# The Hongkong Electric Co Ltd

香港電燈有限公司



# ENVIRONMENTAL IMPACT ASSESSMENT (EIA) ORDINANCE, CAP. 499

## **ENVIRONMENTAL PERMIT NO. EP-071/2000/C**

# LAMMA POWER STATION EXTENSION ENVIRONMENTAL MONITORING & AUDIT PROGRAMME AT CONSTRUCTION PHASE

Report Title

Environmental Monitoring and Audit Report

(May 2006)

Date

14/06/2006

Certified by

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#### **EXECUTIVE SUMMARY**

This is the sixty-second monthly Environmental Monitoring and Audit (EM&A) report for the Project "Construction of Lamma Power Station Extension" prepared by the Environmental Team (ET). This report presents the results of impact monitoring on air quality and noise for the said project in May 2006.

After successful completion of post-project monitoring in September 2002, no further marine water quality monitoring for the reclamation works would be required.

Air and noise monitoring were performed. The results were checked against the established Action/Limit (AL) levels. An on-site audit was conducted once per week. The implementation status of the environmental mitigation measures, Event/Action Plan and environmental complaint handling procedures were also checked.

A separate monthly EM&A report for submarine pipeline prepared by the consultant, as one of ET members, is shown in Appendix K.

#### **Construction Activities Undertaken**

Construction activities for Lamma Extension during the reporting month are tabulated as follows:

Item	Construction Activities	
Unit L9 Civil and Building Works	Main Station Building, 275kV Switching Station Building, Shunt Reactor, Chimney, Drainage & Road, Fire Services Water Tank and Fire Pump House, C.W. Culvert System & Equipment Room, C.W. Pump Equipment Room, Gas Receiving Station, Pipe & Cable Rack and Lamma Power Station Addition and Alteration (LPS A&A) Works	
Unit L9 Mechanical Erection	Erection of HRSG, Steam Turbine, Gas Turbine, Generator, Condenser, Aux Equipment, Air duct / Inlet Filter, HRSG Inlet Duct and Piping Support / Piping Erection; Insulation Work; and Installation of Platform, Pipe Rack, Intake Aux Equipment, Bop piping and GRS piping	
Unit L9 Electrical, Instrumentation & Control Erection	Cable Tray Cover Installation, Instrument Piping Installation and Cable Termination	
Transmission System	Backfilling above portal structure for Cable Duct 2 and cable trench from N4 landing point to Cable Duct no.2 Entrance	
Gas Pipeline	Please refer to Appendix K	
Miscellaneous	Slurry ash piping & filling	

## **Environmental Monitoring Works**

One (1) dust monitoring events was re-scheduled in the reporting month as shown in the following table:

Monitoring work	Monitoring	Original	Makeup	Reasons
	Location	Schedule	Sampling	
1 hour TSP sampling	AM3	02/05/2006	03/05/2006	Failure of TEOM TSP sampler.

Other than the above incident, all monitoring work at designated stations was performed as scheduled satisfactorily.

#### Air Quality

No exceedance of Action/Limit levels on 1-hour TSP and 24-hour TSP for air quality was recorded in the month.

#### Noise

Construction work for Lamma Extension was carried out during the restricted hours including evening-time, holidays and night-time under valid Construction Noise Permits. No exceedance of Action and Limit levels for noise arising from the construction of Lamma Extension and transmission system was recorded in the month.

#### **Site Environmental Audit**

EPD officials from Regional Office (South) visited Lamma Power Station on 29/05/2006. EPD inspected the Lamma Extension Construction Site. There was no adverse comment from EPD regarding the construction site.

Independent Environmental Checker (IEC) conducted a site inspection on 25/05/2006. The inspection result is attached in Appendix H.

Site audits were carried out on a weekly basis to monitor environmental issues on the construction site. The site conditions were generally satisfactory. All required mitigation measures were implemented.

**Environmental Licensing and Permitting** 

Description	Description Permit No.		Valid Period		Date of
		From	To		Issuance
Varied Environmental Permit	EP-071/2000/C	18/05/05	-	HEC	18/05/05
Construction Noise Permit	GW-RS0784-05	29/11/05	19/05/06	Contractor	29/11/05
Construction Noise Permit	GW-RS0719-05	01/12/05	31/05/06	Contractor	09/11/05
Construction Noise Permit	GW-RE0363-05	01/01/06	31/05/06	Contractor	24/11/05
Construction Noise Permit	GW-RS0008-06	24/01/06	30/06/06	Contractor	20/01/06

Description	Permit No.	Valid	Period	<b>Issued To</b>	Date of
_		From	To		Issuance
Construction Noise Permit	GW-RS0032-06	11/02/06	10/08/06	Contractor	27/01/06
Construction Noise Permit	GW-RS0138-06	24/03/06	21/09/06	Contractor	24/03/06
Construction Noise Permit	GW-RS0154-06	04/04/06	30/06/06	Contractor	31/03/06
Construction Noise Permit	GW-RS0278-06	24/05/06	19/11/06	Contractor	24/05/06
Dumping Permit	EP/MD/06-092	19/04/06	30/06/06	Contractor	19/04/06
Registration of Chemical Waste Producer	WPN5213-912-P2781-07	11/06/04	-	Contractor	11/06/04
Registration of Chemical Waste Producer	WPN5213-912-K2801-03	15/09/04	-	Contractor	15/09/04
Registration of Chemical Waste Producer	WPN5517-912-T2007-02	17/03/05	-	Contractor	17/03/05
Registration of Chemical Waste Producer	WPN5213-912-W2852-09	25/01/05	-	Contractor	25/01/05
Registration of Chemical Waste Producer	WPN4111-912-M2534-09	20/06/05	-	Contractor	20/06/05
WPCO Discharge Licence	EP890/W2/XD020	22/11/04	30/11/09	Contractor	22/11/04
WPCO Discharge Licence	EP890/W2/XD021	03/02/05	28/02/10	Contractor	03/02/05

# **Implementation Status of Environmental Mitigation Measures**

Environmental mitigation measures for the construction activities as recommended in the EM&A manual were implemented in the reporting month.

# **Environmental Complaints**

No complaint against the construction activities was received in the reporting month. All previous cases were settled.

# **Future Key Issues**

The future key issues to be considered in the coming month are as follows:

## **Unit L9 Civil and Building Works**

- to continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained;
- to continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the performance;
- to monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary;

# **Unit L9 Mechanical Erection**

- to continue monitoring the noise level during construction
- to continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the performance;
- to monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary;

# **Unit L9 Electrical Erection**

- to continue monitoring the noise level during construction
- to continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the performance;
- to monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary;

# Transmission System

- to continue monitoring the noise level during construction;
- to continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the performance;
- to monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary;
- to closely monitor the construction activities in order to avoid disturbance to the rare plants;
- to provide temporary fire fighting equipment for prevention of fire within the work sites.

#### **Concluding Remarks**

The environmental performance of the project was generally satisfactory.

# 1. INTRODUCTION

#### 1.1 Background

The Environmental Team (hereinafter called the "ET") was formed within the Hongkong Electric Co. Ltd (HEC) to undertake Environmental Monitoring and Audit for "Construction of Lamma Power Station Extension" (hereinafter called the "Project"). Under the requirements of Section 6 of Environmental Permit EP-071/2000/C, an EM&A programme for impact environmental monitoring set out in the EM&A Manual (Construction Phase) is required to be implemented. In accordance with the EM&A Manual, environmental monitoring of air quality, noise and water quality and regular environmental audits are required for the Project. As the post-project marine water monitoring was successfully completed in September 2002, no further water quality monitoring for the reclamation works would be required.

The Project involves the construction of a gas-fired power station employing combined cycled gas turbine technology, forming an extension to the existing Lamma Power Station. The key elements of the Project including the construction activities associated with the transmission system and submarine gas pipeline are outlined as follows.

- dredging and reclamation to form approximately 22 hectares of usable area;
- construction of six 300MW class gas-fired combined cycle units;
- construction of a gas receiving station;
- construction of a new transmission system linking the Lamma Extension to load centres on Hong Kong Island;
- laying of a gas pipeline for the supply of natural gas to the new power station

This report summarizes the environmental monitoring and audit work for the Project for the month of May 2006.

## 1.2 Project Organisation

An Environmental Management Committee (EMC) has been set up in HEC to oversee the Project. The management structure includes the following:

- Environmental Protection Department (The Authority);
- Environmental Manager (The Chairman of the Environmental Management Committee);
- Engineer;
- Independent Environmental Checker (IEC);
- Environmental Team (ET);
- · Contractor.

The project organisation chart for the construction EM&A programme is shown in Appendix A.

1

# 1.3 Construction Works undertaken during the Reporting Month

Construction activities for Unit L9 civil and building works were for the Main Station Building, 275kV Switching Station Building, Shunt Reactor, Chimney, Drainage & Road, Fire Services Water Tank and Fire Pump House, C.W. Culvert System & Equipment Room, C.W. Pump Equipment Room, Gas Receiving Station, Pipe & Cable Rack and LPS A&A Works. Construction activities for Unit L9 mechanical works were the erection of HRSG, Steam Turbine, Gas Turbine, Generator, Condenser, Auxiliary Equipment, Air duct / Inlet Filter, HRSG Inlet Duct, Piping Support / Piping, Insulation Work, and installation of Platform, Pipe Rack, Intake Auxiliary Equipment, Bop piping and GRS piping. Construction activities for Unit L9 electrical, instrumentation & control erection were Cable Tray Cover installation, Instrument Piping Installation and Construction activities for Unit L9's associated transmission Cable Termination. system were backfilling above portal structure for Cable Duct 2 and cable trench from N4 landing point to Cable Duct no.2 Entrance, installation of submarine cables between N2 & N4 and backfilling & cable protection. A separate monthly EM&A report for submarine pipeline prepared by the consultant, as one of ET members, is shown in Appendix K. Layout plans for construction site and transmission system are shown in Figure 1.1 and Figure 1.2 respectively. Uncontaminated materials were dumped at the assigned location within the South Cheung Chau Spoil Disposal Area. Figure 1.3 and Figure 1.4 and show the dumping locations in May 2006.

The main construction activities carried out during the reporting month and the corresponding environmental mitigation measures are summarized in Table 1.1. The implementation of major mitigation measures in the month is provided in Appendix I.

Table 1.1 Construction Activities and Their Corresponding Environmental Mitigation Measures

Item	Construction Activities	<b>Environmental Mitigation Measures</b>
Unit L9	Civil and Buildin	ng Works
1	Main Station Building	Air  Dust suppression measures implemented.  Noise  General noise mitigation measures employed at all work sites throughout the construction phase.
		Waste Management  - Waste Management Plan submitted and implemented.

Item	Construction Activities	Enviro	onmental Mitigation Measures
2	275kV Switching Station Building	Air - Noise -	Dust suppression measures implemented.  General noise mitigation measures employed at all work sites throughout the construction phase.
		Waste	Management Waste Management Plan submitted and implemented.
3	Shunt Reactor	Air -	Dust suppression measures implemented.
		Noise -	General noise mitigation measures employed at all work sites throughout the construction phase.
		Waste -	Management Waste Management Plan submitted and implemented.
4	Chimney	Air -	Dust suppression measures implemented.
		Noise -	General noise mitigation measures employed at all work sites throughout the construction phase.
		Waste -	Management Waste Management Plan submitted and implemented.
5	Drainage & Road Works	Air –	Dust suppression measures implemented.
		Noise -	General noise mitigation measures employed at all work sites throughout the construction phase.
		Waste -	Management Waste Management Plan submitted and implemented.

Item	Construction Activities	<b>Environmental Mitigation Measures</b>
6	Fire Services Water Tank and Fire Pump House	Air  Dust suppression measures implemented.  Noise  General noise mitigation measures employed at
		all work sites throughout the construction phase.
		<ul><li>Waste Management</li><li>Waste Management Plan submitted and implemented.</li></ul>
7	C.W. Culvert System & Equipment	<ul><li>Air</li><li>Dust suppression measures implemented.</li></ul>
	Room	Noise  General noise mitigation measures employed at all work sites throughout the construction phase.
		<ul><li>Waste Management</li><li>Waste Management Plan submitted and implemented.</li></ul>
8	C.W. Pump Equipment Room	<ul><li>Air</li><li>Dust suppression measures implemented.</li></ul>
		Noise  General noise mitigation measures employed at all work sites throughout the construction phase.
		<ul><li>Waste Management</li><li>Waste Management Plan submitted and implemented.</li></ul>
9	Gas Receiving Station	<ul><li>Air</li><li>Dust suppression measures implemented.</li></ul>
		Noise  General noise mitigation measures employed at all work sites throughout the construction phase.
		<ul><li>Waste Management</li><li>Waste Management Plan submitted and implemented.</li></ul>

Item	Construction Activities	Envir	onmental Mitigation Measures
10	Pipe & Cable Rack	Air -	Dust suppression measures implemented.
		Noise -	General noise mitigation measures employed at all work sites throughout the construction phase.
		Waste -	Management Waste Management Plan submitted and implemented.
11	LPS A&A Works	Air -	Dust suppression measures implemented.
		Noise -	General noise mitigation measures employed at all work sites throughout the construction phase.
		Waste -	Management Waste Management Plan submitted and implemented.
Constru	uction of Transmi	ssion S	ystem
12	Backfilling above portal structure for Cable Duct 2 and cable trench from N4 landing point to Cable Duct no.2 Entrance	Terres	Special care and close monitoring to avoid disturbances to the rare plant species.  Temporary fire fighting equipment provided within the work area during construction.
13	Installation of Submarine Cables between N2 & N4	Noise -	General noise mitigation measures employed at all work sites throughout the construction phase.
14	Backfilling & Cable Protection	Noise -	General noise mitigation measures employed at all work sites throughout the construction phase.

Item	Construction Activities	<b>Environmental Mitigation Measures</b>				
Unit L9	Unit L9 Mechanical Erection					
15	HRSG Erection	Air  — Dust suppression measures implemented.				
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.				
		Waste Management  - Waste Management Plan submitted and implemented.				
16	Steam Turbine Erection	Air  — Dust suppression measures implemented.				
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.				
		Waste Management  - Waste Management Plan submitted and implemented.				
17	Gas Turbine Erection	Air  — Dust suppression measures implemented.				
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.				
		Waste Management  - Waste Management Plan submitted and implemented.				
18	Generator Erection	Air  – Dust suppression measures implemented.				
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.				
		Waste Management  - Waste Management Plan submitted and implemented.				

Item	Construction Activities	<b>Environmental Mitigation Measures</b>		
19	Condenser Erection	Air  — Dust suppression measures implemented.		
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
20	Auxiliary Equipment Erection	Air  - Dust suppression measures implemented.		
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
21	Air duct / Inlet Filter	Air  — Dust suppression measures implemented.		
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
22	HRSG Inlet Duct	Air  - Dust suppression measures implemented.		
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		

Item	Construction Activities	Environmental Mitigation Measures		
23	Piping Support / Piping Erection	Air -	Dust suppression measures implemented.	
			General noise mitigation measures employed at all work sites throughout the construction phase.	
		- '	Management Waste Management Plan submitted and implemented.	
24	Insulation Work	<b>Air</b> -	Dust suppression measures implemented.	
			General noise mitigation measures employed at all work sites throughout the construction phase.	
		-	Management Waste Management Plan submitted and implemented.	
25	Platform Installation	<b>Air</b> –	Dust suppression measures implemented.	
			General noise mitigation measures employed at all work sites throughout the construction phase.	
		-	Management Waste Management Plan submitted and implemented.	
26	Pipe Rack Installation	<b>Air</b> -	Dust suppression measures implemented.	
			General noise mitigation measures employed at all work sites throughout the construction phase.	
		_ ,	Management Waste Management Plan submitted and implemented.	

Item	Construction Activities	<b>Environmental Mitigation Measures</b>		
27	Intake Aux Equipment Installation	Air  – Dust suppression measures implemented.		
		Noise  General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
28	Bop piping installation	Air  – Dust suppression measures implemented.		
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
29	GRS piping installation	Air  – Dust suppression measures implemented.		
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
Unit L9	Electrical, Instr	rumentation & Control Erection		
30	Cable Tray Cover Installation	Air  – Dust suppression measures implemented.		
		Noise  - General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		

Item	Construction Activities	Environmental Mitigation Measures		
31	Instrument Piping Installation	Air  – Dust suppression measures implemented.		
		Noise  General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
32	Cable Termination	Air  – Dust suppression measures implemented.		
		Noise  General noise mitigation measures employed at all work sites throughout the construction phase.		
		Waste Management  - Waste Management Plan submitted and implemented.		
Miscellaneous				
33	Slurry ash piping & filling	Noise  — General noise mitigation measures implemented and silent type equipment deployed.		

# 1.4 Summary of EM&A Requirements

The EM&A program requires environmental monitoring for air, noise and water quality. As the post-project marine water monitoring was successfully completed in September 2002, no further water quality monitoring for the reclamation works would be required. The detailed EM&A monitoring work for air quality and noise are described in Sections 2 and 3 respectively. Regular environmental site audits for air quality, noise, water quality and waste management were carried out.

The following environmental audits are summarized in Section 4 of this report:

- Environmental monitoring results;
- Waste Management Records;
- Weekly site audit results;
- The status of environmental licensing and permits for the Project;

• The implementation status of environmental protection and pollution control/mitigation measures.

Future key issues will be reported in Section 5 of this report.

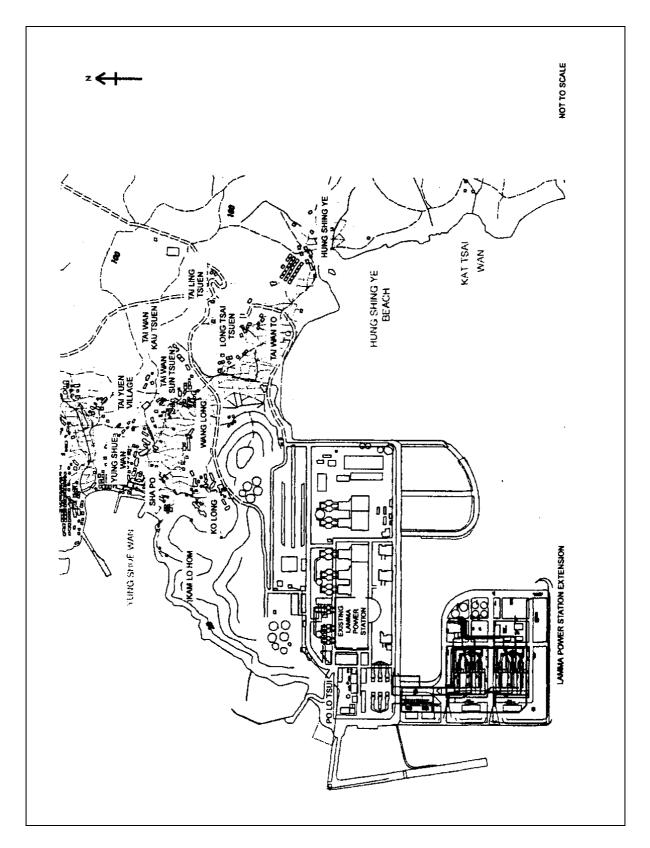


Figure 1.1 Layout of Work Site

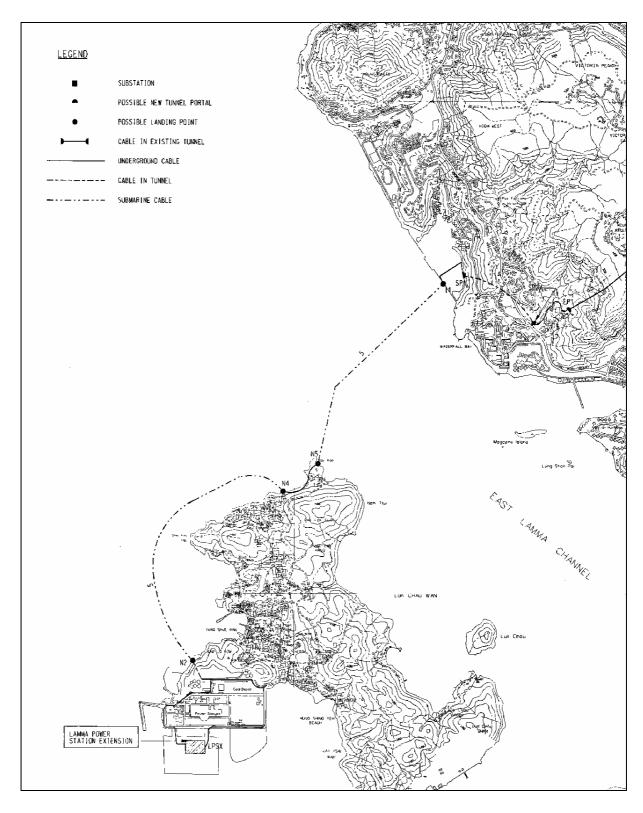


Figure 1.2 Cable Route of Transmission System

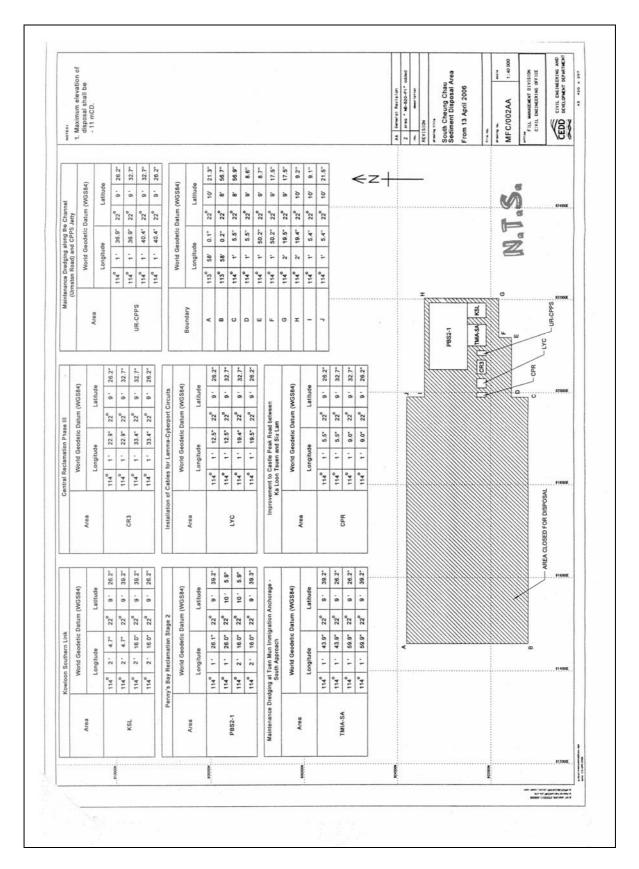


Figure 1.3 Location of Dumping Area (up to 16/05/2006)

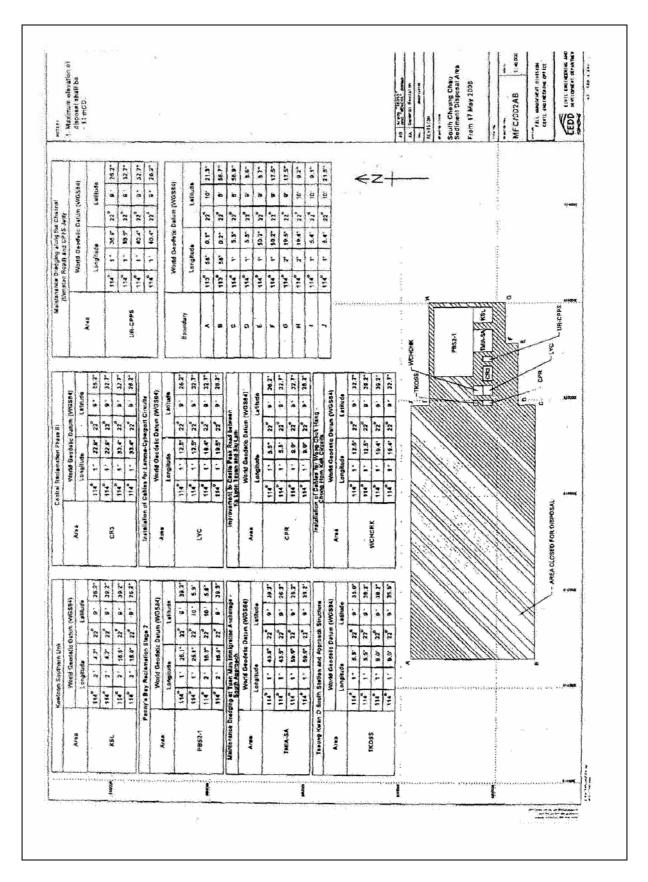


Figure 1.4 Location of Dumping Area (from 17/05/2006)

# 2. AIR QUALITY

# 2.1 Monitoring Requirements

1-hour and 24-hour TSP monitoring at agreed frequencies were conducted to monitor air quality. The impact monitoring data were checked against the Action/Limit Levels as determined in the Baseline Monitoring Report (Construction Phase). Appendix B shows the established Action/Limit Levels for Air Quality.

