

1.0 Purpose

This procedure describes the overall requirements for monitoring and measurement as part of **HKGEC**'s EMS requirements to ensure that there is adequate control on significant environmental aspects, compliance with legal and other requirements, and to achieve objectives and targets.

2.0 Scope

This procedure applies to all Significant Environmental Aspects, Environmental Instructions and Programmes established by **HKGEC**.

3.0 Reference Documents

Section 4.5.1, EMS Manual

EP-04 Control of Documents

EP-07 Enquiry / Complaint / Nonconformity Handling

EP-08 Control of Records

4.0 Definitions

EMR – Environmental Management Representative

EMS Committee – Environmental Management System Committee

5.0 Responsibility**5.1 Environmental Management Representative**

The Environmental Management Representative (EMR) shall work with the EMS Committee to define the monitoring requirements and evaluation of compliance, and has the overall responsibility for ensuring that the requirements of this procedure are implemented.

5.2 Departmental Manager

The Departmental Manager shall ensure that the operational control procedures / instructions relevant to their teams are followed by their staff, that all monitoring requirements are implemented properly, and that all nonconformities are reported to the EMR.

6.0 Procedure

6.1 The EMR, in consultation with the EMS Committee and the executive responsible for relevant functions / departments if necessary, shall establish monitoring criteria in the following areas:

- The achievement of environmental objectives and targets and the progress of programmes.
- The effectiveness of operational control procedures for controlling the significant environmental aspects of project activities including the control and monitoring of contractors' environmental performance. (Refer to respective EI)
- The conformity of environmental legislation and other requirements related to **HKGEC**'s environmental aspects.

6.2 Monitoring criteria shall include the monitoring / measuring frequency, methods, responsibilities and records or reports that shall be kept. The monitoring criteria shall be documented or integrated into the respective operational control procedures (refer to EI). The responsible Departmental Manager shall ensure that the monitoring

requirements are carried out and report any environmental nonconformities to the EMR.

- 6.3 The EMS Committee shall hold regular meetings (approximately **every 3 months**) and maintain records to :
- discuss and review the achievement of the objectives and targets and the progress of relevant programmes;
 - review the monitoring data (e.g. inspection checklist as shown in Appendix 2) to check whether the monitoring and operational control procedures are implemented properly;
 - review information to evaluate whether **HKGEC**'s activities comply with applicable environmental legislation (section 4.5.2.1) and other requirements (section 4.5.2.2) to which we subscribes;
 - review any environmental nonconformities, and the corresponding corrective action and preventive actions.
- 6.4 In case of nonconformities, the relevant Departmental Manager shall investigate the causes of nonconformities and establish appropriate corrective and preventive actions. The corrective and preventive actions shall be verified by the Departmental Manager and endorsed by the EMR (refer to EP-07).
- 6.5 The monitoring criteria shall be reviewed and revised according to changes in legislative requirements and the practical situations of **HKGEC** as a result of continual improvement of environmental performance.
- 6.6 Whenever necessary, calibration of measuring equipment shall be defined clearly in terms of calibration methodology, calibration frequency, acceptance criteria and responsible personnel.
- 6.7** HKGEC shall record the results (and maintain the records) of the periodic evaluation of compliance and shall be considered at the management review.

7.0 Records

Record Description	Record Location/ Retention Responsibility	Minimum Retention Time
Monitoring Plan (EF-EP06-01)	EMR	3 years
Meeting minutes of the EMS Committee meeting (Refer to regular meeting minutes which are kept by EMR)	EMR	3 years
Relevant records demonstrating the progress and achievement of objectives, targets and programmes. (Refer to relevant person-in-charge)	Relevant person-in-charge of the respective programmes	3 years
Environmental Inspection Checklist for Production Area (EF-EP06-02)	EMR	3 years

8.0 Appendix

Appendix 1 : Monitoring Plan (EF-EP06-01)

Appendix 2 : Environmental Inspection Checklist for Production Areas (EF-EP06-02)

No.	Item	Responsible person	Frequency	Mechanism
1.	Register of Environmental Aspects	EMR	Annually and as required	Refer to EP-01 and complete EF-EI01-1
2.	List of Legal & Other Requirements	EMR	Every 3 months	Refer to EP-02 and LR-01, and review any legal updates and revise accordingly.
3.	O&T and Programmes Performance	EMS Committee	Every 3 months	Refer to EM-01 and discuss the progress of O&T
4.	Legal Compliance	EMR, Departmental Manager	Monthly	Review and confirm the conformity to legislation as subscribed in LR-01, and discuss during Management Review meeting.
5.	Emergency Preparedness & Response	EMR	As per schedule	Refer to EP-05 and complete Emergency Drill Report / Accident Report
6.	Wastewater monitoring	Facility Manager	As per schedule	Refer to EI-10 wastewater treatment plant maintenance.
7.	Office inspection	EMR	Every month	Refer to EI-01
8.	Energy saving programme	EMR	As per schedule	Refer to EI-07
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				

Inspected by _____ Date _____
Signature _____ Reviewed by _____

Please tick the appropriate box
 0 – serious nonconformity, requires issue of CAR (fill the corrective action request form)
 1 – not satisfied, but immediate remedial action was taken and found acceptable
 2 - satisfied
Important : Please refer to the requirements as defined in EI-03—09 Environmental Instructions

Items to be checked	0	1	2	N/A	Comment / Follow up
<i>Waste management</i>					
1. Solid wastes are segregated and collected properly?					
2. Solid wastes are stored at designated areas with proper labelling and cover?					
3. Chemical wastes are stored at designated containers and areas? And in good conditions?					
4. Chemical wastes are properly labelled and closed?					
5. Waste disposal records are maintained?					
6. Secondary containment and adequate ventilation for storage areas are provided?					
<i>Air pollution control</i>					
7. Plating baths are properly covered when not in use?					
8. Ventilation systems / air pollution control systems are properly maintained and in good conditions?					
9. No abnormal fume / smell is observed?					
10. Effective maintenance of plant and equipment through visual inspection and records review are performed?					
<i>Water pollution control</i>					
11. Wastewater treatment plant is operated properly and in good conditions?					
12. Wastewater arising from electroplating process is segregated and directed to in-house wastewater treatment plant?					
13. Wastewater treatment plant is cleaned and maintained regularly and records maintained?					
<i>Noise pollution control</i>					
14. Routine maintenance conducted and records of all inspections and maintenance works maintained?					
15. No abnormal noise is observed from equipments and operations?					

Items to be checked	0	1	2	N/A	Comment / Follow up
<i>Resource conservation</i>					
16. No running tap (when they are not in use) or water leakage is observed?					
17. Switch off electrical appliance when they are not in use?					
18. Sufficient drain time provided above the process bath to reduce the quantity of dragout?					
19. The temperature of plating baths is set properly?					
<i>Handling and storage of chemicals</i>					
20. Drip trays are provided for chemical storage?					
21. Chemicals are properly labelled and stored in good conditions?					
22. Chemical spillage kits are maintained properly?					
23. Mixing areas are well lit and ventilated, and are as close to their point of use as possible?					
Others:					

Sample