact. The scales used to determine the related score for each aspect are summarised in Appendix 2. Then the total score of each aspect will be calculated by multiplying the three considerations as shown in the following equation. If the aspects score higher than 25, they are deemed as significant.

$$\text{Scoring of Concerns} = \text{Severity} \times \text{Frequency} \times \text{Quantity}$$

Significant Environmental Aspects shall be taken into account in establishing, implementing and maintaining the EMS, they shall be managed by operational control procedures or by establishing improvement objectives and targets.

6.5 Development and Updating of the Register of Environmental Aspects

The EMS Committee shall identify SZEPCB's environmental aspects and evaluate their significance following steps 6.1 to 6.4. The result shall be showed in the Register of Environmental Aspects (document EAR-01). The information provided for each aspect shall include:

- The process / activity where the aspect is identified;
- A brief description of the aspect;
- The environmental impacts expected to result from the aspect;
- Score of the impacts based on the evaluation criteria;
- The control mechanism for each significant environmental aspect (e.g. operational control procedures, objectives and targets)

The member of EMS Committee shall prepare and review the Register of Environmental Aspects for approval by the Executive Director. The Register shall be updated :

- on a regular basis after the Management Review as necessary; and
- whenever planned or new development, or new or modified activities, products or services are introduced by SZEPCB or its contractors and suppliers.

7.0 Records

Record Description	Record Location/ Retention Responsibility	Minimum Retention Time
Register of Environmental	EMR keeps the Master	Two previous version

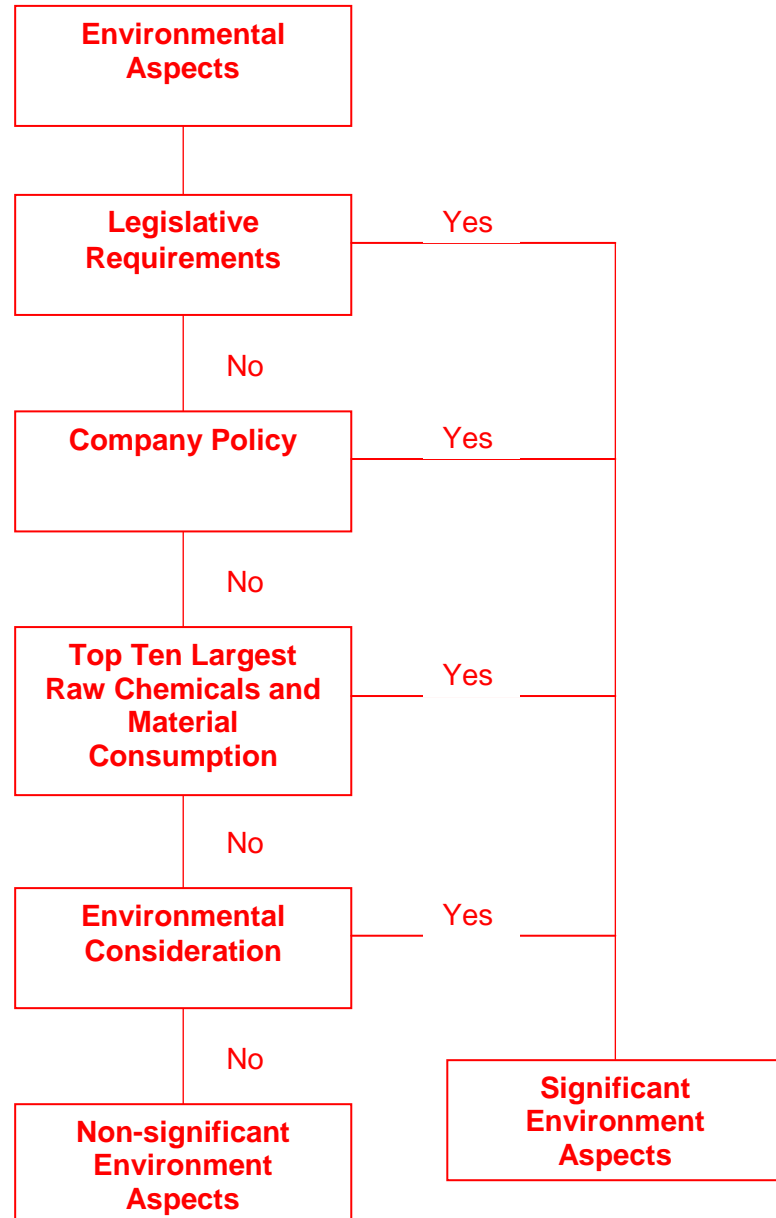
Aspects (EAR-01)	Copy	
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8.0 Appendix

Appendix 1 – Evaluation Process of Environmental Aspect Significance

Appendix 2 – Environmental Consideration Methodology

Appendix 1 – Evaluation Process of Environmental Aspect Significance



Appendix 2 – Environmental Consideration Methodology

Environmental Consideration	Severity		
Toxicity ¹			
Inhalation (Mist/dust) LC 50	> 200 mg/L	> 20 mg/L	< 2 mg/L
Inhalation (Gas/ Vapour) ppm	> 20,000	> 2,000	< 200
Oral (Solid/ Liquid) LD 50	> 15 g/kg	> 500 mg/kg	< 50 mg/kg
Potential Hazard	First Aid	Injury	Serious Injury
Solid Waste	Non-recyclable	Not Applicable	Recyclable
Noise TWA (dBA)	< 75 dBA	< 85 dBA	> 90 dBA
Odour ²	Odourless	Slight	Strong
Score	1	3	5

Environmental Consideration	Routine Event / Accidental Event	Score
Frequency	Yearly	1
	Monthly	3
	Daily	5

Environmental Consideration	Solid	Liquid	Air	Score
Quantity	< 1 kg	< 20 L	< 1 m ³ /s	1
	< 50 kg	< 200 L	< 8 m ³ /s	3
	> 1,000 kg	> 1,000 L	> 15 m ³ /s	5

Scoring of Concerns = Severity X Frequency X Quantity

The environmental aspects scoring **higher than 25 marks** are considered as significant.

¹ refer to Material Safety Data Sheet

² set up an odour judging panel to evaluate perceived odour at ground level