## 2.2 Monitoring Locations

Three dust monitoring locations were selected for 1-hour TSP sampling (AM1, AM2 & AM3) while four monitoring locations were selected for 24-hour TSP sampling (AM1, AM2, AM3 and AM4). Table 2.1 tabulates the monitoring stations. The locations of the monitoring stations are shown in Figure 2.1.

Table 2.1 Air Quality Monitoring Locations

Location I.D.	Description
AM1	Reservoir
AM2	East Gate
AM3	Ash Lagoon
AM4	Tai Yuen Village

## 2.3 Monitoring Equipment

Continuous 24-hour TSP air quality monitoring was performed using the GS2310 High Volume Air Samplers (HVAS), Partisol Model 2000 Sampler and the MINIVOL Portable Sampler at AM1&2, AM3 and AM4 respectively. TEOM Model 1400a continuous dust monitors were used to carry out 1-hour TSP monitoring at AM1, AM2 and AM3. Table 2.2 summarises the equipment used in dust monitoring.

Table 2.2 Air Quality Monitoring Equipment

Equipment	Model and Make
24-hour sampling:	
HVAS Sampler	Model GS2310
	Anderson Instruments Inc.
Partisol Air Sampler	Partisol Model 2000
_	Rupprecht & Patashnick
MINIVOL Portable Sampler	AIRMETRICS
1-hour sampling:	
Continuous TSP Dust Meter	TEOM Model 1400a
	Rupprecht & Patashnick

# 2.4 Monitoring Parameters, Frequency and Duration

Table 2.3 summarises the monitoring parameters, duration and frequency of air quality monitoring. The monitoring schedule for the reporting month is shown in Appendix C.

Table 2.3 Air Quality Monitoring Parameter, Duration and Frequency

Monitoring Stations	Parameter	Duration	Frequency
AM1	1-hour TSP	1	3 hourly samples every 6 days
AWII	24-hour TSP	24	Once every 6 days
AM2	1-hour TSP	1	3 hourly samples every 6 days
Alviz	24-hour TSP	24	Once every 6 days
AM3	1-hour TSP	1	3 hourly samples every 6 days
AIVIS	24-hour TSP	24	Once every 6 days
AM4	24-hour TSP	24	Once every 6 days

# 2.5 Monitoring Procedures and Calibration Details

#### 24- hour TSP Monitor:

Preparation of Filter Papers

- Visual inspection of filter papers was carried out to ensure that there were no pinholes, tears and creases;
- The filter papers were then labeled before sampling.
- The filter papers were equilibrated at room temperature and relative humidity < 50% for at least 24 hours before weighing.

# Field Monitoring

- During collection of the sampled filter paper, the information on the elapse timer was logged. Site observations around the monitoring stations, which might have affected the monitoring results, were also recorded. Major pollution sources, if any, would be identified and reported. The flow record chart for the previous sampling was checked to see if there was any abnormality.
- The post-sampling filter papers were removed carefully from the filter holder and folded to avoid loss of fibres or dust particles from the filter papers;
- The filter holder and its surrounding were cleaned;
- A pre-weighed blank filter paper for the next sampling was put in place and aligned carefully. The filter holder was then tightened firmly to avoid leakage;
- A new flow record chart was loaded into the flow recorder;
- The programmable timer was set for the next 24 hrs sampling period, ! 1/2 hr;
- The post-sampling filter papers were equilibrated at room temperature and relative humidity < 50% for at least 24 hours before weighing.

#### 1- hour TSP Monitor:

- The following parameters of the TEOM model dust meters are regularly checked to ensure proper functionality:
  - o Mass concentration;
  - o Total mass:
  - o Frequency of the tapered element;
  - o Electrical noise;
  - o Main flow;
  - o Auxiliary flow.

#### Maintenance & Calibration

- The monitoring equipment and their accessories are maintained in good working conditions.
- Monitoring equipment is calibrated at monthly intervals. Calibration details are shown in Appendix F.

#### 2.6 Results and Observations

One (1) dust monitoring event was re-scheduled in the reporting month as shown in the following table:

Monitoring work	Monitoring	Original	Makeup	Reasons
	Location	Schedule	Sampling	
1 hour TSP sampling	AM3	02/05/2006	03/05/2006	Failure of TSP sampler.

Apart from the above incident, all dust monitoring works were conducted on schedule. All monitoring data and graphical presentation of the monitoring results are provided in Appendix D. Key findings and observations are provided below:

1-hour TSP

No exceedance of 1-hour TSP Action/Limit Level was recorded in the month.

24-hour TSP

No exceedance of 24-hour TSP Action/Limit Level was recorded in the month.

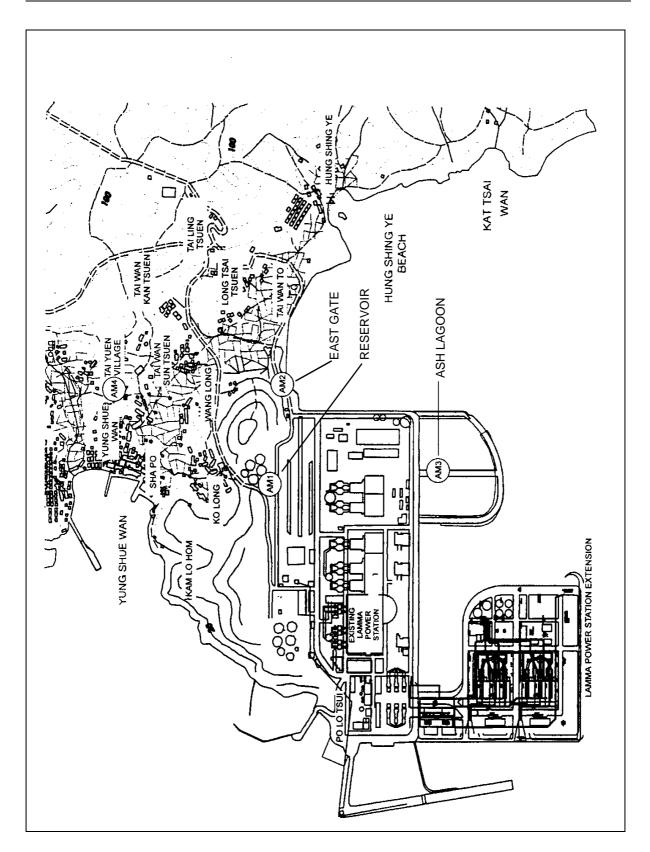


Figure 2.1 Location of Air Quality Monitoring Stations

#### 3. NOISE

#### 3.1 Monitoring Requirements

Continuous noise alarm monitoring at Ash Lagoon/Ching Lam were carried out to calculate the noise contributed by the construction activities at the two critical NSR's, viz. Long Tsai Tsuen/Hung Shing Ye and the school within the village of Tai Wan San Tsuen. The impact monitoring data for construction noise were checked against the limit levels specified in the EM&A Manual. With the availability of the construction noise permits, impact monitoring for the construction work during the restricted hours was also carried out. Section 4 presents the details of the construction noise permits.

Manual noise measurements at Pak Kok Tsui residences were carried out for the construction work of Transmission System in this reporting month. The impact noise monitoring data were checked against the limit levels specified in the EM&A Manual. Appendix B shows the established Action/Limit Levels for noise.

# 3.2 Monitoring Locations

In accordance with the EM&A manual, the identified noise monitoring locations are listed in Table 3.1 and shown in Figure 3.1 and Figure 3.2.

Table 3.1 Noise Monitoring Locations

Purpose of noise monitoring	<b>Monitoring Location</b>	
Lamma Extension	Ash Lagoon	
Lamma Extension	Ching Lam	
Transmission System	Pak Kok Tsui residences (No.2 and No.8)	

# 3.3 Monitoring Equipment

The sound level meters used for noise monitoring complied with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). The noise monitoring equipment used is shown in Table 3.2.

Table 3.2 Noise Monitoring Equipment

Equipment	Model			
Equipment	Lamma Extension	Transmission System		
Sound level meter	Rion NA-27/ B&K 2238F	Rion NL-31		
Sound level calibrator	Rion NC-74	Rion NC-74		

# 3.4 Monitoring Parameters, Frequency and Duration

Continuous alarm monitoring of A-weighted Leq levels was carried out at Ash Lagoon and Ching Lam while manual noise monitoring was conducted at Pak Kok Tsui residences. The measurement duration and parameter of noise monitoring were presented in Table 3.3 as follows:

Table 3.3 Noise Monitoring Duration and Parameter

Location	Time Period	Frequency	Parameter
	Daytime: 0700-1900 hrs on normal weekdays	Daytime: 30 minutes	30-min L <sub>Aeq</sub>
Ash Lagoon Ching Lam	Evening-time & holidays: 0700-2300 hrs on holidays; and 1900-2300 hrs on all other days	Evening-time & holidays: 5 minutes	5-min L <sub>Aeq</sub>
	Night-time: 2300-0700 hrs of next day	Night-time: 5 minutes	5-min L <sub>Aeq</sub>
Pak Kok Tsui residences	0700-1900 hrs on normal weekdays	Twice per week	30-min L <sub>Aeq</sub>

## 3.5 Monitoring Procedures and Calibration Details

Monitoring Procedures

Continuous Noise Monitoring for Lamma Extension Construction

The measured noise levels (MNL's) were collected at the noise alarm monitoring stations at Ash Lagoon and Ching Lam. The notional background noise levels (viz. baseline noise data at Ash Lagoon and Ching Lam) were applied to correct the corresponding MNL's in 30-min/5-min  $L_{Aeq}$ .

A wind speed sensor was installed at Station Building Rooftop. The wind speed signal was used to determine whether the data from Ash Lagoon and Ching Lam noise alarm monitoring stations were affected. The instantaneous data was discarded in case the instantaneous wind speed exceeded 10 m/s. The 30-min/5-min  $L_{\text{Aeq}}$  was considered valid only if the amount of valid data was equal to or above 70%.

When calibrating the noise measuring equipment, all observations around the monitoring stations, which might have affected the monitoring results, were recorded.

# Manual Noise Monitoring for Transmission System Construction

Manual noise measurements were carried out at the Pak Kok Tsui residences in accordance with standard acoustical principles and practices for checking the impact of noise related to construction of the Transmission System.

Hand-held anemometer was used to measure the wind speed while taking noise measurements. If the wind speed is excessive, noise data will be discarded and remeasured.

## **Equipment Calibration**

The sound level meters and calibrators have been verified by the manufacturer or accredited laboratory. Equipment for continuous noise monitoring was calibrated at site on a monthly basis.

The sound level meters used for manual noise measurement were calibrated with a sound level calibrator immediately before and after noise measurement in accordance with the relevant Technical Memoranda under the Noise Control Ordinance. Calibration details are shown in Appendix F.

#### 3.6 Results and Observations

Continuous noise monitoring was conducted at the two monitoring stations at Ash Lagoon and Ching Lam while manual noise monitoring was carried out at the Pak Kok Tsui residences.

All monitoring results and their graphical presentations are provided in Appendix E. No exceedance of noise Action/Limit Level was recorded in the month.

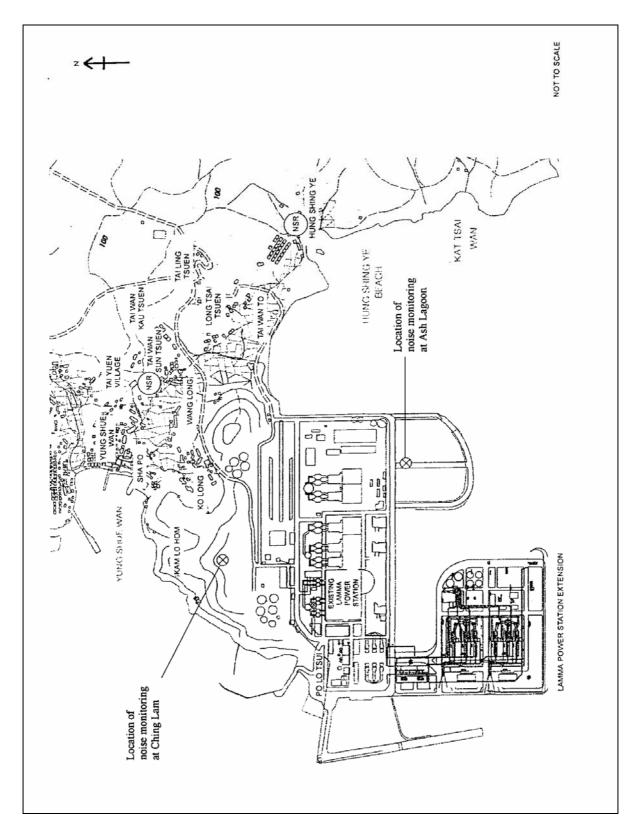


Figure 3.1 Location of Noise Monitoring Stations

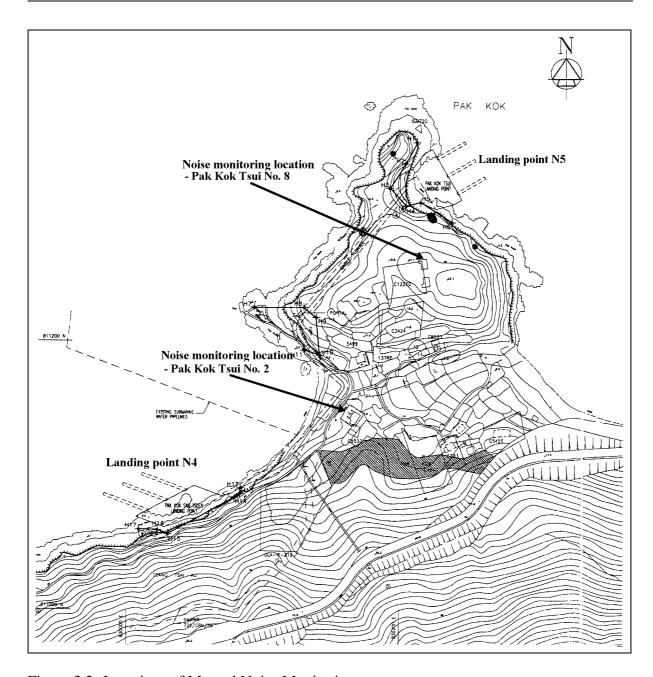


Figure 3.2 Locations of Manual Noise Monitoring

## 4. ENVIRONMENTAL AUDIT

## 4.1 Review of Environmental Monitoring Procedures

The environmental monitoring procedures were regularly reviewed by the Environmental Team. No modification to the existing monitoring procedures was recommended.

# 4.2 Assessment of Environmental Monitoring Results

Monitoring results for Air Quality and Noise

The environmental monitoring results for Air Quality and Noise in the reporting month presented in sections 2, 3 and 4 respectively are summarized in Table 4.1.

Table 4.1 Summary of AL Level Exceedances on Monitoring Parameters

Item	Parameter Monitored	Monitoring Period	No. of Exceedances In		Event/Action Plan Implementation Status	
			Action Level	Limit Level	and Results	
Air						
1	Ambient TSP (24-hour)	01/05/06- 31/05/06	0	0		
2	Ambient TSP (1-hour)	01/05/06- 31/05/06	0	0		
Noise						
1	Noise level at the critical NSR's predicted by the noise alarm monitoring system	01/05/06- 31/05/06	0	0		
2	Manual noise monitoring at the Pak Kok Tsui residences	01/05/06- 31/05/06	0	0		

Waste Management Records

The estimated amounts of different types of waste generated in May 2006 are shown in Table 4.2.

Table 4.2 Estimated Amounts of Waste Generated in May 2006

Waste Type	Examples	<b>Estimated Amount</b>
Construction Waste	Concrete Waste, Used formwork, reinforcement	0.8 Tonne
	and wooden waste	108.2 m <sup>3</sup>
General Refuse	Domestic wastes collected	$20 \text{ m}^3$
	on site	

#### 4.3 Site Environmental Audit

EPD officials from Regional Office (South) visited Lamma Power Station on 29/05/2006. EPD inspected the Lamma Extension Construction Site. There was no adverse comment from EPD regarding the construction site.

IEC conducted a site inspection on 25/05/2006. The inspection result is attached in Appendix H.

Site audits were carried out by ET on a weekly basis to monitor environmental issues at the construction sites to ensure that all mitigation measures were implemented timely and properly. The site conditions were generally satisfactory. All required mitigation measures were implemented. The weekly site inspection results are attached in Appendix H.

# 4.4 Status of Environmental Licensing and Permitting

All permits/licenses obtained for the project are summarised in Table 4.3.

Table 4.3 Summary of Environmental Licensing and Permit Status

Description	Permit No.	Valid Period		Highlights	Status
		From	To		
Varied Environmental Permit	EP-071/2000/C	18/05/05	-	The whole construction work site	Valid

Description	Permit No.	Valid Period		Highlights	Status
_		From	To		
Construction Noise Permit	GW-RS0784-05	29/11/05	19/05/06	Operation of PME's allowed during the restricted hours (general holidays including Sundays between 0700-1900 hrs and any day not being a general holiday between 1900-2100 hrs).	Valid
Construction Noise Permit	GW-RS0719-05	01/12/05	31/05/06	Operation of PME's allowed during the restricted hours (general holidays including Sundays between 0700-0700 hrs on next day and any day not being a holiday between 1900-0700 hrs on next day).	Valid
Construction Noise Permit	GW-RE0363-05	01/01/06	31/05/06	Operation of PME's allowed during the restricted hours (general holidays including Sundays between 0700-0700 hrs on next day and any day not being a general holiday between 1900-0700 hrs on next day).	Valid

Description	otion Permit No. Valid Period		Period	Highlights	Status
_		From	To		
Construction Noise Permit	GW-RS0008-06	24/01/06	30/06/06	Operation of PME's allowed during the restricted hours (general holidays including Sundays between 0700-2300 hrs and any day not being a general holiday between 1900-2300 hrs).	Valid
Construction Noise Permit	GW-RS0032-06	11/02/06	10/08/06	Operation of PME's allowed during the restricted hours (general holidays including Sundays between 0700-0700 hrs on next day and any day not being a general holiday between 1900-0700 hrs on next day).	Valid
Construction Noise Permit	GW-RS0138-06	24/03/06	21/09/06	Operation of PME's allowed during the restricted hours (general holidays including Sundays between 0700-0700 hrs on next day and any day not being a general holiday between 1900-0700 hrs on next day).	Valid

Description	Permit No.	Valid Period From To		Highlights	Status	
•						
Construction Noise Permit	GW-RS0154-06	04/04/06	30/06/06	Operation of PME's allowed during the restricted hours (general holidays including Sundays between 0700-2300 hrs and any day not being a general holiday between 1900-2300 hrs).	Valid	
Construction Noise Permit	GW-RS0278-06	24/05/06	19/11/06	Operation of PME's allowed during the restricted hours (general holiday including Sundays between 0700-1900 hrs and any day not being a general holiday between 1900-2100 hrs).	Valid	
Dumping Permit	EP/MD/06-092	19/04/06	30/06/06	Dumping at South Cheung Chau Disposal Area; Supply and Installation of Submarine and Land Cables	Valid	
Registration of Chemical Waste Producer	WPN5213-912-P2781-07	11/06/04	-	Major Chemical Waste Type: Spent lubrication oil, waste car battery, paint or thinner contaminated container	Valid	
Registration of Chemical Waste Producer	WPN5213-912-K2801-03	15/09/04	-	Major Chemical Waste Type: Spent lubricating oil, spent battery, contaminated soil with spent flammable liquid	Valid	

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Description	Permit No.	Valid Period		Highlights	Status
_		From	To		
Registration of Chemical Waste Producer	WPN5517-912-T2007-02	17/03/05	-	Major Chemical Waste Type for the construction work: asbestos waste, spent lubricating lubrication oil	Valid
Registration of Chemical Waste Producer	WPN5213-912-W2852-09	25/01/05	-	Major Chemical Waste Type: spent mineral oil/ lubricating oil, spent solvents, spent batteries and surplus paint	Valid
Registration of Chemical Waste Producer	WPN4111-912-M2534-09	20/06/05	-	Major Chemical Waste Type: spent insulation oil for transformer	Valid
WPCO Discharge Licence	EP890/W2/XD020	22/11/04	30/11/09	Toilet for LMX construction site	Valid
WPCO Discharge Licence	EP890/W2/XD021	03/02/05	28/02/10	Toilet for LMX construction site	Valid

#### **4.5** Implementation Status of Environmental Mitigation Measures

Mitigation measures detailed in the permits and the EM&A Manual (Construction Phase) are required to be implemented. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in Appendix I.

#### 4.6 Implementation Status of Event/Action Plans

The Event/Action Plans extracted from the EM&A Manual (Construction Phase) are presented in Appendix G.

#### 4.7 Implementation Status of Environmental Complaint Handling Procedures

In May 2006, no complaint against the construction activities was received and all previous cases were settled

Table 4.4 Environmental Complaints / Enquiries Received in May 2006

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions /Actions Taken	Conclusion / Status
Nil	N/A	N/A

Table 4.5 Outstanding Environmental Complaints / Enquiries Carried Over

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions /Actions Taken	Conclusion / Status
Nil	N/A	N/A

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#### 5. FUTURE KEY ISSUES

#### 5.1 Status of Natural Gas supply

Based on current project schedule, HEC anticipates there is no delay in the supply of natural gas.

#### 5.2 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

#### **Unit L9 Civil and Building Works**

#### Noise Impact

- To continue monitoring the noise level during construction and to ensure compliance with the CNP's already obtained.
- To continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the noise performance.

#### Air Impact

• To monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

#### Unit L9 Mechanical Erection

#### Noise Impact

- To continue monitoring the noise level during construction.
- To continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the noise performance.

#### Air Impact

• To monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

#### Unit L9 Electrical, Instrumentation & Control Erection

#### Noise Impact

- To continue monitoring the noise level during construction.
- To continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the noise performance.

#### Air Impact

• To monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

#### **Transmission System**

#### Noise Impact

- To continue monitoring the noise level during construction.
- To continue executing the preventive measures for avoiding noise exceedance and keep monitoring/ reviewing the performance.

#### Air Impact

• To monitor and review the sufficiency of the dust suppression measures provided and increase the resources accordingly if necessary.

#### Terrestrial Ecology Impact

- To closely monitor the construction activities in order to avoid disturbance to the rare plants.
- To provide temporary fire fighting equipment for prevention of fire within the work sites.

#### 5.3 Monitoring Schedules for the Next 3 Months

With the completion of post-project monitoring, no further marine water quality monitoring for the reclamation works is required.

The tentative environmental monitoring schedules for the next 3 months are shown in Appendix C.

#### **5.4** Construction Program for the Next 3 Months

The period of construction activity of slurry ash piping & filling is tentatively from June 2006 to August 2006. The tentative construction programs for the next 3 months are shown in Appendix J.

#### 6. CONCLUSION

One (1) TSP monitoring event was rescheduled owing to the breakdown of TSP sampler. Other than this, all monitoring work at designated stations was performed as scheduled satisfactorily. The environmental monitoring works and site inspection were performed as scheduled in the reporting month. All monitoring results were checked and reviewed.

No Action/Limit level exceedance on 1-hour and 24-hour TSP level was recorded in the reporting month.

No Action/Limit level exceedance on noise was recorded in the reporting month.

Environmental mitigation measures recommended in the EM&A manual for the construction activities were implemented in the reporting month. No complaint against the construction activities was received in the reporting month. All previous cases were settled. No prosecution was received for this Project in the reporting period.

A separate monthly EM&A report for submarine pipeline prepared by the consultant, as one of ET members, is shown in Appendix K.

