SHENZHEN ENVIRONMENTAL PRINTED CIRCUIT BOARD COMPANY

Environmental Procedure

Environmental Emergency Preparedness and Response

(EP-05)

Revision No. : 1

Date : 01-01-2006

Prepared by : Jiang Ho

(EMR)

Approved by : Ma Hung

(Executive Director)

Revision History

Revision Date	Description	Sections Affected	Revised By	Approved By
01-01-2006	First issue	- -	- -	Ma Hung

1.0 Purpose

This procedure describes the preparedness and response procedures for potential accidents and emergency situations giving rise to significant environmental impacts.

2.0 Scope

This procedure applies to PCB manufacturing of SZEPCB for which potential accidents and emergency situations may arise. The procedures for preventing and mitigating the following emergency situations are described:

- Fires, explosions;
- Rainstorms, typhoon or other unexpected weather conditions;
- Major Chemical Spillage or leakage;
- Accidents as a result of equipment failure

3.0 Reference Documents

Section 4.4.7, EMS Manual

EP-04 Control of Documents

EP-08 Control of Records

4.0 Definitions

EMR – Environmental Management Representative

AD – Administration Department

5.0 Responsibility

5.1 Environmental Management Representative

The EMR shall review the suitability and effectiveness of the emergency procedures after each accident or emergency situation.

5.2 Function / Departmental Manager

The Function / Departmental Manager shall prepare an Emergency Response Plan to minimise the likelihood of accidents and emergency situations. The Function / Departmental Manager shall ensure that all staff and contractors who work on site are aware of and familiar with the requirements of the emergency procedures. The Function / Departmental Manager shall arrange appropriate drills at various department / area and ensure that the requirements of the emergency procedures are communicated to all staff and are implemented. In case of emergency situations in the facility, the Function / Departmental Manager shall be informed and review the accident reports and remediation works taken by responsible staff.

5.3 Emergency Team

When emergency incidents occur, the Emergency Team is responsible for the execution of the appropriate emergency procedures as advised by the EMR and/or Function / Departmental Manager.

5.4 Staff of SZEPCB

All staff shall be familiarized with the emergency procedures and follow them in case of accidents or emergency situations.

6.0 Procedure

6.1 The EMR, EMS Committee, and Function / Departmental Manager shall identify dangers, taking proactive steps to prevent emergency incidents, and completing

tasks in preparation for emergencies.

6.2 The EMR shall coordinate the preparation and maintenance of the Emergency Response Plan (Appendix 1) that contains all emergency procedures.

6.3 Function / Departmental Managers may prepare their own Emergency Response Plans relevant to their activities and inform such plans to the EMR for compilation.

6.4 The Function / Departmental Managers shall familiarise and train their staff and Emergency Team members on the procedures described in the Emergency Response Plan. This shall be accomplished in accordance with EP-03 Training Procedure.

6.5 The Function / Departmental Manager and involved staff shall identify the root causes and any preventive actions and report the accident by completing an Accident Report (Appendix 3) after each accident or emergency situation and submit the completed form to the EMR to review.

6.6 The Function / Departmental Manager shall ensure emergency drill and periodic testing of the procedures are conducted where practical and maintain the emergency drill summary report (Appendix 2) for the EMR to review.

6.7 The EMR together with Function / Departmental Managers shall review the suitability, adequacy and effectiveness of the emergency plan after each accident or emergency situation and revise the emergency plan as necessary.

6.8 The EMR shall maintain documentation on emergency response and preparedness, and emergency incidents for at least 3 years.