The environmental performance of the Project was generally satisfactory.

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#### **Appendix A** Organization Chart

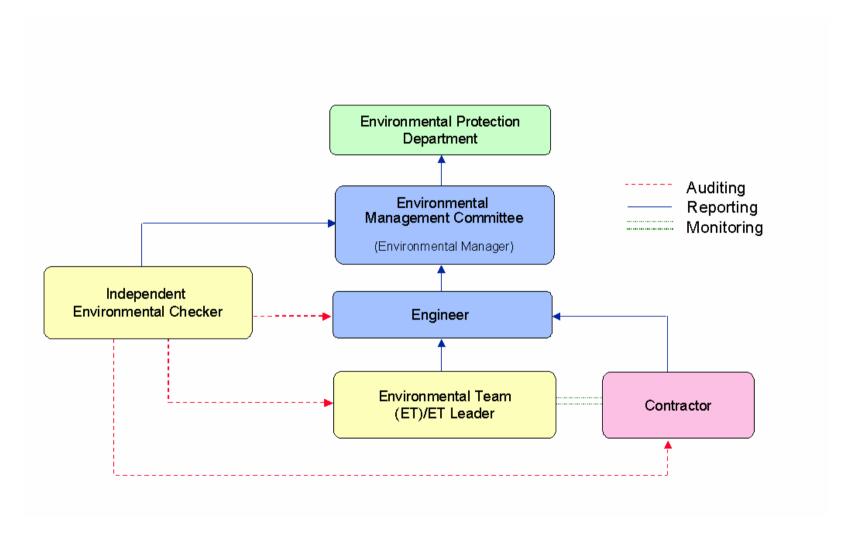


Figure A.1 Organisation of EM&A Programme at Construction Phase

#### Appendix B Action and Limit Levels for Air Quality and Noise Monitoring

#### B.1. Air

Table B.1 Action and Limit Levels for 1-hour and 24-hour TSP

	Action Level, μg/m <sup>3</sup>	Limit Level, μg/m <sup>3</sup>
1-hour TSP*	340	500
24-hour TSP	190	260

T No Action/Limit Level for 1-hour TSP is applied to AM4 where no real time dust monitor is installed.

#### **B.2.** Noise

Table B.2 presents the Action and Limit (AL) levels for construction noise other than percussive piling.

Table B.2 AL Levels for Construction Noise (Other than Percussive Piling)

Parameters	Action	Limit	
Noise Levels at the NSR's at Long Tsai Tsuen/Hung Shing Ye and school within the village of Tai Wan San Tsuen predicted by the noise alarm monitoring system  Manual noise monitoring at the nearest Pak Kok Tsui residences to cable landing points N4 and N5	When one or more documented complaints are received	a. 75 19 we b. sul un Or ho on dB c. sul un Or	dB(A) in L <sub>Aeq,30 min</sub> (07:00-:00 hrs on normal eekdays) (Note 1) bject to statutory control der the Noise Control dinance (07:00-23:00 hrs on lidays and 19:00-23:00 hrs all other days). Set to 60 B(A) in L <sub>Aeq,5 min</sub> bject to statutory control der the Noise Contr

#### Note:

1. For educational institution, the limit level shall be 70 dB(A), reduced to 65 dB(A) during examination periods.

### Appendix C Environmental Monitoring Schedule

Table C.1 Monitoring schedule for 24hr and 1hr TSP monitoring for Lamma Extension Construction (May 2006 to August 2006)

24hr TSP Monitoring	1hr TSP Monitoring
02/May/2006	02/May/2006 1500hr to 1800hr
08/May/2006	08/May/2006 1500hr to 1800hr
14/May/2006	14/May/2006 1500hr to 1800hr
20/May/2006	20/May/2006 1500hr to 1800hr
26/May/2006	26/May/2006 1500hr to 1800hr
01/Jun/2006	01/Jun/2006 1500hr to 1800hr
07/Jun/2006	07/Jun/2006 1500hr to 1800hr
13/Jun/2006	13/Jun/2006 1500hr to 1800hr
19/Jun/2006	19/Jun/2006 1500hr to 1800hr
25/Jun/2006	25/Jun/2006 1500hr to 1800hr
01/Jul/2006	01/Jul/2006 1500hr to 1800hr
07/Jul/2006	07/Jul/2006 1500hr to 1800hr
13/Jul/2006	13/Jul/2006 1500hr to 1800hr
19/Jul/2006	19/Jul/2006 1500hr to 1800hr
25/Jul/2006	25/Jul/2006 1500hr to 1800hr
31/Jul/2006	31/Jul/2006 1500hr to 1800hr
06/Aug/2006	06/Aug/2006 1500hr to 1800hr
12/Aug/2006	12/Aug/2006 1500hr to 1800hr
18/Aug/2006	18/Aug/2006 1500hr to 1800hr
24/Aug/2006	24/Aug/2006 1500hr to 1800hr
30/Aug/2006	30/Aug/2006 1500hr to 1800hr

Table C.2 Manual Noise Monitoring Schedule for Transmission System Construction (May 2006 to August 2006)

Date	Monitoring Start Time
02/May/2006	10:00
04/May/2006	14:00
09/May/2006	10:00
12/May/2006	14:00
16/May/2006	10:00
19/May/2006	14:00
23/May/2006	10:00
26/May/2006	14:00
30/May/2006	10:00
02/Jun/2006	14:00
06/Jun/2006	10:00
09/Jun/2006	14:00
13/Jun/2006	10:00
16/Jun/2006	14:00
20/Jun2006	10:00
23/Jun/2006	14:00
27/Jun/2006	10:00
30/Jun/2006	14:00
04/Jul/2006	10:00
07/Jul/2006	14:00
11/Jul/2006	10:00
14/Jul/2006	14:00
18/Jul/2006	10:00
21/Jul/2006	14:00
25/Jul/2006	10:00
28/Jul/2006	14:00
01/Aug/2006	10:00
04/Aug/2006	14:00
08/Aug/2006	10:00
11/Aug/2006	14:00
15/Aug/2006	10:00
18/Aug/2006	14:00
22/Aug/2006	10:00
25/Aug/2006	14:00
29/Aug/2006	10:00

#### APPENDIX D AIR QUALITY MONITORING RESULTS

Site: Lamma Power Station Extension

Month: May 2006

#### 24 hour TSP Measurement:-

		TSP concentr	ation (μg/m <sup>3</sup> )			ather Informations Kong Obser	
Date	Reservoir (AM1)	East Gate (AM2)	Ash Lagoon (AM3)	Tai Yuen Village (AM4)	Mean Wind Speed (km/hr)	Prevailing Wind Dir.	Mean R.H.
02/05/2006	30	30	27	32	24.8	240	86
08/05/2006	25	29	20	26	15.1	190	79
14/05/2006	86	66	62	61	29.2	010	69
20/05/2006	41	35	41	74	27.3	080	85
26/05/2006	25	30	18	22	22.3	230	80

#### 1 hour TSP Measurement:-

I Hour 1SF Mi	cusurement.	TS	TSP concentration (µg/m³)		
Date	Time	Reservoir (AM1)	East Gate (AM2)	Ash Lagoon (AM3)	
	15:00-15:59	28	40	*	
02/05/2006	16:00-16:59	29	32	*	
	17:00-17:59	35	38	*	
	15:00-15:59	-	-	5	
03/05/2006	16:00-16:59	-	-	16	
	17:00-17:59	-	-	14	
	15:00-15:59	30	36	12	
08/05/2006	16:00-16:59	18	27	13	
	17:00-17:59	13	17	11	
	15:00-15:59	44	53	44	
14/05/2006	16:00-16:59	52	58	50	
	17:00-17:59	37	47	38	
	15:00-15:59	41	39	37	
20/05/2006	16:00-16:59	41	41	40	
	17:00-17:59	44	43	42	
	15:00-15:59	20	38	16	
26/05/2006	16:00-16:59	18	38	20	
	17:00-17:59	22	39	21	

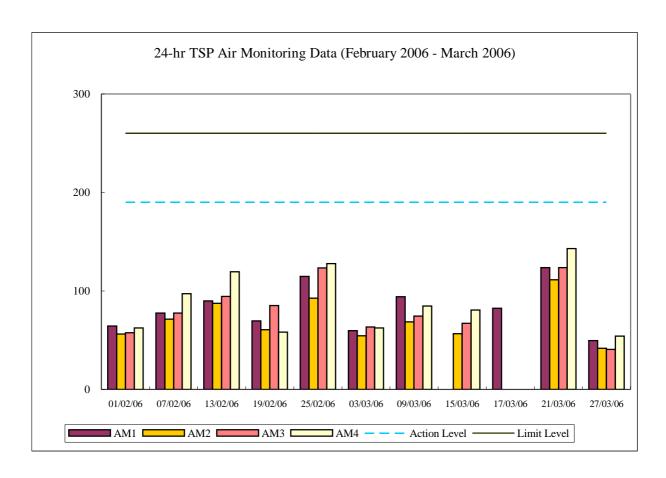
<sup>\* -</sup> Missing data was due to failure of 1-hr TEOM TSP sampler at AM3 (Ash Lagoon) on 02/05/2006. Make-up 1-hr TSP sampling was conducted on 03/05/2006.

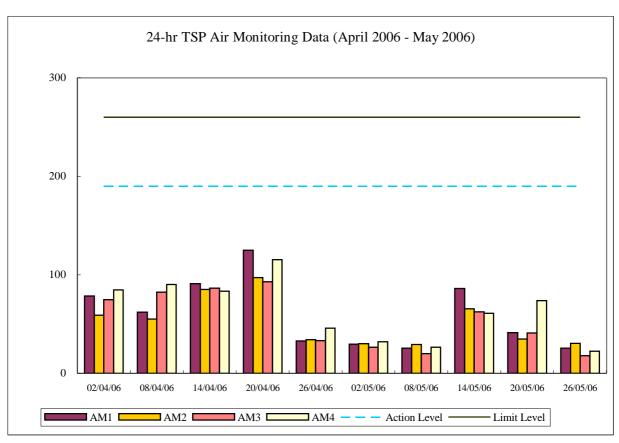
	1-hr TSP	24-hr TSP	
	$(\mu g/m^3)$	$(\mu g/m^3)$	
Action Level	340	190	
Limit Level	500	260	

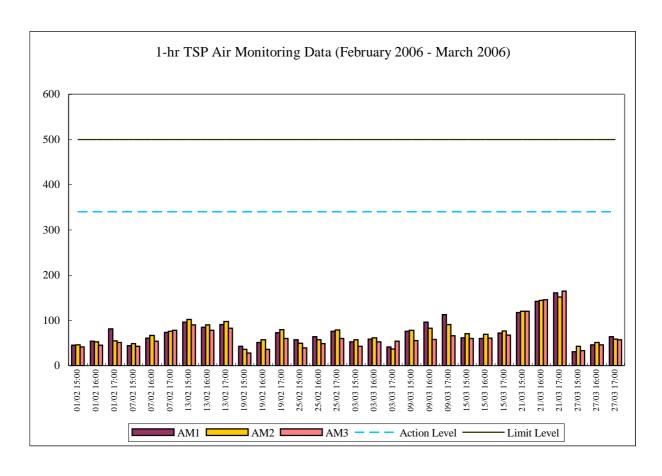
Calibration: Calibration details are shown in appendix F.

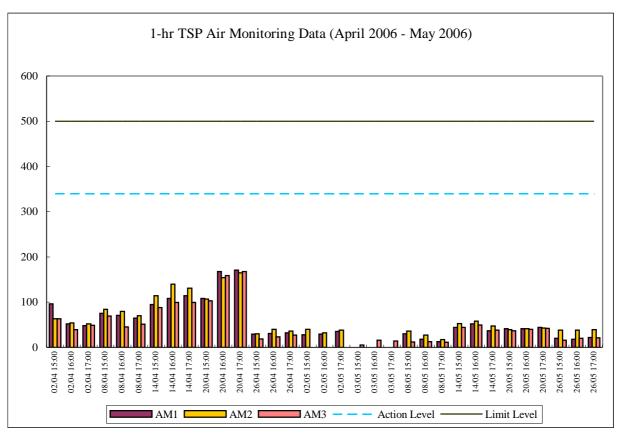
Equipment used:

Location	1-hr TSP	24-hr TSP		
Reservoir and East Gate	TEOM 1400a	High Volume Air Sampler		
Ash Lagoon	TEOM 1400a	Partisol Model 2000 Sampler		
Tai Yuen Village	-	MINIVOL Portable Sampler		









#### Appendix E.1 Continuous Noise Monitoring Results for May 2006

Site: Lamma Power Station Extension - Superstructure

and E&M Works

Measurement Location: Ash Lagoon and Ching Lam

Measurement Parameter: 30-min Leq (07:00-19:00 hrs on normal weekdays)

5-min Leq (07:00-23:00 hrs on holidays and 19:00-23:00 hrs on all other days, and 23:00-

07:00 hrs of next day)

Noise Equipment Used: Rion NA-27 (Ash Lagoon) and B&K 2238F (Ching

Lam) sound level meters and Rion NC-74 sound

level calibrator

Last Calibration Date: Rion NA-27 sound level meter - 17/02/2005

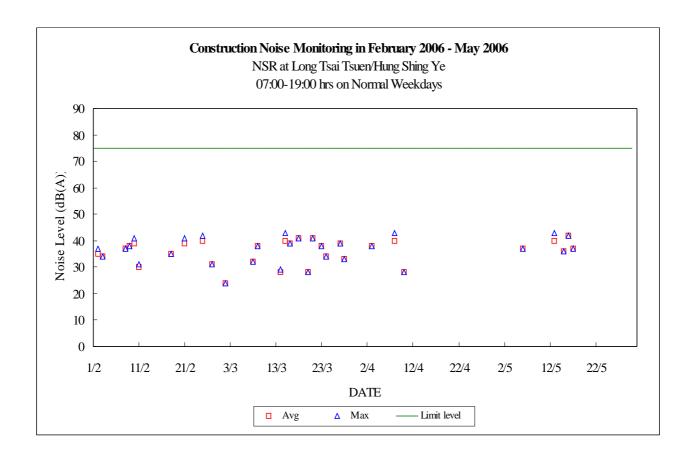
B&K 2238F sound level meter - 13/07/2004 Rion NC-74 calibrator - 13/03/2006

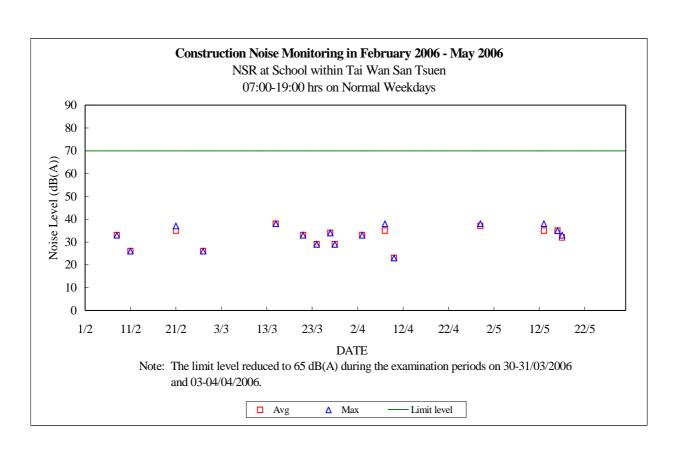
Date	Time	Calculated Noise Level at NSR at Long Tsai Tsuen/Hung Shing Ye (dB(A))		Noise Level at NSR at Long Time Tsai Tsuen/Hung Shing Ye (dB(A))		Noise Level	Calculated Noise Level at NSR at the school within Tai Wan San Tsuen (dB(A))		Limit Noise Level (dB(A))
		Max	Avg		Max	Avg			
01/05/2006	07:00-23:00	53	47	60	48	45	60		
01/05/2006	23:00-07:00	30	30	45	25	25	45		
02/05/2006	07:00-19:00			75			70		
02/05/2006	19:00-23:00	37	35	60	32	31	60		
02/05/2006	23:00-07:00	45	40	45	40	35	45		
03/05/2006	07:00-19:00			75			70		
03/05/2006	19:00-23:00	36	31	60	32	27	60		
03/05/2006	23:00-07:00	36	33	45	32	29	45		
04/05/2006	07:00-19:00			75			70		
04/05/2006	19:00-23:00	38	34	60	33	29	60		
04/05/2006	23:00-07:00	39	32	45	34	27	45		
05/05/2006	07:00-23:00	45	34	60	33	27	60		
05/05/2006	23:00-07:00	45	38	45	37	29	45		
06/05/2006	07:00-19:00	37	37	75			70		
06/05/2006	19:00-23:00			60			60		
06/05/2006	23:00-07:00	33	29	45	28	25	45		
07/05/2006	07:00-23:00	45	38	60	37	31	60		
07/05/2006	23:00-07:00	32	31	45	27	26	45		
08/05/2006	07:00-19:00			75			70		
08/05/2006	19:00-23:00			60			60		
08/05/2006	23:00-07:00	35	31	45	30	27	45		
09/05/2006	07:00-19:00			75			70		

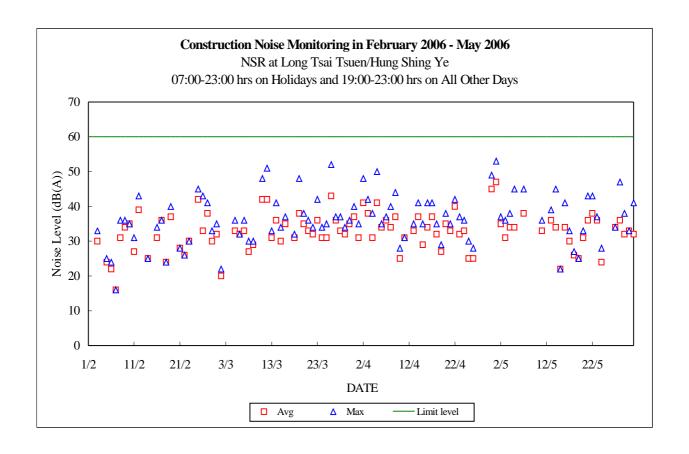
Date	Time	Calcula Noise Level a NSR at Tsai Tsuen/H Shing N (dB(A))	at Long Hung Ke	Limit Noise Level (dB(A))	Calcula Noise Level a NSR at school within Wan Sar Tsuen (dB(A))	at the Tai	Limit Noise Level (dB(A))
		Max	Avg		Max	Avg	
09/05/2006	19:00-23:00			60			60
09/05/2006	23:00-07:00	45	37	45	27	22	45
10/05/2006	07:00-19:00			75			70
10/05/2006	19:00-23:00			60			60
10/05/2006	23:00-07:00	36	32	45	32	27	45
11/05/2006	07:00-19:00			75			70
11/05/2006	19:00-23:00	36	33	60	31	28	60
11/05/2006	23:00-07:00	35	31	45	30	27	45
12/05/2006	07:00-19:00			75			70
12/05/2006	19:00-23:00			60			60
12/05/2006	23:00-07:00	42	36	45	37	30	45
13/05/2006	07:00-19:00	43	40	75	38	35	70
13/05/2006	19:00-23:00	39	36	60	34	31	60
13/05/2006	23:00-07:00	40	30	45	35	26	45
14/05/2006	07:00-23:00	45	34	60	37	29	60
14/05/2006	23:00-07:00	38	33	45	32	27	45
15/05/2006	07:00-19:00	36	36	75			70
15/05/2006	19:00-23:00	22	22	60	18	18	60
15/05/2006	23:00-07:00	41	35	45	25	22	45
16/05/2006	07:00-19:00	42	42	75	35	35	70
16/05/2006	19:00-23:00	41	34	60	36	30	60
16/05/2006	23:00-07:00	45	38	45	40	34	45
17/05/2006	07:00-19:00	37	37	75	33	32	70
17/05/2006	19:00-23:00	33	30	60	28	25	60
17/05/2006	23:00-07:00	28	25	45	23	20	45
18/05/2006	07:00-19:00			75			70
18/05/2006	19:00-23:00	27	26	60	23	22	60
18/05/2006	23:00-07:00	44	35	45	32	27	45
19/05/2006	07:00-19:00			75			70
19/05/2006	19:00-23:00	25	25	60	21	21	60
19/05/2006	23:00-07:00	34	29	45	29	24	45
20/05/2006	07:00-19:00			75			70
20/05/2006	19:00-23:00	33	31	60	28	26	60
20/05/2006	23:00-07:00	38	33	45	34	27	45
21/05/2006	07:00-23:00	43	36	60	38	32	60

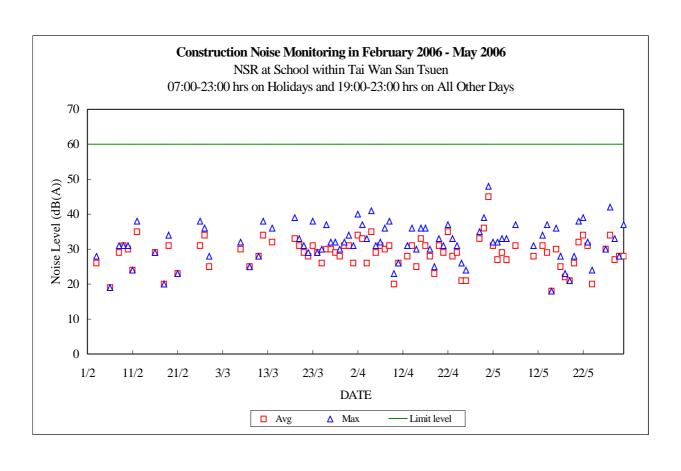
Date	Time	Calcula Noise Level a NSR at Tsai Tsuen/F Shing Y (dB(A))	at Long Hung Ye	Limit Noise Level (dB(A))	Calcula Noise Level a NSR at school within Wan Sar Tsuen (dB(A))	at the Tai	Limit Noise Level (dB(A))
21/05/2006	23:00-07:00	36	Avg 33	45	Max 32	Avg 29	45
22/05/2006	07:00-19:00			75			70
22/05/2006	19:00-23:00	43	38	60	39	34	60
22/05/2006	23:00-07:00	43	37	45	39	33	45
23/05/2006	07:00-19:00			75			70
23/05/2006	19:00-23:00	37	36	60	32	31	60
23/05/2006	23:00-07:00	34	31	45	29	26	45
24/05/2006	07:00-19:00			75			70
24/05/2006	19:00-23:00	28	24	60	24	20	60
24/05/2006	23:00-07:00	45	36	45	29	27	45
25/05/2006	07:00-19:00			75			70
25/05/2006	19:00-23:00			60			60
25/05/2006	23:00-07:00	38	32	45	34	27	45
26/05/2006	07:00-19:00			75			70
26/05/2006	19:00-23:00			60			60
26/05/2006	23:00-07:00			45			45
27/05/2006	07:00-19:00			75			70
27/05/2006	19:00-23:00	34	34	60	30	30	60
27/05/2006	23:00-07:00	41	36	45	37	32	45
28/05/2006	07:00-23:00	47	36	60	42	34	60
28/05/2006	23:00-07:00	43	37	45	34	29	45
29/05/2006	07:00-19:00			75			70
29/05/2006	19:00-23:00	38	32	60	33	27	60
29/05/2006	23:00-07:00	39	33	45	34	29	45
30/05/2006	07:00-19:00			75			70
30/05/2006	19:00-23:00	33	33	60	28	28	60
30/05/2006	23:00-07:00	45	36	45	40	32	45
31/05/2006	07:00-23:00	41	32	60	37	28	60
31/05/2006	23:00-07:00	41	38	45	36	33	45

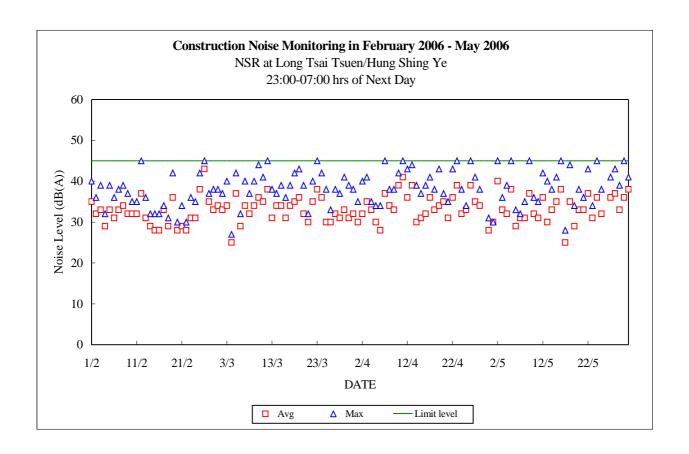
Note: "--" represents the measured noise monitoring data lower than the established notional background level/discarded under strong wind.

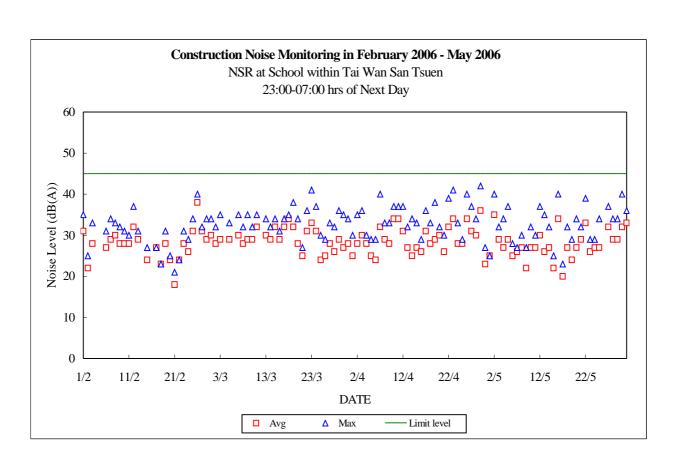












#### Appendix E.2 **Manual Noise Monitoring Results for May 2006**

Lamma Power Station Extension - Transmission System Site:

Measurement Parameter: 30-min Leq (07:00-19:00 hrs on normal weekdays) Noise Equipment Used: Rion NL-31 sound level meter and Rion NC-74 sound

level calibrator

Wind Speed Equipment: Extech Instruments 45118

Last Calibration Date: Rion NL-31 sound level meter - 08/08/2005

Rion NC-74 sound level calibrator - 04/10/2005

Measurement Location: N4 - Pak Kok Tsui No.2

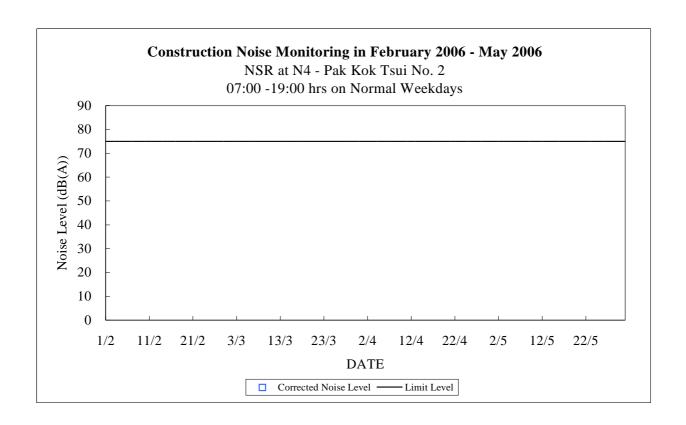
Date	Time	Measured Noise Level (dB(A))	Notional Background Noise Level (dB(A))	Corrected Noise Level (dB(A))	Limit Noise Level (dB(A))	Wind Speed (m/s)
02/05/2006	10:00-10:30	52.0	54.9		75	<5
04/05/2006	14:00-14:30	53.5	54.9		75	<5
09/05/2006	10:00-10:30	52.3	54.9		75	<5
12/05/2006	14:00-14:30	52.7	54.9		75	<5
16/05/2006	10:00-10:30	52.5	54.9		75	<5
19/05/2006	14:00-14:30	51.9	54.9		75	<5
23/05/2006	10:00-10:30	52.3	54.9		75	<5
26/05/2006	14:00-14:30	52.2	54.9		75	<5
30/05/2006	10:00-10:30	52.7	54.9		75	<5

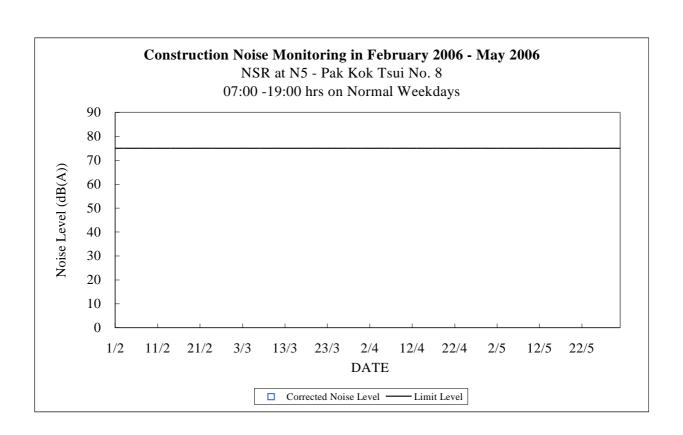
Measurement Location: N5 - Pak Kok Tsui No.8

Date	Time	Measured Noise Level (dB(A))	Notional Background Noise Level (dB(A))	Corrected Noise Level (dB(A))	Limit Noise Level (dB(A))	Wind Speed (m/s)
02/05/2006	10:40-11:10	49.2	54.9		75	<5
04/05/2006	14:40-15:10	50.8	54.9		75	<5
09/05/2006	10:40-11:10	50.1	54.9		75	<5
12/05/2006	14:40-15:10	50.3	54.9		75	<5
16/05/2006	10:40-11:10	51.2	54.9		75	<5
19/05/2006	14:40-15:10	49.6	54.9		75	<5
23/05/2006	10:40-11:10	50.8	54.9		75	<5
26/05/2006	14:40-15:10	51.1	54.9		75	<5
30/05/2006	10:40-11:10	51.3	54.9		75	<5

#### Note:

- The noise generated from local noisy events (e.g. dog barking, passingby pedestrians, motor vehicle, aeroplane, helicopter, etc.) was manually removed during measurement as far as practicable.
- 2. "--" represents the measured noise monitoring data lower than the established notional background level.





### Appendix F

The QA/QC Procedures and Results

#### HIGH VOLUME AIR SAMPLER SITE VISIT LOG SHEET

W L M L T 4 Glass-fib	K Pr	Hour of Visit:  HVAS S/N:  New filter paper no.:  ressure, $P_a = 1$	0.745 2198 LTSO mb
Glass-fit $= \frac{277+2}{289}$ cometer res	6.5 K Pr	New filter paper no.:	Utso
Glass-filter  = 277 +2 289  ometer res	K Pr		
ns = <u>277 +2</u> 299 ometer re	<u>ξ.Σ</u> Κ Pr	ressure, $P_a = 1$	mb_vovmb
= <u>277 +2</u> 299 ometer res	. }	ressure, $P_a = 1$	mb_vovmb
۱۹۹ ometer re:	. }	ressure, $P_a = 1$	mbmb
	ading		
e No.			
		Manometer reading at corresponds to Q <sub>STD</sub> (inch H <sub>2</sub> C	$=40 \text{ ft}^3/\text{min}.$
05)		$\triangle H_a = 19.29(T_a/P_a)$	= 5.75"
			r manometer : $\pm$ 0.2 inch $\rm H_2O$
s of HVA	aS		
	of HVAS fl	g before calibration: w controller (Y/N): g after calibration:	g before calibration:

File Name: C:\monitor\ambient\hvprical\HVASCAL05.doc

#### HIGH VOLUME AIR SAMPLER SITE VISIT LOG SHEET

Site Na	ame:	<u> </u>	b <sub>1</sub> ,	Site No.:	MYZ
Date o	f visit:	16-	5.05	Hour of Visit:	10:20
Staff n	ame:	W.L.M.Al	< /H.K.TsA	HVAS S/N:	2115
Used f	Jsed filter paper no.:		46	New filter paper no.:	LT51
Туре	of filter:	Glass-fil	ore		,
I. II.	Ambient Condition  Temperature, $T_a =$ Correction of mano	26.P+? 	·	ressure, $P_a = 10$	∣omb
	Calibration orific	e No.		Manometer reading at si corresponds to $Q_{STD} =$ (inch $H_2O$ )	40 ft <sup>3</sup> /min.
	1535(09/200	15)		$\triangle H_a = 19.29(T_a/P_a) =$	= 5,73
	Manometer reading Adjustment of flow Manometer reading Note: Tolerance Limit of	controll g after ca	er (Y/N): libration:	5.8 N 5.8.	manometer: $\pm$ 0.2 inch $\mathrm{H}_2\mathrm{O}$
III.	General Conditions	s of HVA	aS		
IV.	Remarks				

File Name: C:\monitor\ambient\hvprical\HVASCAL05.doc

#### PARTISOL TSP SAMPLER SITE VISIT LOG SHEET

Site Name:	: ASH LAGOON	Site Number: AM 3
Date of Vis	sit: 15-5206	Hour of Visit: 1550
Staff Name	e: W. L. MAK	Partisol S/N: 2000 B 20755 C 410
Used Filter	No.: PD 21	New Filter No.: PD 27
Ambient te	emperature:30.2°C	Ambient pressure: / 🍪 🤊
I.	General Services	
	1. Replace control unit La	rge In-line Filter
	2. Clean the sample inlet	nead
	3. Clean sample tube	
	4. Clean / Replace pump	neadX
	5. Clean / Replace piston	×
1.	Temperature Check (Ambien  2 9.5 °C Cali  Before	
2.	Pressure Check (Ambient press	sure $\pm$ 20 mbar)(factor = 0.000987)
	Before mbar Cali	bration: X/N N mbar After
3.	Flow Check (16.7± 1.1 litre/min	
	Howait Cali Before	bration: $\frac{\mathbf{Y}/\mathbf{N}}{\mathbf{After}}$ $\frac{\mathcal{N}}{\mathbf{After}}$ 1/min
III. <u>Re</u>	<u>marks</u>	
_		

## MINI VOLUME AIR SAMPLER SITE VISIT LOG SHEET

Site Name:	TYV_	Site No.:	AM4
Date of visit:	15-5-06	Hour of Visit:	13:45
Staff name:	H.K.TSAW 67	MINIVOL S/N:	3393
Used filter paper no.:	MI 05	New filter paper no.:	MI06
Type of filter:  I. Calibration is perfo	Cellulose / Gla (Delete as approprimed by using Dr		
5 Sl/min set point i			
7.0			er
II. General Service of M  1. Clean Rota	meter:	Υ΄	***************************************
2. Clean / repl	lace Pump Valves	:: <u> </u>	
3. Clean / rep	lace Pump Diaphr	ragms:	
4. Clean Impa	action Inlet:	X	
5. Replace Ti	mer Battery Every	y 6 months: X	
6. Replace In	let Filter:		
III. Remarks			

# THE HONGKONG ELECTRIC CO., LTD. LAMMA POWER STATION EXTENSION TEOM 1400A CONTINUOUS DUST MONITOR DATA QUALITY ASSURANCE LOG SHEET

Month: May Year: 2006

	Reservoir (AM1)								
Date	Frequency (Hz) (230 – 260)	Noise (< 0.1)	Operation Mode (Mode 4)	Main Flow (l/min) (0.94 – 1.06)	Aux. Flow (l/min) (14.67 – 16.67)				
2/5/2006	255-54	0.036	4	1.00	15-68				
8/5/2006	257-26	0-027	4	1.00	15-68				
14/5/2006	217.13	0.055	· ·	1.00	15-68				
20/5/2006	216.74	0036	U	1.00	15.68				
26/5/2006	256-64	0.036	¥	1.00	15-68				

	East Gate (AM2)								
Date	Frequency (Hz) (230 – 250)	Noise (< 0.1)	Operation Mode (Mode 4)	Main Flow (l/min) (0.94 – 1.06)	Aux. Flow (l/min) (14.67 – 16.67)				
2/5/2006	246-31	0.041	ķ	0-99	15.63				
8/5/2006	246.02	0.067	٤	0.99	15-62				
14/5/2006	245.89	0.064	¥	0.49	15.63				
20/5/2006	245.49	0.040	4	2.99	15.62				
26/5/2006	245.36	0.036	4	0.59	15-63				

			Ash Lagoon (AM3)		
Date	Frequency (Hz) (240 – 270)	Noise (< 0.1)	Operation Mode (Mode 4)	Main Flow (l/min) (0.94 – 1.06)	Aux. Flow (l/min) (14.67 – 16.67)
3/5/2006*	248.50	1031	4	1.00	15-66
8/5/2006	248.53	8 (0.0	4	1.00	15.66
14/5/2006	~48.43	0,031	4	1.00	(1-66
20/5/2006	248.12	0.430	4	1.00	15-66
26/5/2006	248.04	0.032	4	1.00	15-66

	Maintenance	e Record	
	Reservoir	East Gate	Ash Lagoon
TEOM Filter Exchange	<b>√</b>	/	
Clean TSP Inlet		/	
Replace flow in-line filter		*****	
Pump Repair		7.71.5 1.1.	
Leak Check			
Flow Audit	***************************************	***************************************	
Flow Controller Calibration			· · · · · · · · · · · · · · · · · · ·
A/C filter cleaning	/		

Remarks:	70 70.1	)	,	A , /		,
land 1-hr	LEDM (SI	sample,	<u>at</u>	Ash Lagar.	· CAM3	was
The 1-hr found de	tes Co	nducted	on	Nabe-up 3-5-06	1- hc	73 1
, ,						
Prepared by :	Also.	_				
Checked by :	(de	_				

# THE HONGKONG ELECTRIC CO., LTD. LAMMA POWER STATION EXTENSION NOISE MONITORING STATION SITE VISIT LOG SHEET

Loc	cationAsh_Lagoon/Ching Lam*							
Dat	e	19-2-06		Time		10:30		
Equ	EquipmentRion NA-27/B&K 2238F* Sound Level Meter							
Ser	ial Num	ber <u>0<del>011</del></u>	<del>1465/0011146</del> 6	70011146	7/234383	<del>8</del> /2356907*		
Sta	ff Atte	nded	N	L MAK	. H.k	TSANG		
				••	,	·		
1.	Calibr	ation						
	Acoust	ic calibrat	or used		*****	Rion NC-74		
	Calibr	ation level	before adjus	tment (d	B(A))	94.0		
	Calibr	ation level	after adjust	ment (dB	(A))	94		
2.	Weathe	r Condition	<u>s</u>					
	a. Su	nny/fine/c <del>l</del>	oudy/showery/	heavy ra	<del>in*</del>			
	b. St	rong wind/b	<del>resze</del> /calm*					
3.	Remark	/Observation	<u>n</u>					
				-t				
					_			

Note: \* - Please delete where inappropriate

## THE HONGKONG ELECTRIC CO., LTD. LAMMA POWER STATION EXTENSION NOISE MONITORING STATION SITE VISIT LOG SHEET

ocation Ash Lagoon/ <del>Ching Lam*</del>							
11:30							
Equipment Rion NA-27/ <del>B&amp;K 2238F*</del> Sound Level Meter							
Serial Number 00111465/00111466/00111467/2343838/2356907*							
Staff Attended W.L.MAK ; H.K.TSAN6							
Rion NC-74							
t (dB(A))93.P							
(dB(A))94							
y rain*							

Note: \* - Please delete where inappropriate

#### **Equipment Calibration Record for May 2006**

Site: Civil works for 275kV Cable Route from Lamma Island to Cyberport

Noise Equipment Used: RION NL - 31
Calibrator Used: RION NC - 74

Measurement Location: N4 - Pak Kok Tsui No. 2

Date	Calibration Level before Measurement (dB(A))	Calibration Level after Measurement (dB(A))	Calibrated by
02/05/2006	94.0	94.0	C K Law
04/05/2006	94.0	94.0	C K Law
09/05/2006	94.0	94.0	C K Law
12/05/2006	94.0	94.0	C K Law
16/05/2006	94.0	94.0	C K Law
19/05/2006	94.0	94.0	C K Law
23/05/2006	94.0	94.0	C K Law
26/05/2006	94.0	94.0	C K Law
30/05/2006	94.0	94.0	C K Law

Measurement Location: N5 - Pak Kok Tsui No. 8

Date	Calibration Level before Measurement (dB(A))	Calibration Level after Measurement (dB(A))	Calibrated by
02/05/2006	94.0	94.0	C K Law
04/05/2006	94.0	94.0	C K Law
09/05/2006	94.0	94.0	C K Law
12/05/2006	94.0	94.0	C K Law
16/05/2006	94.0	94.0	C K Law
19/05/2006	94.0	94.0	C K Law
23/05/2006	94.0	94.0	C K Law
26/05/2006	94.0	94.0	C K Law
30/05/2006	94.0	94.0	C K Law

Note: Measurement accepted as valid only if the calibration levels from before and after the noise measurement agreed to within 1.0 dB.

### Appendix G Event/Action Plans

Table G.1 Event and Action Plans for Air Quality

Event	Monitoring Action				
	ET Leader	IEC	Engineer	Contractor	
Action Level					
Exceedance of one sample	Identify source Inform Engineer and IEC verbally Repeat measurement to confirm finding	Check monitoring data submitted by ET and advise Engineer.	Notify Contractor Checking monitoring data and contractor's working methods	Rectify any unacceptable practice amend any working methods if appropriate	
Exceedance of two or more consecutive samples	Identify source Inform Engineer and IEC verbally Repeat measurement to confirm finding Increase monitoring frequency Discuss with Engineer and Contractor on remedial actions required If exceedance continues, arrange meeting with Engineer If exceedance stops, discontinue additional monitoring	Check monitoring data submitted by ET and advise Engineer.  Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor  Advise Engineer on the effectiveness of the proposed remedial measures  Verify the implementation of the remedial measures	Confirm receipt of notification of failure in writing Notify contractor Checking monitoring data and contractor's working methods Discuss proposed remedial actions with the ET and Contractor Ensure remedial actions properly implemented	Submit proposals for remedial actions to Engineer within 3 working days of notifications Implement the agreed proposals Amend proposal if appropriate	
Limit level					
Exceedance of one sample	Repeat measurement to confirm finding. Identify the source(s) of the impact. If the exceedance is found to be valid and due to the Construction works, verbally advise the Contractor, Engineer and IEC, and inform the EPD of the exceedance, as soon as practicable. Increase monitoring frequency to daily Assess the effectiveness of the contractor's remedial actions and keep Engineer, IEC and EPD informed of the results	Check monitoring data submitted by ET and advise Engineer Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures	Confirm receipt of notification of failure in writing Notify Contractor Checking monitoring data and Contractor's working method Discuss with ET and Contractor on remedial actions to be provided Ensure remedial measures properly implemented	Take immediate action to avoid further exceedance Submit proposals for remedial actions to Engineer within 3 working days of notifications Implement the agreed proposals Amend proposal if appropriate	

Event	Monitoring		Action		
	ET Leader	IEC	Engineer	Contractor	
Exceedance of two or more	Identify source If the exceedance is found to be valid	Provide feedback to the Engineer on the remedial actions proposed by the	Confirm receipt of notification of failure in writing	Take immediate action to avoid further exceedance	
consecutive samples	and due to the construction works, verbally advise the Contractor, Engineer and IEC, and inform the EPD of the	ET / Contractor  Advise Engineer on the effectiveness of the proposed remedial measures	Checking monitoring data and Contractor's working methods Notify Contractor	Submit proposals for remedial actions to Engineer within 3 working days of notifications	
	exceedance as soon as practicable.  Repeat measurement to confirm finding	Verify the implementation of the remedial measures	Discuss proposed remedial actions with ET and Contractor	Implement the agreed proposals	
	Increase monitoring frequency to daily Carry out analysis of Contractor's		Ensure remedial measures properly implemented	Resubmit proposals if problem still not under control	
	working procedures to determine If exceedance continues, consider possible mitigation to be implemented what portion of the work is	what portion of the work is	Stop the relevant portion of works as determined by the		
Contractor to discuss the remedial Contractor		responsible and instruct the Contractor to stop the portion of work until the exceedance is abated	Engineer until the exceedance is abated		
	If exceedance stops, discontinue additional monitoring			_	

Table G.2 Event and Action Plans for Construction Noise

Exceedance	ET Leader	IEC	Engineer	Contractor
Action Level	Undertake noise measurement/check monitoring data to establish validity of complaint.	Review the analysed results submitted by the ET.	Notify Contractor of the complaint if proven.	Submit proposals for remedial actions to Engineer.
	If the complaint is valid, inform Engineer and IEC verbally.	Review the remedial measures proposed by the Contractor and advise the Engineer and ET accordingly.	Check Contractor's working methods and advise IEC and ET accordingly.	Amend proposals if required by the Engineer.
	Identify the source(s) of the noise.	Verify the implementation of the remedial measures.	Remind the Contractor of his contractual obligations and discuss remedial actions.	Implement the remedial actions immediately upon instruction from the Engineer.
	Discuss remedial actions required with Contractor and Engineer.		Keep the Contractor informed of the efficacy of remedial actions.	Liaise with the Engineer to optimise the effectiveness of the agreed mitigation.
	Increase manual monitoring frequency to assess efficacy of remedial measures.			
	If exceedance continues, review implementation of appropriate mitigation measures.			
Limit Level	Repeat manual measurement/check monitoring data to confirm findings.	Agree potential remedial actions with Engineer, ET and Contractor.	Notify Contractor of exceedance.	Take immediate action to avoid further exceedance.
	Identify the source(s) of the impact. If the exceedance is found to be valid and due to	Review Contractor's remedial actions / measures to ensure their effectiveness	Check Contractor's working methods and advise IEC and ET accordingly.	Submit proposals for remedial actions to Engineer.
	the Construction works, verbally advise the Contractor, Engineer and IEC, and inform the EPD of the exceedance, as soon as practicable.	and advise the Engineer and ET accordingly.	Discuss with Contractor the remedial actions to be implemented.	Amend proposals if required by the Engineer.
	Discuss remodial actions required with	Verify the implementation of the remedial measures	Keep the Contractor informed of the efficacy of remedial actions.	Implement remedial actions immediately
	Discuss remedial actions required with Engineer.		If the exceedance continues, consider what portion of the work is	upon instruction from the Engineer.  If the exceedance continues, consider
	Increase manual monitoring frequency to assess efficacy of remedial measures.		responsible and instruct the Contractor to stop the portion of work until the exceedance is abated	what portion of the work is responsible and, as instructed by the Engineer, stop the portion of work until the exceedance is abated

Table G.3 Event and Action Plans for Water Quality

Exceedance	ET Leader	IEC	Engineer	Contractor
Action level exceeded on one sampling day	Verbally inform the Contractor, and IEC. Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with Engineer and Contractor; Repeat measurement on next day of exceedance.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor  Advise Engineer on the effectiveness of the proposed remedial measures  Verify the implementation of the remedial measures	Discuss with Contractor the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose and discuss mitigation measures with Engineer; Implement the agreed mitigation measures.
Action level exceeded on more than one consecutive sampling day	Repeat in-situ measurements to confirm findings; Identify source(s) of impact; Inform Contractor and IEC; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measure with Engineer and Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; Repeat measurement on next day of exceedance.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor  Advise Engineer on the effectiveness of the proposed remedial measures  Verify the implementation of the remedial measures	Discuss with ET and Contractor on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer within 3 working days and discuss with ET and Engineer; Implement the agreed mitigation measures.

Exceedance	ET Leader	IEC	Engineer	Contractor
Limit level exceeded on one sampling day	Verbally inform the Contractor, IEC and the EPD of the exceedance; Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measure with Engineer and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor  Advise Engineer on the effectiveness of the proposed remedial measures  Verify the implementation of the remedial measures	Discuss with Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer within 3 working days and discuss with Engineer; Implement the agreed mitigation measures.
Limit level exceeded by more than one consecutive sampling day	Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform Contractor, IEC and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measure with Engineer and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor  Advise Engineer on the effectiveness of the proposed remedial measures  Verify the implementation of the remedial measures	Discuss with Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures; Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine works until no exceedance of the Limit Level.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer within 3 working days and discuss with Engineer; Implement the agreed mitigation measures As directed by the Engineer, to slow down or to stop all or part of the marine work

## Appendix H

## Site Audit Summary

(In order to save paper, the weekly inspection checklists are provided only in electronic format in the CD-ROM enclosed.)