7.0 Records

Record Description	Record Location/ Retention Responsibility	Minimum Retention Time
Emergency Drill Report (EF-EP05-01)	EMR	3 years
Accident Report (EF-EP05-02)	EMR	3 years

8.0 Appendix

Appendix 1 : Emergency Response Plan

Appendix 2 : Emergency Drill Report (EF-EP05-01)

Appendix 3 : Accident Report (EF-EP05-02)

1) Fire / Explosion

a) Preparation for a fire incident

i) Prepare and maintain an up to date list of chemical / Dangerous Goods (DG) and chemical wastes indicating their location on a site map

ii) Maintain up-to-date copies of all Material Safety Data Sheets (MSDS) for chemicals stored on site

iii) Store readily accessible copies of (i) and (ii) above in an area of the unlikely to be affected by fire. The information should be used to ensure fire-fighting activities are undertaken safely and with minimum impact to the environment.

iv) Check that licensed contractors regularly maintain fire-fighting equipment.

v) Ensure that sandbags are maintained and readily accessible

vi) Maintain periodic drill fire fighting procedures

b) During and Incident

i) Follow "Fire Procedure", alert the emergency services. Brief local Fire Service Department in all aspects of the incident and where appropriate provide the Chemical / DG list, MSDS sheets and site map.

ii) Ensure sandbags are available to the emergency services, to prevent the contamination of the storm water drains / foul sewer, inform the emergency services of their availability for use should tome / urgency of the situation permit.

c) After the Incident

i) Following the steps outlined in EI-03 Waste Management, to contain and dispose of liquid and solid chemical waste

ii) Investigate the causes of the incident and prepare a report describing any environmental impacts which have resulted and how they have been mitigated.

iii) Amend this environmental instruction and the emergency plan based on the findings described in the report if necessary.

2) Rainstorms and typhoons

a) Wastewater potentially contaminated with chemicals after typhoons:

i) Contain wastewater (with sand bags, etc) to prevent from entering water treatment facilities, drainage systems or watercourses

ii) Pump the wastewater into a suitable container and dispose of as chemical wastes according to EI-03 Waste Management.

iii) The EMR / DEMR will then determine if other parties (e.g. Environmental Protection Department, HKSAR / Shenzhen Environmental Protection Bureau, neighbouring communities) need to be informed.

b) Solid wastes:

i) Contain (and if necessary, treat) the waste containment to minimise drainage into sewerage system

ii) The EMR / DEMR shall determine if the wastes are chemical waste and dispose of in accordance to EI for Waste Management

iii) The EMR / DEMR will then determine if other parties (e.g. Environmental Protection Department, HKSAR / Shenzhen Environmental Protection Bureau,

neighbouring communities) need to be informed.

3) Major Chemical / Untreated Wastewater / Diesel Spillage

a) Contain the spill to minimise drainage into sewerage system

b) Inform the Production Manager / EMR immediately.

c) The Production Manager / EMR or his / her delegate shall arrange for appropriate removal and disposal of the chemicals / untreated wastewater / diesel by authorised collectors, and determine if other parties (e.g. Environmental Protection Department, HKSAR / Shenzhen Environmental Protection Bureau, Fire Services Department, HKSAR / Shenzhen's Fire Department, neighbouring communities) need to be informed.

4) Accidental Release of Toxic Gas

a) Terminate the source of toxic gas emission and contain the toxic gas to minimise the emission into atmosphere whenever applicable and practicable.

b) Inform the Production Manager / EMR immediately.

c) The Production Manager / EMR or his / her delegate shall arrange for appropriate cleanup by skilled professionals, and determine if other parties (e.g. Environmental Protection Department, HKSAR / Shenzhen Environmental Protection Bureau, Fire Services Department, HKSAR / Shenzhen's Fire Department, neighbouring communities) need to be informed.

Emergency Drill Report

Date of Emergency Drill	
Type of Emergency Drill	❑ Fires, explosions; ❑ Chemical Spillage or leakage; ❑ Accidents as a result of equipment failure
Department / Section	
Starting Time	
Completion Time	
Number of participants (name list attached)	
Participation Rate	
Name of Fire Officer	
Suggestion Items	
Action Plan	

Sample

Prepared by : _____ Date : _____

Function / Departmental Manager

Accident Report

Date of the Accident : _____ **Time :** _____

Location : _____

Type of Accident : _____

Detailed Description of the Accident :

_____

_____

_____

_____

Responses / Corrective Actions :

_____

_____

_____

_____

Possible Causes(s) of the Accident:

_____

_____

_____

_____

Suggested Preventive Measures:

_____

_____

_____

_____

Submitted by:		**Position:**	
Signature:		**Date:**	

Reviewed by : _____ **Date :** _____

Sample