#### C/N:04/9012

#### The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection of	late 4 May Josh Time 0 9:30 Inspected	· —	ET:		W. Siu	
Site	LMX – L9 Mech. Erection Area	L	Jontra	ctor:	W. F.	Kwok (TDI
Veather						
Condition	Sunny Fine Overcast Hazy		Driz	zle [	Ra	in St
<b>Femperat</b> u	re T C Humidity High Moderat	e [	Lov	v		
Wind	Calm Light Breeze Strong					
ENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		/			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/			
AIR QUAL	Checklist Condition	N/A	Yes	No	Unk	Remarks
7.11	General Requirements					
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?					
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		/			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	/				
	Construction Sites					
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		/			Spraying BY P.Y
	Stockpiling of dusty materials					
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to					

maintain the entire surface wet to prevent dust emission?

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	/				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	1				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	1				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	V				
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	~				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	~				
	Use of vehicles					
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	/				
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		~			Cleaning Provided By P.Y.
	Transfer of dusty materials using a belt conveyor system					J.,
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	/				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	1				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	<b>V</b>				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	/				
	Concrete batching plant					
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	1				
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	/				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	~				
EM&A: A2	Are all the conveyor transfer points totally enclosed?	<b>V</b>				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	V				
Cap3110	Is open burning prohibited?		/			
Cap311	Is black smoke emission from plant/equipment avoided?		V			

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks				
	Dredged Materials		I	1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	I				
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	1								
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	1								
EM&A: E3	Are wastes disposed of at licensed sites?	/								
	Construction Waste and Excavated Materials									
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?									
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	1								
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	V								
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	V								
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	~								
EM&A: E3	Are wastes disposed of at licensed sites?	/								
	General refuse									
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		/							
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		/							
WMP	Is the refuse disposed of regularly and properly?		~							
WMP	Are burning of refuse at site and dumping at sea prohibited?		/							
	Chemical Waste									
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?		/							

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks				
WDO	Has the Contractor been registered as a chemical waste producer?		~							
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?		/							
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?		-							
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?		1							
	Storage, collection and transportation of waste									
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		-							
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?									
	(1) public fill materials for on-site reuse, or disposal at public filling area;	~	-							
	(2) reusable / recyclable materials;	/								
	(3) un-reusable / non-recyclable waste for landfill disposal.		~							
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?		V							

#### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off			1		1
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	1				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	~				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	<i>y</i>				
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	~				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	/				
	Groundwater					
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	1				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	~				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	/				

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	~				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	/	-			
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	~				

#### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes schedu	iled to minimize noise nuisance?		~			
EM&A: C1	Are construction works or equipmuisance?	ment sited to minimize noise					
EM&A: C1	Are all plant and equipment main conditions?	ntained in good operating		_			
EM&A: C1/GP	Is idle equipment turned off or the	rottled down?		/			
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise		1			
EM&A: C1)	Are construction works carried o nuisance?		~				
EM&A: C2	To mitigate construction noise de holidays, is either one of the folle a) Mitigation by portable noise b) Rescheduling of some power sensitive time periods?		~				
EM&A: C3	To mitigate night time constructi equipped with silencers or muffle		/				100
NCO	Are valid construction noise perminspection?	nits, if required, available for	~				
NCO	Are conditions of construction no relevant part(s) of the works imp						
NCO	Are valid noise emission labels f held percussive breakers?	ixed at air compressors and hand		1			
	Major noise source(s)	☐ Traffic ☐ Construction activities outside the site		Constr site Others		activi	ties inside the

#### Abbreviation

VEP:

Varied Environmental Permit

WMP:

Waste Management Plan APC (Construction Dust) Regulation

EM&A: EM&A Manual (Construction Phase) NCO: Noise Control Ordinance

Cap311R: Cap311O: Cap311:

APC (Open Burning) Regulation Air Pollution Control Ordinance

WDO: Waste Disposal Ordinance

PN1/94: Unk:

Practice Note for Professional Persons (Construction Site Drainage) Unknown

Remark			 
	 	 4	 

Signatures

ET Member

Contractor's Representative

(Name in Block letters:

(Name in Block letters:

#### C/N:04/90/2

# The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection of	date II May Just Time 0 9:30 Inspected	·	ET:	h	J. Gru	(HEC) Kwok (TDK)
Site	LMX-69 Med. Freetien Area		Contrac		W. F.	KWOK (IDK)
Weather						
Condition	Sunny Fine Overcast Hazy		Driz	zle [	Ra	ain Storm
Temperatu	re 6 C Humidity High Moderat	te _	Lov	V		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		V			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		<b>✓</b>			
AIR QUALI Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements			L		
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?	V				
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		~			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	✓				
	Construction Sites	***************************************				
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		/			Sproying By P.Y.
	Stockpiling of dusty materials					0
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	\/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	V ,				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	V				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	✓ .				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	V			***************************************	
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	✓				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	V				
	Use of vehicles					1
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	✓ <u> </u>				
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		<b>√</b>			Cleaning Princed By P.T
	Transfer of dusty materials using a belt conveyor system					-
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	<i>y</i>				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	<i>y</i>			**************************************	
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	<i>y</i>				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	· /				
	Concrete batching plant					
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	V				
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	<b>√</b>				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	, V	-			
EM&A: A2	Are all the conveyor transfer points totally enclosed?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	<b>V</b>	-			
Cap311O	Is open burning prohibited?		$\sqrt{}$			
Cap311	Is black smoke emission from plant/equipment avoided?		$\sqrt{}$			

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials			L		
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?					
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	$\checkmark$				
EM&A: E3	Are wastes disposed of at licensed sites?	✓				
	Construction Waste and Excavated Materials					
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	/				
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	V				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	V				
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	<b>V</b>				
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	✓				
EM&A: E3	Are wastes disposed of at licensed sites?	1				
	General refuse					
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		J			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		<b>√</b>			
WMP	Is the refuse disposed of regularly and properly?		1			
WMP	Are burning of refuse at site and dumping at sea prohibited?		1			
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?		V			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?		✓			
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?		J			
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?		V			
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?		<i></i>			
	Storage, collection and transportation of waste	•				
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		V			
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;					
	(2) reusable / recyclable materials;	<b>V</b>				
	(3) un-reusable / non-recyclable waste for landfill disposal.		_			
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?		V		1	

#### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off					
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	~				-
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	~				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	1				
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	,				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	J				
	Groundwater					
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	<b>V</b>				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	V				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	1				

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	1				,.
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	J				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	V				

#### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks		
EM&A: C1	Are working programmes scheduled t	minimize noise nuisance?		1					
EM&A: C1	Are construction works or equipment nuisance?	ited to minimize noise		7					
EM&A: C1	Are all plant and equipment maintaine conditions?	I in good operating		1					
EM&A: C1/GP	Is idle equipment turned off or throttle	el down?		/					
EM&A: C1	Are methods of working devised and nuisance?	ranged to minimize noise		/					
EM&A: C1)	Are construction works carried out in nuisance?	a manner to minimize noise		1					
EM&A: C2	To mitigate construction noise during holidays, is either one of the following a) Mitigation by portable noise barr b) Rescheduling of some powered resensitive time periods?	g measures adopted? i ers at noise sources or		/					
EM&A: C3	To mitigate night time construction no equipped with silencers or mufflers?	se, is dredging equipment	1						
NCO	Are valid construction noise permits, inspection?	required, available for	/						
NCO	Are conditions of construction noise p relevant part(s) of the works implement		/				-		
NCO	Are valid noise emission labels fixed a held percussive breakers?	air compressors and hand	1	/			T. Advanced		
	Major noise source(s)	Traffic	ļ ,	site		activi	ties inside the		
		Construction activities outside the site		Others	5				

(Name in Block letters:

W.510

Abbreviation				
VEP: WMP: Cap311R: Cap311O: Cap311: PN1/94: Unk:	Varied Environmental Permit Waste Management Plan APC (Construction Dust) Regula in APC (Open Burning) Regulation Air Pollution Control Ordinance Practice Note for Professional Personal Person	ion NCO: WDO:	EM&A Manual (Construction Phase) Noise Control Ordinance Waste Disposal Ordinance Drainage)	
Remark				
	-			-
	-			
Signatures				
ET Member	Contractor	r's Representative		
<b>\</b>				

(Name in Block letters:

W.7. Kwik)

#### ていこ いしょう (の) The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection of	LMY-19 Mich, Freeten Area	ed By			r: U\	t. C. Ingu
Weather				Der Production		The Control of Language and Person
Condition	Sunny Fine Overcast Hazy		Driz	zle [	Ra	in Storr
Temperatu		e [	☐ ☐ Low			<u></u>
Wind	Calm Light Breeze Strong	<u> </u>				
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		1			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/			
AIR QUAL	ITY					
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements	ì				
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?					
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		/			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete barching plant wherever applicable and have it available for inspection?	/				

Page 1 of 7

Are haul roads paved with concrete or sprayed with water to keep the entire road wet?

Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?

**Construction Sites** 

Stockpiling of dusty materials

EM&A: A1

Cap311R: Sch 18

C:\Documents and Settings\English\My Documents\U9 Safety Management\S-05 Inspection programme\Weekly Site Inspection Checklist.doc

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dy PFA prevented from overfilling?	1				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	1				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	1				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/				
	Loading, unloading or transfer of custy materials		1			
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loadir g, unloading or transfer operation?					
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	1				
-	Use of vehicles					
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	/				
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		1			Cleary Provided By PY
1	Transfer of dusty materials using a belt conveyor system			<u> </u>		3
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	(				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	1				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	/				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	1				
	Concrete batching plant					
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	1				
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	/				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	/				
EM&A: A2	Are all the conveyor transfer points totally enclosed?	7				

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Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	/				
Cap3110	Is open burning prohibited?		1			
Cap311	Is black smoke emission from plant/equipment avoided?		/			

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks				
	Dredged Materials			•						
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	/								
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	1								
EM&A: E3	Are wastes disposed of at licensed sites?	/								
	Construction Waste and Excavated Materials									
WMP EM&A: E3	Does the Contractor possess a valid Fublic Dumping License for construction waste and excavated materials and make it available for inspection?	/	-							
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	(								
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	1								
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	1								
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	1								
EM&A: E3	Are wastes disposed of at licensed sites?	1								
	General refuse									
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		1							
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		/							
WMP	Is the refuse disposed of regularly and properly?		1							
WMP	Are burning of refuse at site and dumping at sea prohibited?									
	Chemical Waste									
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?		/							

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Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?		1			
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?		/			
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?					
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?		/			
	Storage, collection and transportation of waste	1		L		
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		/			
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;	1				
	(2) reusable / recyclable materials;					
	(3) un-reusable / non-recyclable waste for landfill disposal.		1			
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?		/			

#### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off		·			L
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	/				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	1				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	1				
PN1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	1				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	1				
	Groundwater					
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?					

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Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	/				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	/				

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	/				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	1				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	/				

#### NOISE ·

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes sched	uled to minimize noise nuisance?		/			
EM&A: C1	Are construction works or equip nuisance?	ment sited to minimize noise		/			
EM&A: C1	Are all plant and equipment mai conditions?	ntained in good operating		1			
EM&A: C1/GP	Is idle equipment turned off or the	hrottled down?		1			
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise		1			
EM&A: C1)	Are construction works carried on nuisance?	out in a manner to minimize noise		1			
EM&A: C2				1			
EM&A: C3	To mitigate night time construct equipped with silencers or muffl	ion noise, is dredging equipment ers?	1				
NCO	Are valid construction noise per inspection?	mits, if required, available for	1				
NCO	Are conditions of construction n relevant part(s) of the works imp		/				
NCO	Are valid noise emission labels held percussive breakers?	fixed at air compressors and hand		1			
1.1	Major noise source(s)	☐ Traffic ☐ Construction activities outside the site	<u> </u>	Constr site Others		activi	ties inside the

Waste Management F APC (Construction D APC (Open Burning) Air Pollution Control	lan ust) Regulation Regulation Ordinance	NCO: WDO:	EM&A Manual (Construction Phase) Noise Control Ordinance Waste Disposal Ordinance  Orainage)
AND BLOCK TO THE LOCK TO THE SHEET AND THE STATE OF THE S	y adin'ny fivondronana ao amin'ny tanàna mandritry ny taona mandritry ny taona 2001–2004.		nada di san kenya-lapi danmangan dan balangan kelapi paman-lapan aya kenyamban dan dan dan dan dan dan dan dan Balangan
	And the second s		
	Contractor's Represe	ntative	
	Waste Management F APC (Construction D APC (Open Burning) Air Pollution Control Practice Note for Prof	Unknown	Waste Management Plan EM&A: APC (Construction Dust) Regulation NCO: APC (Open Burning) Regulation WDO: Air Pollution Control Ordinance Practice Note for Professional Persons (Construction Site I Unknown

Abbreviation

#### C/N:04/9012

# The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	date N-05-Wolf Time 10=30 Inspected	· -	ET: Contrac	ytor:	M	him Chiu
Site	LMX – Mech. Erection Area		Jonua			Chin
Weather					,	
Condition	Sunny Fine Overcast Hazy		Driz	zle [	Ra	nin Storm
Temperatu	re 75 °C Humidity High Modera	te	Low	1		
Wind	Calm Light Breeze Strong					
GENERAL					-	
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		1			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?				- HURT	
AIR QUAL	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements					
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?		,			
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		/			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?					
	Construction Sites					
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?	V				
	Stockpiling of dusty materials					
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?					
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	1				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	1	,			
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?					
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?					
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?					
	Use of vehicles					
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?					Change fronted by P.T.
	Transfer of dusty materials using a belt conveyor system					
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?					
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?					
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?		/			
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?					
	Concrete batching plant					
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?					
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	/				
EM&A:	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?					
A2	above umoading point?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?					
Cap311O	Is open burning prohibited?		/			
Cap311	Is black smoke emission from plant/equipment avoided?					

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?					
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?					
EM&A: E3	Are wastes disposed of at licensed sites?					
	Construction Waste and Excavated Materials					•
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?					
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	/				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?		•			
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	/				
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	0	1			
EM&A: E3	Are wastes disposed of at licensed sites?					
	General refuse					<del></del>
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		/			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		/			
WMP	Is the refuse disposed of regularly and properly?		1			
WMP	Are burning of refuse at site and dumping at sea prohibited?				·	
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?		V			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?					
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?		/			
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?					
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?					
	Storage, collection and transportation of waste			·		L
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?					
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;	/				
	(2) reusable / recyclable materials;					
	(3) un-reusable / non-recyclable waste for landfill disposal.					
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?					-

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off					
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	/	,			1 100
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?		,			
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?					
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	1				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?					
	Groundwater		/			
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	0				
	Wheel Washing Water		/			
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?					

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	V	1			-
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?					
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?					

#### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes schedu	aled to minimize noise nuisance?					
EM&A: C1	Are construction works or equipmuisance?	nent sited to minimize noise			,		
EM&A: C1	Are all plant and equipment main conditions?	ntained in good operating			,		
EM&A: C1/GP	Is idle equipment turned off or the	rottled down?		~			
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise					
EM&A: C1)	Are construction works carried o nuisance?	ut in a manner to minimize noise					
EM&A: C2	To mitigate construction noise du holidays, is either one of the folka) Mitigation by portable noise b) Rescheduling of some power sensitive time periods?	owing measures adopted?					
EM&A: C3	To mitigate night time constructi equipped with silencers or muffle		1				
NCO	Are valid construction noise perminspection?	nits, if required, available for	1	.,			
NCO	Are conditions of construction no relevant part(s) of the works imp		/				
NCO	Are valid noise emission labels fi held percussive breakers?	xed at air compressors and hand			,		
	Major noise source(s)	☐ Traffic		ties inside the			
	,	Construction activities outside the site		Others			

#### Abbreviation

VEP:

Varied Environmental Permit Waste Management Plan

WMP: Cap311R: Cap311O: Cap311:

PN1/94:

APC (Construction Dust) Regulation

APC (Open Burning) Regulation

Air Pollution Control Ordinance

Practice Note for Professional Persons (Construction Site Drainage)

Unk: Unknown

Remark

NCO:

WDO:

Signatures

ET Member

Contractor's Representative

IEC's Representative

EM&A: EM&A Manual (Construction Phase)

Noise Control Ordinance

Waste Disposal Ordinance

This site inspection was carried out in the presence of IEC's representative

)

(Name in Block letters:

Chin Chin Tok.

Name in Block Letters:

# The Hongkong Electric Co. Ltd. Lamma Power Station Extension - Site Formation, Piling Works and

	Weekly Site Inspection Check	klist				
Inspectio	in date $3/5/6$ Time $(0=3)$ Inspec	ected B			ary	Long, P
Site	LMX-Super otu due					( by way,
Weather		<u> </u>				
Condition	Sunny Fine Overcast Hazy	Г		izzle	<u></u>	- ا
Tempera	ture C Humidity High Mode	L. Date [	_	)W	<u></u>	Rain Sto
Wind	Calm Light Breeze Strong	_	_, ~	·••		
GENERAL		<u> </u>				
Ref.	Checklist Condition	N/A	Yes	No	Uni	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?					Nemarks
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/	-	-	
		<u></u>	L	<u>.                                    </u>	L	
IR QUALI	TTY				<del>-</del>	
Ref.	Checklist Condition	NA	Yes	No	Unk	Remarks
	General Requirements					Kemarks
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?				<del>.</del>	
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		/			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?					
			- 1		ļ	1

Page Lot 1

Are haul roads paved with concrete or sprayed with water to keep

Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to

maintain the entire surface wet to prevent dust emission?

Construction Sites

the entire road wel?

 $0.494 \times 1.304$  HANGA Look of the exploredistance collection

Stockpiling of dusty materials

EM&A: ΑĒ

Cap311R:

Seb 18

Ref.	Checklist Condition .	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	/				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?					
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?					
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/				
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	/				
EM&A: Al	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	/				_
	Use of vehicles					
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		1			
	Transfer of dusty materials using a belt conveyor system	1		1	1	·
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?					
		1/		1	1	1
Cap311R: Sch 20(2)	ls every transfer point between any two-belt conveyors totally enclosed?	/				
	1 · · · · · · · · · · · · · · · · · · ·	/				
Sch 20(2) Cap311R:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return	/				
Sch 20(2)  Cap311R: Sch 20(3)  Cap311R:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting	/				
Sch 20(2)  Cap311R: Sch 20(3)  Cap311R:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	/				
Cap311R: Sch 20(3)  Cap311R: Sch 20(4)  EM&A:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?  Concrete batching plant  Are the loading, unloading, handling, transfer or storage of any	/ /				
Cap311R: Sch 20(3)  Cap311R: Sch 20(4)  EM&A: A2  EM&A:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?  Concrete batching plant  Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?  Are dusty materials, except cement and dry PFA, wetted by water	/ / /				

	N/A Yes No Unk Remarks
Rel.	Checklist Candition
	Miscellaneous  11R: Are completed earthworks scaled and hydroseculed and planted as
Cap3 Sch J	6 soon as possible.
Ì	Is open burning prohibited?  Is black smoke emission from plant/equipment avoided?
Cap	311 Is black smoke emission

STE/CHI	EMIC	CAL	WASTE MA	NAGEME				NA	Yes	No	Unk	Remai	rks
ef	Che	cklist	Condition								<del></del>		
	Dre	dged	Materials	- t-netor mass	sess valid du	mping pe	mits for	1				1	Ì
VMP EM&A: E3	dre	dged	Wattric man					1	+-	+	<del> </del>	1	
IVNIP EM&A: E3	) rec	cords/	contractor kep ticketing syste			ble for ins	pection:	+	+	+	1	1	
EM&A: E3	1	LC MS	stes disposed (	f at licensed				_1					
	+c	 Consti	ruction Waste	and Excava	ited Materia id Public Du	als Imping Li	cense for	T	1				
WMP EM&A: E	3   c	constr	uction waste =	.,				1		_			<del></del> -
VMP		Has t	he Contractor		isposal record d materials,	rds for the and made	them						
			able for inspec					+		/			
WMP			itable concrete amation/filling the used form							_	11		
WMP		Are	the used form posed of in a la e the remainin	works reused indfill site?	as tar to p	aterials di	sposed of	at			+-+		
WMP		the	public minig	g <sub>1</sub> coo .					7				
ENI&	A: EJ	- 1	re wastes dispo						ـــــــــــــــــــــــــــــــــــ			<u>-</u> -	
		+	General refuse	tor maintain	ed a disposa	l record fo	r general	refuse			1		
WMI	,		las the Contraction of the last the las						1				
WM	P		Is general refused to the the refused to the refuse d						-		1	<del></del>	<del> </del>
17/4			Are burning	of refuse at si	te and dump	ing at sea	prohibited	1?			/-!-		
W			الأ العمانيين بص	aste			Learnil	from		T			
E	11&A	.:	Has the cont the relevant (Chemical V	authority, if r Vaste) (Gener	equired, acc ral Regulatio	m); otaing to						\	

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?					
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	/	,			
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste'?	1				
EΜ&Λ: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?				•	
	Storage, collection and transportation of waste	<b>1</b>				
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?					
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;					
	(2) reusable / recyclable materials;	/				
	(3) un-reusable / non-recyclable waste for landfill disposal.	/				
EM&A: F3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?	/				

#### WATER QUALITY

Reſ	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off	<del></del>				
PN 1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	/				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	/				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	/				
PN 1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	/				
PN 1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	/				
PN 1/94	Groundwater Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	/				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	-				
PN4/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?					
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?					

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: GI	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	/				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	/				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	/		i ·		

#### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks	
EM&A:	Are working programmes schedu	rled to minimize noise nuisance?		1				
EM&A: Cl	Are construction works or equiponuisance?	ment sited to minimize noise		/				
EM&A: CI	Are all plant and equipment main conditions?	ntained in good operating		/				
EM&A: CI/GP	Is idle equipment turned off or the	rottled down?		1				
EM&A: CI	Are methods of working devised nuisance?	and arranged to minimize noise						
EM&A: CI)	Are construction works carried on nuisance?		/					
EM&A: C2	To mitigate construction noise di hotidays, is either one of the folloa) Mitigation by portable noise b) Rescheduling of some power sensitive time periods?		/					
EM&A: C3	To mitigate night time constructs equipped with silencers or muffl	ion noise, is dredging equipment ers?	1					
NCO	Are valid construction noise per inspection?	nits, if required, available for						
NCO	Are conditions of construction in relevant part(s) of the works imp			/				
NCO	Are valid noise emission labels f held percussive breakers?	ixed at air compressors and hand						
	Maineria	☐ Traffic	Ø	Consti	ructio	n activ	ities inside the	
	Major noise source(s)	Construction activities outside the site	Others					

#### Abbreviation

	NEP: NNIP Cap311R: Cap311O Cap311: PN1794: Unk:	Varied Environmental Permit Waste Management Plan APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance Practice Note for Professional Persons (Co Unknown	NCO: WDO:	EM&A Manual (Construction Phase) Noise Control Ordinance Waste Disposal Ordinance  Drainage)
	Remark			
	Nil			
		A	<u></u>	
y M		•	<del></del> .	
,				
	<del> </del>		·	
	Signatures		<del></del>	
	ET Member	Contractor's Repre	sentative	
		Now G	(fo Hows	<del>,</del>

11th November 2002

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension - Site Formation, Piling Works and Superstructure Works

	Weekly Site Inspection Cl	ks hecki	ist				
Inspe Site	ection date 10 K/D Time Time		ed By		Lav	Righ	- PDC
Weatl	ner						,
Cond Temp Wind GENER	erature Covercast Hamidity High Mo	zy oderate ong		Drizz Low	de [	Rain	Storm
GENER	AL						
Ref.	Checklist Condition	·	<del></del>			_	
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?	<del> </del>	VA Y	es N	io Ur	nk Remar	ks
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' office on site?	es		] /[	-	-	_
AIR QUA			<del>-</del>				
	Checklist Condition	NA	Yes	No	11-1	T	
Cap311R:	General Requirements  Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?				Unk	Remarks	
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this	-				· 	
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	/		-			_
	Construction Sites			1			1
EM&A:	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?			<u>-</u> -	<del>-</del> -		

Are stockpiles of dusty materials entirely covered with impervious

sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wel to prevent dust emission?

Cap311R:

Sch 18

Stockpiling of dusty materials

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Censent and dry polyerized fuel ash (PFA)					
Cap311R: Sch 45(3)	Are the storage silos for cement or dry PFA prevented from overfilling?					
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?				_	
Cap311R: Seh 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	/				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/				
•	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	/				
EM&A: Al	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	/				
	Use of vehicles					
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			
	Transfer of dusty materials using a belt conveyor system	· ··· -	L			
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?					
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	/				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	/				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	/				
•	Concrete batching plant	•	-	L		
EM&л: л2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?		_			
EM&A: A2	Are dusty materials, except cement and dry PFA, wetled by water spray system?	/				·
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	/				

	N/A Yes No Unk Remarks
Rel.	Checklist Condition
	Miscellaneous  Are completed earthworks sealed and hydroseeded and planted as
Cap311R: Seh 16	sown as possible.
Cap311O	Is open burning prohibited?  Is black smoke emission from plan/equipment avoided?
Cap311	Is black smoke emission toom,

STEICHI	MICAL WASTE MANAGEMENT	N/A	Yes	No	Unk	Remarks
ef	Checklist Condition				τ	
	Dredged Materials  Does the appropriate contractor possess valid dumping permits for mud and have them available for inspection?		\			
/MP M&A: E3	dredged marine must all a dredged must all a dredged marine must all a dredged marine must all a dredged must all a dredged marine must all a dredged must all a d	1	-	+-	-	
VNIP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	<del>/</del>	4-	+	-	
EM&A: E3	Are wastes disposed of at licensed sites?	1		L_ 		
WMP EM&A: E	Construction Waste and Excavated Materials  Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?				-	
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them		1		-	
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?  Are the used formworks reused as far as possible before being					
WMP	Are the used formworks reused as the disposed of in a landfill site?  Are the remaining unsuitable excavated materials disposed of a control of the control	11			-+	
WMP	the public firming areas.					
EM&A	E3 Are wastes disposed of at licensed sites?					
ļ	General refuse  Has the Contractor maintained a disposal record for general residence of the contractor maintained and disposal record for general refuse.	efuse				
WMP	Has the Contractor mannantantantantantantantantantantantanta			1	-	
WMI	hernical Wastes:		-	17	1	
IVNI	Is the refuse disposed of regularly and properly?  Are burning of refuse at site and dumping at sea prohibited.	?		17		
VM	Chamical Waste	from	T ,	1		
EN E3	SA: Has the contractor obtained the necessary disposal perints the relevant authority, if required, according to Waste Disport (Chemical Waste) (General Regulation)?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
wpo	Has the Contractor been registered as a chemical waste producer?				-	
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	/				
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging. Handling and Storage of Chemical Waste**?	/				
ЕМ&Л: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?	/			· <del>-</del>	·· <u>·</u>
	Storage, collection and transportation of waste			11		
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?	(				
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
<u>_, , , =.</u> .	(1) public fill materials for on-site reuse, or disposal at public filling area;	/				
	(2) reusable / recyclable materials;	/				
	(3) un-reusable / non-recyclable waste for landfill disposal.	/				<u> </u>
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?					<del></del>

#### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off		·			
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	/				-
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	/				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	/				
PN 1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	/				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul servers?					
PN1/94	Groundwater  Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water				<b>-</b>	
PN 1794	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?					
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?					

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	/				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?					
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?		·			

#### NOISE

Ref	Checklist Candition		N/A	Yes	No	Unk	Remarks
EM&A:	Are working programmes schedu	rled to minimize noise nuisance?		/			
EM&A: CI	Are construction works or equiponuisance?	ment sited to minimize noise		/			-
EM&A: CI	Are all plant and equipment main conditions?	ntained in good operating					
EM&A: CI/GP	Is idle equipment turned off or the	rottled down?					· · · · · · · · · · · · · · · · · · ·
EM&A: CI	Are methods of working devised nuisance?	and arranged to minimize noise		/			
EM&A: CI)	Are construction works carried on nuisance?	ut in a manner to minimize noise		/			
EM&A: C2		uring Sunday's and public owing measures adopted? e barriers at noise sources or ered mechanical equipment to less		/			
EM&A: C3	To mitigate night time constructi equipped with silencers or muffle	on noise, is dredging equipment ers?					
NCO	Are valid construction noise per inspection?	nits, if required, available for					<u> </u>
NCO	Are conditions of construction in relevant part(s) of the works imp						
NCO	Are valid noise emission labels f held percussive breakers?	ixed at air compressors and hand					
	Major noise source(s)	☐ Traffic	Ø	Constr site	uction	activi	ties inside the
	major noise addrect(s)	Construction activities outside the site		Others			

#### **Abbreviation**

3/MP Cap311R; Cap311O Cap311; PN1/94;	Waste Minnagement Plan APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance Practice Note for Professional Persons (Con	NCO: WDO:	EM&A Manual (Construction Phas Noise Control Ordinance Waste Disposal Ordinance
Unk:	Unknown	struction Site (	rainage)
Remark			
Nil			
1011			
<u> </u>		<u></u>	
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		**	
Signatures		<del></del>	
ET Member	Contractor's Represe	ntative	

11th November 2002

WONG HO HONG (Name in Block letters:

### The Hongkong Electric Co. Ltd. Lamma Power Station Extension - Site Formation, Piling Works and Superstructure Works Weekly Site Inspection Checklist

	Weekly Site Inspection Check	dist				
Inspectio	on date 17/5/06 Time 1030 Inspe	cted B			any	Way, PDE
Site	Lux- superstancture		Co	ntrac	tor: 0	ng Way
Weather						
Condition Tempera	n Sunny Fine Overcast Hazy ture Overcast Moden	ate [	Dri	zzle w		tain Storm
Wind	Calm Light Breeze Strong	<b>L</b> ,				
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	17.1	
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		/		Unk	Remarks
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?					
			<u> </u>			
AIR QUALI	ITY					<del></del>
Reſ.	Checklist Condition	N/4 ]		Т		<del></del>

Ref.	Checklist Condition	NA	Yes	No	Unk	Remarks
	General Requirements	1	L	l		- Contacks
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?		/			
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?					
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?					
	Construction Sites					
EM&A: Al	Are haul roads paved with concrete or sprayed with water to keep the entire road we!?				<sub>-</sub>	<del></del>
	Stockpiling of dusty materials					
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wer to prevent dust emission?					

Ref.	Checklist Canditian	N/A	Yes	Nο	Unk	Remarks
•	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?					
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?					
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	/				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/				
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	/				
EM&A: Al	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	/				
	Use of vehicles				•	•
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	/				
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			
	Transfer of dusty materials using a belt conveyor system	<u>,                                     </u>				
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	/				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	/				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	/				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?					
	Concrete batching plant	,				
EM&л: л2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	/				
EM&A:	Are dusty materials, except cement and dry PFA, wetted by water spray system?	/				
EM&A:	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	/				
	Are all the conveyor transfer points totally enclosed?	<del> /-</del>	<del> </del>		<del> </del>	<del> </del>

		N/A Yes No Unk Remarks
,		o dising
Ì.,	.r i	Checklist Condition
: R		
		A licenstrate the second planted as
		Absorbs sealed and hydrosectic and p
		Miscellaneous  Are completed earthworks sealed and hydroseeded and planted as
		soon as possible.
1 9	ich 16	
i		Is open burning prohibited?
j-		Is open burning promote
į i	Cap311O	Is black smoke emission from plant/equipment avoided?
- 1		the smoke emission from planted or production
1	Cap311	Is black since
- 1	Capari	
- L		

STE/CHI	EMICA 	L WASTE MA			N/A	Yes	No	Unk	Remark	5
···	Check	list Condition		L				<del></del>	τ	
	Drede	ed Materials	tractor possess valid dumpi I have them available for in	ing permits for					1	
MP M&A: E3	dredg	ed marine med and			-	-	+-	-	-	
/NIP M&A: E3	. Has t	he contractor kept : ds/ticketing system	a complete set of dumping a and made them available i	for inspection?	/	-	-\-		-	
M&A: E3	Are	wastes disposed of	at licensed sites?		1/		l_	_1		
	-	etruction Waste a	nd Excavated Materials	ing License for		1	T	T		
WMP EM&A: E	Do	s the Contractor postruction waste and	ossess a valid Public Dumpi d excavated materials and m	nake it available						
	for	inspection!		or the	7			*		
WMP	co	nstruction Waste M	on?							
WMP		suitable concrete veclamation/filling v	waste/excavated material us	ed for on-site						
		-d formw	orks reused as far as possib	le before being						
WMP			dfill site? unsuitable excavated materi			/				
WMP	1	the public tilling a				1		+		
EM&/	(; E3	Are wastes dispose	ed of at licensed sites?					_ <b></b>		
		General refuse	or maintained a disposal rec	ord for general r	efuse		/			
IVMP			stored within receptacles at			-	1			
WNI	P	abouncal wastes	•				+	-	+	
WAI	P	Is the refuse dis	posed of regularly and prop refuse at site and dumping a	at sea prohibited	· 		士,	Z <u> </u>		
WA	119	Chamical Was	ite	di malangranits	from	Ţ,	1			
EN	1&A:	Has the contract the relevant au	ctor obtained the necessary thority, if required, according te) (General Regulation)?	ng to Waste Dist	(1,544	/				L

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?	1				
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	/				
ЕМ&Л: Е4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste**?	/			<u>-</u>	
EΜ&Λ: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?					<u> </u>
	Storage, collection and transportation of waste	4				
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?	/				
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;	/				
	(2) reusable / recyclable materials;	/				
	(3) un-reusable / non-recyclable waste for landfill disposal.	/	-			
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?	/				

#### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off					
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	/				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	/				
PN 1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	/				
PN1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	/				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul servers?	/				
PN1/94	Groundwater Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	/				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	1	_		<u> </u>	
P:N1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?					
•	Wheel Washing Water	1				
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?					<u> </u>

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: GI	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	1				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?					
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?					

#### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: CI	Are working programmes sched	uled to minimize noise nuisance?		/			
EM&A: CI	Are construction works or equip nuisance?	ment sited to minimize noise		/			
EM&A: CI	Are all plant and equipment mai conditions?	ntained in good operating		/	·		
EM&A: CI/GP	Is idle equipment turned off or t	hrottled down?		/			<del></del>
EM&A: CI	Are methods of working devised nuisance?	f and arranged to minimize noise		/			
EM&A: CI)	Are construction works carried on nuisance?	out in a manner to minimize noise		7			
EM&A: C2		uring Sunday's and public owing measures adopted? e barriers at noise sources or ered mechanical equipment to less		/	-		
EM&A: C3	To mitigate night time construct equipped with silencers or muffl	ion noise, is dredging equipment ers?	/				
NCO	Are valid construction noise per inspection?	mits, if required, available for		/			
NCO	Are conditions of construction n relevant part(s) of the works imp			/			
NCO	Are valid noise emission labels held percussive breakers?	fixed at air compressors and hand		/			
	Major noise source(s)	☐ Traffic		Constr site	uction	activi	ties inside the
		Construction activities outside the site		Others			

#### Abbreviation

Signatures ET Member  Contractor's Representative	al (Construction Phase) Ordinance al Ordinance
Signatures	
Signatures	
Signatures	<del></del>
Signatures	
ET Member Contractor's Representative	
(Name in Block Jetters: ) (Name in Block Jetters:	

11th November 2002

# The Hongkong Electric Co. Ltd. Lamma Power Station Extension – Site Formation, Piling Works and Superstructure Works Weekly Site Inspection Checklist

	on date WSO Time Lo Do Insp	octed	`	T: [	an	
Site	LAX - Supersyndere		10	Ontra	ictor:	Engo We
Weather			·			
Condition	on Sunny Fine Overcast Hazy			rizzle		Rain Sr
Temper	ature☑☑°C Humidity ☐ High ☑ Mode				·	Rain St
Wind	Calm Light Breeze Stron			.OW		
GENERA	L		<u>-                                      </u>	·		
Ref.	Checklist Condition	N/A	Yes	Т.,	7	
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		10	N.	O Uni	k Remarks
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?	<del> </del>	1	1	<del> </del>	
		· I	· /	<b>/</b>	1	1
IR QUAL	JITY		1/	<u> </u>		
	TTY Checklist Condition					
<del></del>	Checklist Condition	N/A	Yes	No	Unk	Remarks
Ref.		N/A	Yes	No	Unk	Remarks
Ref. Cap311R:	Checklist Condition  General Requirements  Has the contractors notified EPD of the construction site which is classified as a notifiable work in a consideration.	N/A	Yes	No	Unk	Remarks
Cap311R: Cap311R: Cap311R: ch 12(3)	Checklist Condition  General Requirements  Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?  A compressed air jet shall not be used for	N/A	Yes	No	Unk	Remarks
Ref. Cap311R: Cap311R: ch 12(3)	Checklist Condition  General Requirements  Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?  A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?  Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the contracts batching at a start of the contractors possess.	N/A	Yes	No	Unk	Remarks
Cap311R: Cap311R: Cap311R: Ch 12(3) Cap311	Checklist Condition  General Requirements  Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?  A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?  Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	N/A	Yes	No	Unk	Remarks
Cap311R: 3 Cap311R: Sch 12(3) Cap311	Checklist Condition  General Requirements  Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?  A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?  Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?  Construction Sites  Are haul roads paved with concrete preserved in the construction of the contractors possess.	N/A	Yes	No	Unk	Remarks

Page Load

 $^{12}$  (1912). Cat HANGI Tooler 1905, the color colline at a  $^{12}$ 

Ref.	Checklist Candition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?					
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?					
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	/				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/				
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	/				
EM&A: Al	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	/				
	Use of vehicles					
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	/			-	
Cap311R: Seh 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			
	Transfer of dusty materials using a belt conveyor system	·	<b></b>			
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	/				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	/				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	/				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 in?	/				
	Concrete batching plant	-	<del></del>	•		·
ЕМ&л: л2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	/				
EN1&Λ: Λ2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	/				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	/				
EM&A:	Are all the conveyor transfer points totally enclosed?	1	İ			-

	N/A Yes No Unk Remarks
Ref.	Checklist Condition
	Miscellaneous  Are completed earthworks scaled and hydrosecded and planted as
Cap311R: Seh 16	sown as passion.
Cap3110	Is open burning prohibited?  Is black smoke emission from plant/equipment avoided?
Cap311	Is black smoke chinases

STE/CHI	EMIC	AL WASTE MANAGEMENT		N/A	Yes	No	Unk	Remarks	_
· ·		klist Condition					<del></del>	T	$\dashv$
	Dre	dged Materials s the appropriate contractor possess valid dumping per s the appropriate contractor possess valid dumping per s the appropriate contractor possess valid dumping per	mits for		.\				
MP M&A: E3	dre	iged marrie trial		-	+-	+	<del>                                     </del>		
VAIP	. Ha	s the contractor kept a complete set of dumping ords/ticketing system and made them available for ins	ection?	/					$\dashv$
M&A: E3		e wastes disposed of at licensed sites?		1					
EM&A: E3	١.		ense for	Τ-	ή-	7	T-		
WMP	10	onstruction Waste and Excavated Materials toes the Contractor possess a valid Public Dumping Lie construction waste and excavated materials and make it	available			1			
EM&A: E	\ f	or inspection!		+	1	_			
WMP		Has the Contractor maintained disposal records for the construction waste and excavated materials, and made construction waste specifical?	them						
		available for inspection?  Is suitable concrete waste/excavated material used for		1					
WMP							1-1		
WMP		Are the used formworks reused as far as possible before disposed of in a landfill site?				_	+		
		the companing unsuitable excavated materials di	posed of	36	/			<u></u>	
WMP		the public filming around			/				
EMIR	(: EJ	Are wastes disposed of at licensed sites?			·			T	
		General refuse  Has the Contractor maintained a disposal record for inspection?	r general r	efuse		/			
WMI	•	Has the Contractor mannament and made it available for inspection?  Is general refuse stored within receptacles and sep			+				
WM	P	Lamical Wisics.			-	+,	+	+	
IVA	IP.	ls the refuse disposed of regularly and properly?  Are burning of refuse at site and dumping at sea	prohibited	·!		<u>- † .</u>	/-		
W	4P	or mical Waste	Learnits	from	-T-,	7			
E (	1&1	Chemical Waste  Has the contractor obtained the necessary dispositive relevant authority, if required, according to (Chemical Waste) (General Regulation)?	Waste Dist	posal	/		 	\	

Ref	Checklist Condition	N/A	Ves	Na	Unk	Remarks		
woo	Has the Contractor been registered as a chemical waste producer?	/						
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?					+		
em&a: E4	Is chemical waste handled according to the Code of Practice on the Packaging. Handling and Storage of Chemical Waste**?	/						
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?							
	Storage, collection and transportation of waste							
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?	/						
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?							
	(1) public fill materials for on-site reuse, or disposal at public filling area;	7						
	(2) reusable / recyclable materials;	/						
	(3) un-reusable / non-recyclable waste for landfill disposal.	/						
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?							

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off					
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	/				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	/				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	/				
PN1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	/				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent sitt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	/				
BALLOL	Groundwater Is groundwater that pumped out of wells discharged into storm			ļ		
PN1/94	drains after the removal of silt in silt removal facilities?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	1		<u> </u>		<del></del>
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?					
	Wheel Washing Water	1				
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?					

#### MARINE ECOLOGY

Ref	Checklist Condition	NA	Yes	No	Unk	Remarks
EM&A: GI	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	/				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?		/			
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	1				

#### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes sched	uled to minimize noise nuisance?		1			
EM&A: CI	Are construction works or equip nuisance?	ment sited to minimize noise		/			
EM&A: CI	Are all plant and equipment mai conditions?	ntained in good operating		/			
EM&A: CI/GP	Is idle equipment turned off or the	hrottled down?	<del>                                     </del>				
EM&A: CI	Are methods of working devised maisance?	are methods of working devised and arranged to minimize noise uisance?  are construction works carried out in a manner to minimize noise		/			
EM&A: C1)	Are construction works carried on nuisance?	out in a manner to minimize noise		/			
EM&A: C2	To mitigate construction noise during Sunday's and public holidays, is either one of the following measures adopted?  a) Mitigation by portable noise barriers at noise sources or b) Rescheduling of some powered mechanical equipment to less sensitive time periods?			/	-		
EM&A: C3	To mitigate night time construct equipped with silencers or muffl	ion noise, is dredging equipment ers?	/				
NCO	Are valid construction noise per inspection?	mits, if required, available for		/			<u> </u>
NCO	Are conditions of construction n relevant part(s) of the works imp	oise permits, if any, for the elemented accordingly?		/			
NCO	Are valid noise emission labels held percussive breakers?	fixed at air compressors and hand		/			
	Major noise source(s)	☐ Traffic	1	Constr site	uction	activit	ies inside the
	major noise source(s)	Construction activities outside the site		Others			

#### Abbreviation

	VEP; AMP Cap3 FB; Cap3 FO; Cap3 FF; PN1794; Unk;	Varied Environmental Permit Waste Alamagement Plan APC (Construction Dust) Regult APC (Open Burning) Regulation Air Pollution Control Ordinance Practice Note for Professional Pounknown	ation NCO: n WDO:	EM&A Manual (Construction Phase) Noise Control Ordinance Waste Disposal Ordinance  Orainage)
	Remark			
	Nil			
			**	
v Yi				
- ;				
	Signatures			•
	ET Member	Contracto	or's Representative	
				IEC's Representative This site inspection was carried out in the presence of IEC's representative
	Dame in Block	(Name in	Block letters:	Name in Block Letters:  ( Man In Ma

11th November 2002

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	date 3 MAY 2006 Time 09:05 hcs Inspec	ted By	ET:	7.	F. CI	TER CHENG /SANKI
Site	LMX-19 Hectrical Gredion Area.		Con	tracto	or: pe	TER CHENG /SANKI
Weather						
Condition		_	_	,	_	
		L.	Driz	zle	<b>√</b> R	ain Storm
Temperat	ure Q4 °C Humidity ✓ High Modera	ıte [	Lo	W		
Wind	Calm Light . Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?	-	V			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/	i		
AIR QUAL Ref.	Checklist Condition	N/A	7/	<u> </u>	<b>V.</b> 1	
		INIA	Yes	No	Unk	Remarks
Cap311R:	General Requirements  Has the contractors notified EPD of the construction site which is		ļ	ı	<u></u> I	
3	classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?	/		!		
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		<b>✓</b>			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	/				
	Construction Sites		J	L		
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		<b>/</b>			Varie Spraying Pravided By Fand Y.
	Stockpiling of dusty materials		J	,J_		The state of the s
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)	<u> </u>	<u> </u>	<u> </u>	l	
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	<b>V</b>				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	1				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	<b>✓</b>				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/			<del></del>	
	Loading, unloading or transfer of dusty materials	_l				
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	v				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	1				
	Use of vehicles					
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		V			Whee West Services from By Part Y.
	Transfer of dusty materials using a belt conveyor system		- 1		l	y lait.
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	V		1		
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	/				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?					
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?					*164.
	Concrete batching plant	L				
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	V				176.
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	V				
I		v		_		
EM&A: \\2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous				L	
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	V				
Cap311O	Is open burning prohibited?		V			
Cap311	Is black smoke emission from plant/equipment avoided?		/			

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks					
	Dredged Materials	1		<u>'</u>							
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	V									
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	1									
EM&A: E3	Are wastes disposed of at licensed sites?	1									
	Construction Waste and Excavated Materials										
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	v									
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	V				<u>-</u> .					
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	1				-					
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	1			***						
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	1									
EM&A: E3	Are wastes disposed of at licensed sites?	1		******							
	General refuse		1	L	I						
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		v								
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		1								
WMP	Is the refuse disposed of regularly and properly?		V			<del></del>					
WMP	Are burning of refuse at site and dumping at sea prohibited?		<b>V</b>								
	Chemical Waste										
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	1		}							

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks		
WDO	Has the Contractor been registered as a chemical waste producer?	<b>√</b>						
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	U						
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	J				,		
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?	V						
	Storage, collection and transportation of waste							
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		v					
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?	N						
	(1) public fill materials for on-site reuse, or disposal at public filling area;							
	(2) reusable / recyclable materials;							
	(3) un-reusable / non-recyclable waste for landfill disposal.							
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?	/						

#### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off	•	•			
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	1				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	V				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	v				
PN1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	V				4
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?  Groundwater	٧				
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	V				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	<u> </u>				
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	V				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	1				

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	1				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	1				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	V				# H

#### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes sched	uled to minimize noise nuisance?		1			
EM&A: C1	Are construction works or equip nuisance?	ment sited to minimize noise		~			
EM&A: CI	Are all plant and equipment mai conditions?	ntained in good operating		1			
EM&A: C1/GP	Is idle equipment turned off or the	hrottled down?		<b>✓</b>			
EM&A: Cl	Are methods of working devised nuisance?	l and arranged to minimize noise		1			
EM&A: C1)	Are construction works carried of nuisance?	out in a manner to minimize noise		1			n + <del>F (10 m) 4</del> 1
EM&A: C2				1			
EM&A: C3	To mitigate night time constructi equipped with silencers or muffl		v				***
NCO	Are valid construction noise per inspection?	nits, if required, available for	<b>V</b>				_
NCO	Are conditions of construction ne relevant part(s) of the works imp	1					
NCO	Are valid noise emission labels f held percussive breakers?	ixed at air compressors and hand	V	,			
		☐ Traffic	1	Constr site	uction	activi	ties inside the
	Major noise source(s)	Construction activities outside the site	<del></del>	Others		-	

Abbreviation			
VEP: WMP: Cap311R: Cap3110: Cap311: PN1/94: Unk:	Varied Environmental Permit Waste Management Plan APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance Practice Note for Professional Persons (Cor Unknown	NCO: WDO:	EM&A Manual (Construction Phase Noise Control Ordinance Waste Disposal Ordinance rainage)
Remark			
	•		
.,			
	- 17 - 17 - 17 - 17 - 17 - 17 - 17 - 17		THE PROPERTY OF THE PROPERTY O
Signatures		•	
ET Member	Contractor's Repres	entative	

T.F. CHIU PUE

PETER CHENG ) SANKO

12th January 2005

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	date lo MAY 2006 Time 09: 20 hrs Inspec	ted By	ET:	7	F. CHI	и <i>  РОЕ</i> 16r СИЕМСТ/	]
Site	LMX -19 Electrical Trection Area		Con	tracto	or: PE	TER CHENG	BAN
Weather							•
Condition	Sunny Fine Overcast Hazy		Driz	zle	R	ain Stor	m
Temperati	ure ☐ °C Humidity ✓ High ☐ Modera	ite [	Lov	N			
Wind	Calm V Light . Breeze Strong						
GENERAL		***			•		
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks	
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		/				
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/	-			
AIR QUALI Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks	
ACI.		N/A	Yes	No	Unk	Remarks	
Cap311R: 3	General Requirements  Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?						
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		✓				
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	/					
	Construction Sites						
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?					Noter Spray	my 2014
-11	Stockpiling of dusty materials					0	(
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	/					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)			.l		
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	1				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	1				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	V				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	1				
	Loading, unloading or transfer of dusty materials			<u> </u>		
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	1				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	1				
	Use of vehicles	·		. <u> </u>		********
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			Wheel Working Service Provi By Paul Y
"	Transfer of dusty materials using a belt conveyor system		I			<del>3</del> 1 mil (1
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	/				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	V				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	/	,			
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	1				
	Concrete batching plant		( .			
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	<b>V</b>				
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	V				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	V				
EM&A:	Are all the conveyor transfer points totally enclosed?	/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous	<u> </u>				·
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	V				
Cap311O	Is open burning prohibited?		U.			
Cap311	Is black smoke emission from plant/equipment avoided?		1			

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					<u>'</u>
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	V				
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	1				
EM&A: E3	Are wastes disposed of at licensed sites?	1				
	Construction Waste and Excavated Materials					
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	v				
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	1				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	/				
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	/				***
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	V				
EM&A: E3	Are wastes disposed of at licensed sites?	J				
	General refuse		-			
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		1			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		<b>√</b>			
WMP	Is the refuse disposed of regularly and properly?		1			
WMP	Are burning of refuse at site and dumping at sea prohibited?		V			
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks		
WDO	Has the Contractor been registered as a chemical waste producer?	v						
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	V						
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	V						
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?	1						
	Storage, collection and transportation of waste							
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		V					
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?							
	(1) public fill materials for on-site reuse, or disposal at public filling area;							
	(2) reusable / recyclable materials;							
	(3) un-reusable / non-recyclable waste for landfill disposal.							
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?	/						

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off	- I		ı	I	,
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	/				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	1			7,7,7,11	***************************************
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	7				TT-04/6-0-1
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	V				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				. 151
PN1/94	Groundwater  Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	V				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	1				
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	/				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	1				

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	/				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	V				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	/				, , , , , , , , , , , , , , , , , , , ,

### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks		
EM&A: CI	Are working programmes sched		1						
EM&A: C1	Are construction works or equip nuisance?		1						
EM&A: C1	Are all plant and equipment maintained in good operating conditions?			<b>y</b>					
EM&A: C1/GP	Is idle equipment turned off or t	hrottled down?		1					
EM&A: C1	Are methods of working devised nuisance?	d and arranged to minimize noise		v			***************************************		
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?			1					
EM&A: C2	To mitigate construction noise during Sunday's and public holidays, is either one of the following measures adopted?  a) Mitigation by portable noise barriers at noise sources or b) Rescheduling of some powered mechanical equipment to less sensitive time periods?								
EM&A: C3	To mitigate night time construction noise, is dredging equipment equipped with silencers or mufflers?								
NCO	Are valid construction noise permits, if required, available for inspection?						, , , , , , , , , , , , , , , , , , ,		
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?								
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?						***************************************		
	Major noise source(s)			Construction activities inside the site					
	major noise source(s)	Construction activities outside the site	Others						

	1. 1.			4:	
- /-	DD	rev	VI 1	11	on

VEP:

Varied Environmental Permit

WMP:

Waste Management Plan

Cap311R: Cap3110:

APC (Construction Dust) Regulation APC (Open Burning) Regulation

Cap311: PN1/94: Unk:

Air Pollution Control Ordinance Practice Note for Professional Persons (Construction Site Drainage)

Unknown

		···
	 1000000	
·		

NCO:

WDO:

EM&A: EM&A Manual (Construction Phase)

Noise Control Ordinance

Waste Disposal Ordinance

Signatures

ET Member

Contractor's Representative

PETER CHENGE)

12th January 2005

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	date 16 MAY 2006 Time Of. 20 La Inspec	ted By			T CHI		
Site	LMX- L9 ELEGRICAL BREETION AREA		Con	шаск	or: <i>[.</i>	C. 10 / SAN	<u> 4</u> 20
Weather							-
Condition	Sunny Fine Overcast Hazy		Driz	zle	F	tain Stor	rm
Temperat	ure 5 °C Humidity High Modera	ate _	Lov	W			
Wind	Caim Light . Breeze Strong						
GENERAL							
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks	]
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		<b>√</b>				
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/				-
AIR QUAL Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks	]
	General Requirements					Account 125	
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?	<b>/</b>			•		
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		1				
Сар311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	✓					
	Construction Sites	<u> </u>	<u></u> .			<u> </u>	
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		<b>V</b>			WATER SPRAYI Provided by	
	Stockpiling of dusty materials	<u> </u>		L		ן אפעיטפטטן	והאג
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?		:				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)	<u>'</u>	· • · · · · · · · · · · · · · · · · · ·			<del></del>
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	V				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	v				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	1				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	V				
	Loading, unloading or transfer of dusty materials	·				
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	V				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	V				
	Use of vehicles	1				
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	✓				,
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			Wheel Wash Services Prov By Pal Y
	Transfer of dusty materials using a belt conveyor system					0
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	V				
_			- 1		- 1	
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	v				
		V				
Sch 20(2) Cap311R: Sch 20(3) Cap311R:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return					
Sch 20(2) Cap311R: Sch 20(3) Cap311R:	enclosed?  Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting					
Cap311R: Sch 20(3) Cap311R: Sch 20(4) Cap311R: Sch 20(4)	enclosed?  Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?					
Cap311R: Sch 20(3)  Cap311R: Sch 20(4)  EM&A: A2  EM&A:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?  Concrete batching plant  Are the loading, unloading, handling, transfer or storage of any	<i>J</i>				
Sch 20(2) Cap311R:	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?  Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?  Concrete batching plant  Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?  Are dusty materials, except cement and dry PFA, wetted by water	<ul><li>✓</li><li>✓</li></ul>				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous			J		
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	V:				
Cap3110	Is open burning prohibited?		V			
Cap311	Is black smoke emission from plant/equipment avoided?		<b>/</b>			

### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials .					
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	1				
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	1				
EM&A: E3	Are wastes disposed of at licensed sites?	1				
	Construction Waste and Excavated Materials					
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	J				
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	1				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	5				
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	~				
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	J				
EM&A: E3	Are wastes disposed of at licensed sites?	1				
	General refuse					
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		✓			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		V			
WMP	Is the refuse disposed of regularly and properly?		V			
WMP	Are burning of refuse at site and dumping at sea prohibited?		$\overline{}$			
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	J				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks			
WDO	Has the Contractor been registered as a chemical waste producer?	V							
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	<b>V</b> :							
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	V							
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?	J							
	Storage, collection and transportation of waste								
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		J						
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?	1							
· · · · · · · · · · · · · · · · · · ·	(1) public fill materials for on-site reuse, or disposal at public filling area;								
	(2) reusable / recyclable materials;					,			
	(3) un-reusable / non-recyclable waste for landfill disposal.								
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?								

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off			I	•	
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	U				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	V				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	V				
PN1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	~				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	J				
PN1/94	Groundwater   Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	1				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	1				
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	v				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	<b>V</b>				

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	~				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	✓				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	/				

### NOISE

 $\bigcirc$  .

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes schedu	ıled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equiprinuisance?	ment sited to minimize noise		Ų			
EM&A: C1	Are all plant and equipment mair conditions?	ntained in good operating		J			
EM&A: C1/GP	Is idle equipment turned off or th	rottled down?		7			
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise		1			
EM&A: C1)	Are construction works carried or nuisance?		1				
EM&A: C2	holidays, is either one of the follo a) Mitigation by portable noise	Rescheduling of some powered mechanical equipment to less					
EM&A: C3	To mitigate night time construction equipped with silencers or muffle		V				
NCO	Are valid construction noise pern inspection?	nits, if required, available for	V				
NCO	Are conditions of construction no relevant part(s) of the works impl		<b>v</b>				
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?		7				,
		☐ Traffic		Constr	uction	activi	ties inside the
	Major noise source(s)	Construction activities		Others			

Abbreviation			
VEP: WMP: Cap311R: Cap311O: Cap311: PN1/94: Unk:	Varied Environmental Permit Waste Management Plan APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance Practice Note for Professional Persons (Co	NCO: WDO:	EM&A Manual (Construction Phas Noise Control Ordinance Waste Disposal Ordinance Orainage)
Remark			
	<del></del> .		
Signatures			
	Contractor's Repres	cantativa	

(Name in Block letters:

C.C.Lo

12th January 2005

(Name in Block letters:

T.F. CHIN

### The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	idate DENAIZOD Time 10138hrs Inspec	ted By			F. CHI	
Site	LHX-LY ELECTRICAL FREETION AREA.		Cor	itraci	or: C	CLO /SAA
Weather						
Condition	Sunny Fine Overcast Hazy		Dri	zzle	R	ain Storm
Temperat	ure C Humidity High Modera	ate [	Lo	w		
Wind	Calm Light . Breeze Strong					
GENERAL						····
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		1			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?					
AIR QUAL Ref.	Checklist Condition	N/A	Yes	No	Unk	Parada
	General Requirements	14/1	_ res	110	Olik	Remarks
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?					
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		/			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	V				
	Construction Sites					
EM&A : A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		/			Vater Spraying Provided By Px
***	Stockpiling of dusty materials	L				ALDRIANCE 134 LY
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
,	Cement and dry pulverized fuel ash (PFA)		-1		·	<u> </u>
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	<b>√</b> :				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	V				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	1				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	V				
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	U				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	1				
	Use of vehicles	<b>.</b>	<u> </u>			
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	V				
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		<b>√</b>		(	What Wash Services Prop By Pai Y.
	Transfer of dusty materials using a belt conveyor system					0
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	V				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	✓				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	✓				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	1				
	Concrete batching plant	1	I			
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?					
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	~		+		
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	V				ì
EM&A: A2	Are all the conveyor transfer points totally enclosed?	<b>/</b>				
	· · · · · · · · · · · · · · · · · · ·					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous	<u> </u>		·		·
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	<b>√</b> :				
Cap3110	Is open burning prohibited?		V			
Cap311	Is black smoke emission from plant/equipment avoided?					

### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials .				1	•
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	V				
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	1				
EM&A: E3	Are wastes disposed of at licensed sites?	1				
	Construction Waste and Excavated Materials					
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	U				
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	J				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	<i>y</i>				<u></u>
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	1				
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	1				1,000
EM&A: E3	Are wastes disposed of at licensed sites?	J				
	General refuse	1		·	<u> </u>	****
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		V			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		V			
WMP	Is the refuse disposed of regularly and properly?		J ,			
WMP	Are burning of refuse at site and dumping at sea prohibited?		V			
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?					Managaria de professione de la companya de la comp

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?	V				
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	V:				
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	1				
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?	<b>√</b>				
	Storage, collection and transportation of waste	V				
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		V			-
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?	/				
	(1) public fill materials for on-site reuse, or disposal at public filling area;					
	(2) reusable / recyclable materials;					
	(3) un-reusable / non-recyclable waste for landfill disposal.					
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?	1				<del> </del>

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off	1			·	
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	V				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	J				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	V				
PN1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	V				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	1				
	Groundwater					
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	1				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	1		<del>                                     </del>		
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	<b>V</b>				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	1				

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	1				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	<b>/</b>				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	1	_			

### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes schedu	Iled to minimize noise nuisance?		V			
EM&A: Cl	Are construction works or equiponuisance?	ment sited to minimize noise		V			
EM&A: C1	Are all plant and equipment main conditions?	ntained in good operating		1			
EM&A: C1/GP	Is idle equipment turned off or th	rottled down?		J			
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise		/			
EM&A: C1)	Are construction works carried o nuisance?	ut in a manner to minimize noise		1			
EM&A: C2	To mitigate construction noise du holidays, is either one of the folka) Mitigation by portable noise b) Rescheduling of some power sensitive time periods?	owing measures adopted?	J				
EM&A: C3	To mitigate night time constructi equipped with silencers or muffle		J				
NCO	Are valid construction noise pern inspection?	nits, if required, available for	1				
NCO	Are conditions of construction no relevant part(s) of the works imp		1				
NCO	Are valid noise emission labels fi held percussive breakers?	xed at air compressors and hand	J	·			
	Major noise source(s)	Traffic  Construction activities		Constr site Others		ı activi	ties inside the





### Abbreviation

VEP: WMP: Cap311R: Cap311O: Cap311: PN1/94:	Varied Environmental Permit Waste Management Plan APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance Practice Note for Professional Persons (Control Open Professional Persons)	EM&A: EM&A Manual (Construction Phase) NCO: Noise Control Ordinance WDO: Waste Disposal Ordinance astruction Site Drainage)	
Unk:	Unknown		
Remark			
	·		
Signatures			
ET Member	Contractor's Repres	entative IEC's Representative	
		This site inspection was con in the presence of IEC's rep	iel

(Name in Block letters:

(Name in Block letter

CHIN 701 F4 ) C.C./o

SAAKO

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12th January 2005

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	Inspection of the state of the	ted By			CHIV	
Site	LMX-19 ELEGRICAL EREGION AREA		Con	tracto	or: <i>pz78</i>	RCHENG /SA
Weather					· · · · · ·	
Condition	Sunny Fine Overcast Hazy	V	Driz	zzie	R	ain Stor
Temperat	ure 26 °C Humidity High Modera	ate	Lo	w		
Wind	Calm Light . Breeze Strong	<b>I</b>				
GENERAL			<u> </u>			
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		V			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		7			
IR QUAL Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements	1,711		110	Olik	Remarks
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?	<b>/</b>	-			
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?					
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	1				
	Construction Sites	1				
EM&A : A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		V			Nater Spraying Provided by
, ,	Stockpiling of dusty materials	1				11 10 verest by
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)			•	•	<u> </u>
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	<b>⊘</b>				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	V				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	V				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	J				
	Loading, unloading or transfer of dusty materials	l .	1			
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	V				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	1				
	Use of vehicles		1	L		
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	V				
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			Wheel Wash Services Pr By Panl Y
	Transfer of dusty materials using a belt conveyor system			!		0 1000
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?					
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	1				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	1				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	V				
	Concrete batching plant				<u> </u>	
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	1				
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	V				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	V				
EM&A: A2	Are all the conveyor transfer points totally enclosed?	/				
		1	l			

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	V.				
Cap3110	Is open burning prohibited?		1			
Cap311	Is black smoke emission from plant/equipment avoided?		/			

### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	<b>S</b>				
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	S				
EM&A: E3	Are wastes disposed of at licensed sites?	/				
	Construction Waste and Excavated Materials					
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	V				
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	J				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	1				
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	/				
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	٧	:			
EM&A: E3	Are wastes disposed of at licensed sites?	1				
	General refuse					
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		S			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		/	~ <del>=.</del>		
WMP	Is the refuse disposed of regularly and properly?	,	7			
WMP	Are burning of refuse at site and dumping at sea prohibited?		V			
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	V				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks	
WDO	Has the Contractor been registered as a chemical waste producer?	V					
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?	<b>V</b> :					
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	V					
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?	/					
	Storage, collection and transportation of waste						
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		V				
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?	V					
	(1) public fill materials for on-site reuse, or disposal at public filling area;						
	(2) reusable / recyclable materials;						
	(3) un-reusable / non-recyclable waste for landfill disposal.						
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?	1					

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off	•				
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	1				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	V				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	1				
PN1/94	Are open stockpiles of construction materials (e.g., aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	<b>√</b>				9.700
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	J				
PN1/94	Groundwater Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	<b>v</b>				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
_	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	V	:			
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	/				

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	1				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	V				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	1				

### NOISE

0...

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: CI	Are working programmes sched	uled to minimize noise nuisance?		V			***
EM&A: C1	Are construction works or equip nuisance?	ment sited to minimize noise					
EM&A: C1	Are all plant and equipment mai conditions?	ntained in good operating		J			
EM&A: C1/GP	Is idle equipment turned off or the	nrottled down?		J			
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise		J			
EM&A: C1)	Are construction works carried of nuisance?	out in a manner to minimize noise		J			
EM&A: C2				J			
EM&A: C3	To mitigate night time constructi equipped with silencers or muffle		1				
NCO	Are valid construction noise per inspection?	nits, if required, available for	1				
NCO	Are conditions of construction no relevant part(s) of the works imp	oise permits, if any, for the lemented accordingly?	V				
NCO	Are valid noise emission labels fi held percussive breakers?	ixed at air compressors and hand	1				
	Major noise source(s)	Traffic		Constr site	uction	activi	ties inside the
	ajor iroise source(s)	Construction activities outside the site		Others			

### Abbreviation

VEP:

Varied Environmental Permit

WMP:

Waste Management Plan

Cap311R:

APC (Construction Dust) Regulation

Cap3110: Cap311: PN1/94: Unk:

APC (Open Burning) Regulation WDO: Waste D
Air Pollution Control Ordinance
Practice Note for Professional Persons (Construction Site Drainage)

Unknown

Remark		
		<del></del>
	•	
Signatures		
Cm > 41	Control Demonstration	

EM&A: EM&A Manual (Construction Phase)

Noise Control Ordinance

Waste Disposal Ordinance

NCO:

ET Member

Contractor's Representative

(Name in Block letters:

T.F. CHILL )

(Name in Block letters: 0

PETER CHENG

SANKO

12th January 2005

### C/N:04/9018

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection of	late 4May 2006 Time 09:30 Inspected	_ ` ⊢	ET:		W. S.	
Site	LMX – Gas Receiving Station		Contra	ctor:	W. F.	Kwok (TDK)
Weather						
Condition	Sunny Fine Overcast Hazy		Driz	zle [	Ra	ain Storn
Temperatu	re T G Humidity High Modera	te	Lov	v		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		V			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/			
AIR QUALI Ref.	TY Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements	L.,	L	<u> </u>		
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?	✓				
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		V			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	V				
	Construction Sites		•		•	
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		~			Spraying By P.Y.
	Stockpiling of dusty materials	•	•	,		
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	./				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	~				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	/				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	~				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	V				
	Loading, unloading or transfer of dusty materials	•	•		•	
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	V				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	~				
•	Use of vehicles	•				1 .
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	V				
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		✓			Cleaning Promoted By PY.
	Transfer of dusty materials using a belt conveyor system					J.
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	V				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	V				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	V				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	V				
	Concrete batching plant					
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?					
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	1				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	1	Ē			
EM&A: A2	Are all the conveyor transfer points totally enclosed?	1				
	J		·	<del></del>		•

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	<b>/</b>				
Cap3110	Is open burning prohibited?		/			
Cap311	Is black smoke emission from plant/equipment avoided?		V			

### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials			•		•
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	V				
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	✓				
EM&A: E3	Are wastes disposed of at licensed sites?	<b>V</b>				
	Construction Waste and Excavated Materials	J				<del></del>
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	V				
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	V				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	<b>✓</b>				
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	<b>V</b>				
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	/				
EM&A: E3	Are wastes disposed of at licensed sites?	1				
	General refuse					
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		/			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		✓			
WMP	Is the refuse disposed of regularly and properly?		1			
WMP	Are burning of refuse at site and dumping at sea prohibited?		1			
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?		<b>~</b>			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?		/			
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?		~			
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?		~			
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?		/			
	Storage, collection and transportation of waste					
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		/			
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;	V				
	(2) reusable / recyclable materials;	V				
	(3) un-reusable / non-recyclable waste for landfill disposal.		V			
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?		/			

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off					
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	V				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	~				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	V				
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	V				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	/				
PN1/94	Groundwater  Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	V				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	<u></u>				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	/				

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	~				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	_				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	1		-		

### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes schedu	led to minimize noise nuisance?		1			***************************************
EM&A: C1	Are construction works or equipmuisance?	nent sited to minimize noise		V			
EM&A: C1	Are all plant and equipment main conditions?	tained in good operating		/			
EM&A: C1/GP	Is idle equipment turned off or th	rottled down?		/			
EM&A: C1	Are methods of working devised nuisance?						
EM&A: C1)	Are construction works carried or nuisance?		~				
EM&A: C2	To mitigate construction noise du holidays, is either one of the folloa) Mitigation by portable noise b) Rescheduling of some powe sensitive time periods?		✓				
EM&A: C3	To mitigate night time constructie equipped with silencers or muffle		/				
NCO	Are valid construction noise pern inspection?	nits, if required, available for	~				
NCO	Are conditions of construction no relevant part(s) of the works imple		1				
NCO	Are valid noise emission labels fi held percussive breakers?	xed at air compressors and hand		1			
	☐ Traffic			Constr site	uction	activi	ties inside the
	Major noise source(s)	☐ Construction activities outside the site					

### Abbreviation VEP: Varied Environmental Permit EM&A: EM&A Manual (Construction Phase) NCO: Noise Control Ordinance WDO: Waste Disposal Ordinance WMP: Waste Management Plan Cap311R: Cap311O: Cap311: PN1/94: Unk: APC (Construction Dust) Regulation NCO: Noise Co APC (Open Burning) Regulation WDO: Waste D Air Pollution Control Ordinance Practice Note for Professional Persons (Construction Site Drainage) Unknown Remark

Signatures

ET Member

Contractor's Representative

(Name in Block letters:

(Name in Block letters:

UW. F. Kwok)

# C/N:04/90 look The Hongkong Electric Co. Ltd. Lamma Power Station Extension − E&M Works Weekly Site Inspection Checklist

Inspection	date DMay Time 08.15 Inspected	· -	ET:	ctor	W.S	Yuen Kwok (TDK)
Site	LMX - Gas Receiving Station		Contrac	ctor.	****	ICWOK (TDK)
Weather						
Condition	Sunny Fine Overcast Hazy		Driz	zle [	R	ain Storm
Temperati	ure 25 °C Humidity High Modera	te	Lov	v		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition  Has a copy of the most update Environmental Permit been		Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		✓			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		<b>V</b>			
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements	<u></u>				
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?	✓				
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		<b>✓</b>			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	V				
	Construction Sites					
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?	<b>✓</b>				
	Stockpiling of dusty materials	•				
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	~				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks					
	Cement and dry pulverized fuel ash (PFA)										
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	V									
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	<b>J</b>									
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	✓ ·									
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	V									
	Loading, unloading or transfer of dusty materials										
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	<b>√</b>									
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	<b>✓</b>									
	Use of vehicles										
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	V									
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		✓			Cleanny Provided By P.T.					
***************************************	Transfer of dusty materials using a belt conveyor system					9					
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	V									
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	✓									
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	V									
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	<b>✓</b>	, ., .		,						
	Concrete batching plant										
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	\ \ \									
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	<b>~</b>									
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	✓									
EM&A: A2	Are all the conveyor transfer points totally enclosed?	~									

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks		
	Miscellaneous							
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	V						
Cap3110	Is open burning prohibited?		/					
Cap311	Is black smoke emission from plant/equipment avoided?		<b>✓</b>					

### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks					
	Dredged Materials	•	•								
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	V 1									
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	V									
EM&A: E3	Are wastes disposed of at licensed sites?	V									
	Construction Waste and Excavated Materials										
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	\ \									
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	J									
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	V									
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	_									
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	~									
EM&A: E3	Are wastes disposed of at licensed sites?	V									
	General refuse										
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		V								
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		J		,						
WMP	Is the refuse disposed of regularly and properly?		V								
WMP	Are burning of refuse at site and dumping at sea prohibited?		J								
	Chemical Waste										
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?		<b>/</b>								

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?		1			
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?		V			
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?		<i>J</i>			
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?		1			
	Storage, collection and transportation of waste	J	L			<del></del>
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		✓			
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?				-	***
	(1) public fill materials for on-site reuse, or disposal at public filling area;	~				
	(2) reusable / recyclable materials;	1				
	(3) un-reusable / non-recyclable waste for landfill disposal.		✓		-	-
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?		>			

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off					
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?					
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	\ \(  \)				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	V	-			
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	V				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	V				
	Groundwater					
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	V				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water	1				
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	~				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	1				

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	V				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	J				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	1				

### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes sched	uled to minimize noise nuisance?		1			
EM&A: C1	Are construction works or equip nuisance?	oment sited to minimize noise		1			
EM&A: C1	Are all plant and equipment man conditions?	ntained in good operating		/			
EM&A: C1/GP	Is idle equipment turned off or t	hrottled down?		1			
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise		V			
EM&A: C1)	Are construction works carried on nuisance?	out in a manner to minimize noise		~			1 611
EM&A: C2	To mitigate construction noise d holidays, is either one of the foll a) Mitigation by portable nois b) Rescheduling of some pow sensitive time periods?		1				
EM&A: C3	To mitigate night time construct equipped with silencers or muffl	ion noise, is dredging equipment ers?	V				
NCO	Are valid construction noise per inspection?	mits, if required, available for	1				, ,
NCO	Are conditions of construction n relevant part(s) of the works imp		J				
NCO	Are valid noise emission labels findle held percussive breakers?		1				
	Major noise source(s)	☐ Traffic ☐ Construction activities outside the site		Constru site Others	ıction	activit	ies inside the

### Abbreviation

VEP:

Varied Environmental Permit

WMP:

Waste Management Plan

EM&A: EM&A Manual (Construction Phase) NCO: Noise Control Ordinance

Cap311R: Cap311O:

APC (Construction Dust) Regulation APC (Open Burning) Regulation

Waste Disposal Ordinance WDO:

Cap311: PN1/94:

Air Pollution Control Ordinance

Practice Note for Professional Persons (Construction Site Drainage)

Unk:

Unknown

Remark					
		•			
	115 007				
			·		
				•	
,					

Signatures

ET Member

Contractor's Representative

(Name in Block letters:
(YUEN WAY SANG)

(Name in Block letters:

# C/N: 04/9016 The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	date 19May cb Time 09:15 Inspecto	ed By	ET:	Ų	<u>S</u> -	Yhen
Site	LMX- Gos Receiving Station.		Conti	acto	<u>ι. ω,</u>	7. Kude (IDK)
Weather				DHE		
Condition			Drizz	۲	Ra	in Storm
Temperat	ure 25 °C Humidity High Moderat	e	Low	i		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?		1			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/			
AIR QUAI	JTY					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks	
	General Requirements						
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?						
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		1				
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?						
	Construction Sites						
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?	(					
	Stockpiling of dusty materials						
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	/					

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Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?	(				
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?	/				
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?	1				
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/				
	Loading, unloading or transfer of dusty materials					
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?	/				
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	/				
-	Use of vehicles		•			1
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			(lenny Prinded By P-T.
	Transfer of dusty materials using a belt conveyor system					J
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?	1				
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	1				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	/				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	(				
	Concrete batching plant				,	7447
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?	/				
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	1				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	/				
EM&A: A2	Are all the conveyor transfer points totally enclosed?	/				

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Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous			<b>-</b>		
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	/				
Cap3110	Is open burning prohibited?		1			
Cap311	Is black smoke emission from plant/equipment avoided?		1			1

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks			
	Dredged Materials								
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	/							
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	/							
EM&A: E3	Are wastes disposed of at licensed sites?	/							
	Construction Waste and Excavated Materials								
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	1							
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	1							
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?	1							
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	1							
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	1							
EM&A: E3	Are wastes disposed of at licensed sites?	/							
	General refuse								
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?		1						
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		1						
WMP	Is the refuse disposed of regularly and properly?		1						
WMP	Are burning of refuse at site and dumping at sea prohibited?		7						
	Chemical Waste								
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?								

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Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?		-			
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?		/			
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?		/			
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?		/			
	Storage, collection and transportation of waste		l	<u> </u>		
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		/			
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;	1				
	(2) reusable / recyclable materials;	-				
	(3) un-reusable / non-recyclable waste for landfill disposal.		1			
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?		/			

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off					
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?	1				
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	/				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	/				
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?	/				
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?	/				
	Groundwater	1				
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	]				

Page 4 of 7
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Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	/				
	Wheel Washing Water					
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?	/				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?	1				
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?	1				
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	/				

### NOISE -

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A : C1	Are working programmes schedu	led to minimize noise nuisance?		/			
EM&A: C1	Are construction works or equipmousance?	nent sited to minimize noise		/			
EM&A: C1	Are all plant and equipment main conditions?	tained in good operating		1			
EM&A: C1/GP	Is idle equipment turned off or the	rottled down?		/			
EM&A: C1	Are methods of working devised nuisance?						
EM&A: C1)	Are construction works carried or nuisance?		1				
EM&A: C2	To mitigate construction noise du holidays, is either one of the folica) Mitigation by portable noise b) Rescheduling of some power sensitive time periods?	owing measures adopted?		/			
EM&A: C3	To mitigate night time construction equipped with silencers or muffle		(				
NCO	Are valid construction noise pern inspection?	nits, if required, available for	1				
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?						
NCO	Are valid noise emission labels fi held percussive breakers?	ixed at air compressors and hand		1			
	Major noise source(s)	☐ Traffic		site		activ	ties inside the
	1.24jor Roise Source(3)	☐ Construction activities outside the site		Others			

Cap311R: Cap311O: Cap311;	APC (Construction APC (Open Burnin Air Pollution Conti	g) Regulation	NCO: WDO:	Noise Control Ordinance Waste Disposal Ordinance
PN1/94: Unk:	Practice Note for P Unknown	rofessional Persons (Con	nstruction Site I	Orainage)
Remark		and the same interpretation and the second	MARKET SHAWARAN SALAR	ikki pera serpa sepangan didikuman ada sependan sepangan kanan ada ada kanan sebagai sepangan sepangan sepanga
	-			
Signatures				
ET Member		Contractor's Repres	sentative	
				•
IN	1	٨		
W	$\sim$			
	k letters: \	(Name in Block let		

### C/N:04/9018

# The Hongkong Electric Co. Ltd. Lamma Power Station Extension – E&M Works Weekly Site Inspection Checklist

Inspection	date W-05-200 Time 10:30 Inspected	l By	ET:			n Chim
	· · · · · · · · · · · · · · · · · · ·		Contra	ctor:	. (	n Chim
Site	LMX - Gas Receiving Station					
Weather		<del> </del>				····
Condition	Sunny Fine Overcast Hazy		Driz	zle {	R	ain Storm
Temperat	ure 15 °C Humidity ☐ High ☐ Modera	te	Lov	v		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most update Environmental Permit been displayed at all vehicular site entrances/exits for public information?					-
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?			-		
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
· · · · · · · · · · · · · · · · · · ·	General Requirements		1	1		
Cap311R: 3	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice, do the contractors notify EPD of the change?	0				
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Is this observed?		1			
Cap311	Do the contractors possess valid Air Pollution Control Specified Processes Licenses for the concrete batching plant wherever applicable and have it available for inspection?	/				
	Construction Sites					
EM&A: A1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?	0				
	Stockpiling of dusty materials	1				
Cap311R: Sch 18	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Cement and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from overfilling?					
Cap311R: Sch 15(4)	Are the handlings of cement or dry PFA through a totally enclosed system equipped with air pollution control equipment at the vent of the system?					
Cap311R: Sch 15(2)	Is bulk cement or dry PFA stored in a closed silo fitted with a high-level alarm?					
Cap311R: Sch 17	Are the cement, dry PFA or other dusty materials collected by the air pollution control equipment disposed of in totally enclosed containers?	/				
	Loading, unloading or transfer of dusty materials					**************************************
Cap311R: Sch 19	Are dusty materials, except cement and dry PFA, sprayed with water immediately prior to any loading, unloading or transfer operation?					
EM&A: A1	Are the dropping heights of the fill materials controlled to a practical level to minimize fugitive dust emission?	/				
	Use of vehicles					1
Cap311R: Sch 21(2) EM&A: A1	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
Cap311R: Sch 21(1)	Is every vehicle wheel-washed by the wheel washing facilities to remove any dusty materials from its body and wheels before leaving the construction site?		/			Cleaning provided by
	Transfer of dusty materials using a belt conveyor system					·
Cap311R: Sch 20(1)	Are belt conveyors used for transfer of dusty materials covered on the top and 2 sides?					
Cap311R: Sch 20(2)	Is every transfer point between any two-belt conveyors totally enclosed?	/				
Cap311R: Sch 20(3)	Is a belt scraper or equivalent device installed at the head pulley of every conveyor? Is the belt scraper equipped with bottom plates or similar means to prevent falling of materials from the return belts?	<u> </u>				
Cap311R: Sch 20(4)	Are stockpiling conveyors equipped with level adjusting mechanism to maintain the dropping height within 1 m?	1				
	Concrete batching plant					
EM&A: A2	Are the loading, unloading, handling, transfer or storage of any dusty materials carried out in a totally enclosed system?					
EM&A: A2	Are dusty materials, except cement and dry PFA, wetted by water spray system?	\big	_			
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?					
EM&A: A2	Are all the conveyor transfer points totally enclosed?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous		•			
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?					
Cap311O	Is open burning prohibited?					
Cap311	Is black smoke emission from plant/equipment avoided?		/			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials			·	L.,,	I
WMP EM&A: E3	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?		,			
WMP EM&A: E3	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?	V				
EM&A: E3	Are wastes disposed of at licensed sites?			<del> </del>		
	Construction Waste and Excavated Materials					<u> </u>
WMP EM&A: E3	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	~				
WMP	Has the Contractor maintained disposal records for the construction waste and excavated materials, and made them available for inspection?	/				
WMP	Is suitable concrete waste/excavated material used for on-site reclamation/filling works?					
WMP	Are the used formworks reused as far as possible before being disposed of in a landfill site?	/				
WMP	Are the remaining unsuitable excavated materials disposed of at the public filling areas?	1				
EM&A: E3	Are wastes disposed of at licensed sites?	~				
	General refuse					
WMP	Has the Contractor maintained a disposal record for general refuse and made it available for inspection?	·	\bigcup \tag{1.5cm}			
WMP	Is general refuse stored within receptacles and separated from chemical wastes?		/			
WMP	Is the refuse disposed of regularly and properly?		/			
WMP	Are burning of refuse at site and dumping at sea prohibited?					
	Chemical Waste					
EM&A: E3	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?			/		

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
WDO	Has the Contractor been registered as a chemical waste producer?		/			
EM&A: E3	Has the Contractor kept all the trip tickets for the disposal of chemical waste and made them available for inspection?					
EM&A: E4	Is chemical waste handled according to the Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?		/			
EM&A: E4	Is the chemical waste storage, if any, well maintained, kept closed and locked?					
	Storage, collection and transportation of waste	<u> </u>				
EM&A: E3	Are wastes transported by enclosed containers or covered trucks?		/			
EM&A: E3	Are waste materials segregated and sorted into 3 categories as follows?					
	(1) public fill materials for on-site reuse, or disposal at public filling area;	V				
	(2) reusable / recyclable materials;					
	(3) un-reusable / non-recyclable waste for landfill disposal.		/			
EM&A: E3	Are the records of the quantities of wastes generated and disposed off-site for the 3 categories of waste properly maintained?					

### WATER QUALITY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Surface Run-off		,			
PN1/94	Are the silt removal facilities, channels and manholes maintained and the deposited silt and grit removed regularly?					
PN1/94	Are earthworks final surfaces well compacted and the subsequent permanent work or surface protection carried out immediately after the final surfaces are formed to prevent erosion caused by rainstorms? Is appropriate drainage like intercepting channels provided where necessary?	/				
PN1/94	Are measures taken to minimize the ingress of rainwater into trenches? Is rainwater pumped out from trenches or foundation excavations discharged into storm drains via silt removal facilities?	0				
PN1/94	Are open stockpiles of construction materials (e,g, aggregates, sand and fill material) on site covered with tarpaulin or similar fabric during rainstorms? Are measures taken to prevent the washing away of construction materials, soil, silt or debris into the drainage system?					
PN1/94	Are manholes (including newly constructed ones) adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers?		<u> </u>			
	Groundwater					
PN1/94	Is groundwater that pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
PN1/94	Is water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as possible after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	/	,			
	Wheel Washing Water	L .				
PN1/94	Is a wheel-washing bay provided at every exit if practicable and is the silt removed from wash-water before discharging into storm drains?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: G1	Are all percussive piling works conducted on reclaimed land to avoid noise impact to marine mammals?		1			
EM&A: G2	Do the marine vessels moving to and from the construction site strictly follow the routes stated in the "Plan for Dredging & Reclamation, Routing of Construction Related Marine Vessels, and Installation of Silt Curtain"?		,			
EM&A: G3	Is rubble mound seawall constructed to the south and west edges of the reclamation to enhance recolonisation of marine organisms?	V				

### NOISE

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes schedu	aled to minimize noise nuisance?					
EM&A: C1	Are construction works or equiprinuisance?	ment sited to minimize noise					
EM&A: C1	Are all plant and equipment mair conditions?	ntained in good operating					
EM&A: C1/GP	Is idle equipment turned off or th	rottled down?					
EM&A: C1	Are methods of working devised nuisance?	and arranged to minimize noise					
EM&A: C1)	Are construction works carried o nuisance?	ut in a manner to minimize noise			7		
EM&A: C2	To mitigate construction noise du holidays, is either one of the follo a) Mitigation by portable noise b) Rescheduling of some power sensitive time periods?	owing measures adopted?					
EM&A: C3	To mitigate night time construction equipped with silencers or muffle						
NCO	Are valid construction noise perminspection?	nits, if required, available for	1				W. 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
NCO	Are conditions of construction no relevant part(s) of the works imp		/				
NCO	Are valid noise emission labels fineld percussive breakers?	ixed at air compressors and hand		/			
	- Major noise source(s)	☐ Traffic☐ Construction activities outside the site	ļ <u>.</u>	Constr site Others		activi	ities inside the

### Abbreviation

VEP:

Varied Environmental Permit

WMP:

Waste Management Plan

Cap311R: Cap3110:

Remark

APC (Construction Dust) Regulation APC (Open Burning) Regulation

Cap311: PN1/94:

Air Pollution Control Ordinance

Practice Note for Professional Persons (Construction Site Drainage)

Unk: Unknown

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10			W	704 - 75 - 4c	***
(A. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10		559-385-082-			
-	<b>9</b>				
A CONTRACTOR OF THE CONTRACTOR					1479
	*****	39			

NCO:

Signatures

ET Member

Contractor's Representative

IEC's Representative

EM&A: EM&A Manual (Construction Phase)

Noise Control Ordinance

Waste Disposal Ordinance

This site inspection was carried out in the presence of IEC's representative

)

M Chim

(Name in Block letters:

Chiu chia TAK Name in Block Lette

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – Construction of Transmission System Weekly Site Inspection Checklist

Inspection of	late 03/05/06 Time 09:30 Inspect	ted by	ET:	Eric I	Dai	
Site	Transmission Route (Civil Work)		Cont	racto	r: Kier	
	This is a second of the second					
Weather						
Condition	Sunny Fine Overcast Hazy		Driz	zle [	Ra	in Storm
Temperatu	re 29 °C Humidity / High Moderate	te _	Lov	v		
Wind	Calm Light Breeze Strong					
CIENIED AT						
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Checklist Condition  Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?	N/A	Yes	No	Unk	Remarks
Ref.	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public	N/A		No	Unk	Remarks
VEP 1.5	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?  Is a copy of EIA report kept in Engineers' and Contractors' offices	N/A	<b>✓</b>	No	Unk	Remarks

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks			
'	General Requirements		I		***************************************				
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice? If yes, did the contractors notify EPD of the change?	~							
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person.  Has this been observed?	1							
	Stockpiling of dusty materials								
Cap311R: Sch 18 EM&A:J1	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?		<b>✓</b>						
	Use of vehicles								
Cap311R: Sch 21(2)	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	~							
***	Miscellaneous								
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	<b>/</b>							

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
Cap311O	Is open burning prohibited?		✓			
Cap311	Is black smoke emission from plant/equipment avoided?		<b>~</b>			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
Cap466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	<b>~</b>				
Cap466	Are wastes disposed of at licensed sites?	1				
1	Construction Waste and Excavated Materials					
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	1				
Cap354	Are wastes disposed of at licensed sited?	<b>✓</b>				
	Chemical Waste					- FRANCE
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	✓				
Cap354C	Has the Contractor registered as a chemical waste producer?		<b>/</b>			
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	~				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: M1	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?	<b>\</b>				

### NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	<b>✓</b>				
EM&A: L2 ~ L5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?	<b>✓</b>				
NCO	Are valid construction noise permits, if required, available for inspection?	<b>*</b>				
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?	1				
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?	<b>*</b>				

### TERRESTRIAL ECOLOGY

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks	
EM&A: O1	Are the construction activities at la monitored to avoid impact on the a species Celtis biondii, Pteris disparestricted plants Vitis balansaeana and Rhapis excellsa?	uncommon and rare plant or and Ardicia pusilla, and the		1				
EM&A: O2	in good condition along the bound prevent tipping, vehicle movement personnel into adjacent wooded are							
EM&A: Q3		Has regular checking been performed to ensure that the work site boundaries are not exceeded and that no damage occurs to surrounding areas?						
EM&A: Q4	Is open fire prohibited and prevented within the work site boundary during construction? Is temporary fire fighting equipment provided in the work area during construction?			<b>\</b>				
		Traffic	·	Con:		ion act	ivities inside	
	Major noise source(s)	Construction activities outside the site		Others:				

### Abbreviation

VEP:

Varied Environmental Permit

Cap311R: Cap311O: APC (Construction Dust) Regulation APC (Open Burning) Regulation

Cap311: Cap466:

Air Pollution Control Ordinance Dumping at Sea Ordinance

EM&A: EM&A Manual (Construction Phase)

Noise Control Ordinance

Cap354: Waste Disposal Ordinance

Cap354c: WDO (Chemical Waste) (General) Regulation

Unk: Unknown

Remark

Signatures

ET Membe

Contractor's Representative

(Name in Block letters:

Eric, K Y Dai

Assistant Resident Engineer

(Name in Block letters:

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – Construction of Transmission System Weekly Site Inspection Checklist

Inspection	date 10/05/06 Time 09:30 Inspec	ted by	ET:			
Site -	Transmission Route (Civil Work)		Cont	racto	r: Kiei	
Weather						
Condition	✓ Sunny Fine Overcast ✓ Hazy		Driz	zle [	R	nin Stor
Temperati	rre 30 °C Humidity High Moderat	te	Lov	v		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?		1			
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site."		/			
NR QUAL	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements					
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice? If yes, did the contractors notify EPD of the change?	<b>~</b>				
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Has this been observed?	1				
	Stockpiling of dusty materials					
Cap311R: Sch 18 EM&A:J1	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to		/			
	maintain the entire surface wet to prevent dust emission?		ł			
	maintain the entire surface wet to prevent dust emission?  Use of vehicles	J	<u> </u>	<u> </u>	l	
Cap311R: Sch 21(2)		· ·				
	Use of vehicles  Is every load of dusty material on the vehicles leaving the	<b>V</b>				

Re	f.	Checklist Condition	N/A	Yes	No	Unk	Remarks
Ca	p311O	Is open burning prohibited?		✓			
Ca	p311	Is black smoke emission from plant/equipment avoided?		<b>V</b>			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					·
Cap466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	<b>✓</b>	·			
Cap466	Are wastes disposed of at licensed sites?	1				
	Construction Waste and Excavated Materials					
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	/				
Cap354	Are wastes disposed of at licensed sited?	1				
	Chemical Waste					
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	·				
Cap354C	Has the Contractor registered as a chemical waste producer?		1	<u> </u>		
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	_	J			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: MI	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?	1				

### NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	/		-		
EM&A: 1.2~1.5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?	<b>*</b>				
NCO	Are valid construction noise permits, if required, available for inspection?	<b>/</b>				
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?	<b>/</b>				
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?	<b>/</b>				

### TERRESTRIAL ECOLOGY

Ref	Cheeklist Condition		N/A	Yes	No	Unk	Remarks	
EM&A: O1	Are the construction activities at la monitored to avoid impact on the u species Celtis biondii, Pteris dispar restricted plants Vitis balansaeana, and Rhapis excellsa?	ncommon and rare plant r and Ardicia pusilla, and the		<b>~</b>				
EM&A: O2	in good condition along the boundar prevent tipping, vehicle movement personnel into adjacent wooded are	Are fences erected in accordance with the Hoarding Plan and kept in good condition along the boundary of construction sites to revent tipping, vehicle movements, and encroachment of the ersonnel into adjacent wooded areas, particularly where the rare, and incommon and restricted plant species are located?  Has regular checking been performed to ensure that the work site						
EM&A: Q3		not exceeded and that no damage occurs to						
EM&A: Q4	Is open fire prohibited and prevented within the work site boundary during construction? Is temporary fire fighting equipment provided in the work area during construction?			<b>~</b>				
		Traffic	~	Con the		ion act	tivities inside	
	Major noise source(s)	Construction activities outside the site		Oth	hers:			

## Abbreviation VEP Varied Environmental Permit EM&A: EM&A Manual (Construction Phase) Cap311R: Cap311O: Cap311: Cap466: APC (Construction Dust) Regulation NCO: Noise Control Ordinance Cap354: Waste Disposal Ordinance APC (Open Burning) Regulation Air Pollution Control Ordinance Cap354c: WDO (Chemical Waste) (General) Regulation Dumping at Sea Ordinance Unk: Unknown Remark Signatures ET Membe Contractor's Representative Name in Block letters: (Name in Block letters Bric, K Y Dai Assistant Resident Engineer

20th December 2001

## The flongkong Electric Co. Ltd. Lamma Power Station Extension – Construction of Transmission System Weekly Site Inspection Checklist

Incusation	date 18/05/06	Time	10:30	Tres	pect	d by	B"C:	Hend	ry Ho	,
Inspection	10/05/00	ا ۱۰۰۰ نے	- 210 4			!: !:			r. Kie	
Site	Transmi	sion Route (Civ	il Work)			!; !i "	<u>L</u>			
			,							
Veather										
****		Fine	Overcast	Haz.				la أ	✓ R	ain St
Condition	Sunny	Fine	Overcast			-		-216 [	<u></u> ]	· (
Temperati	are 21 °C	Humidity	/ High	Mod	ierst		Lov	W		
Wind	Calm	Light	Breeze	✓ Stro	ηg					
							· 	_	<del></del>	
ENERAL				·	! !			,		
Ref.	Checklist Condition	jt	- I AMADELIA - III			N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the n						†	1	**************************************	
	displayed at all veh information?	pular site entrance	es/exits for public	:	] [		1		ĺ	
VEP 1.6	ls a copy of EIA rep	ort kept in Engine	eers' and Contract	tors' offic	es		<del> </del>	<del> </del> -	<del> </del> -	 
	on site?					!	1			Ì
	<del></del>	,		·	† <u>-                                   </u>	<del></del>			L——.	<u> </u>
						-			·	
IR QUAL	ITY		, :		1. A					,
			<del></del>				· T——	Т—		
Ref	Checklist Conditio	<b>D</b>			7	N/A	Yes	No	Unk	Remarks
	General Requirem									
Cap311R;	Has the contractors classified as a notific change in the notice change?	ible work in a spe	cified form? If th	ere is any	<b>,</b> 1	1	: .			
Cap311R: Sch 12(3)	A compressed air jet from any vehicle, eq Has this been observ	ui <b>ome</b> nt, other ma	for cleaning or cleaning or cleaning or cleaning or person.	caring du	st	·			'	
	Stockpiling of dust		·							
Cap311Rı	Are stockpiles of due	ty materials entire	ly covered with it	mponion	<u>.</u>			_	. <del></del>	· · · · · · · · · · · · · · · · · · ·
ich 18 EM&A:J1	sheets or sheltered di maintain the entire s	the top and 3 side	es or sprayed with	s suddan th		×				
	Use of vehicles	<del></del>								
ap311R:	Is every load of dusty	material on the v	ehicles leaving th	C	1			_		
ch 21(2)	construction site cov	red entirely by cle	an impervious sh	ecting?		1	. ]	-		
	Miscellaneous				7				l	
ap311R; ch 16	Are completed earthy soon as possible?	orks sealed and h	ydroseeded and p	lanted		1				<u> </u>
		1	:							

Page 1 of 4

Ref.		Checklist Condition				N/A	Yes	No	Unk	Remarks
Cap311	ō	Is open burning prohibited?		-	Ш		<b>'</b>			-
Cap311		Is black smoke emission from plant/equipment avoided?	5	:			<b>✓</b>			

Ref	Checklist Condition   N/A   Yes   No   Unk   Remarks
	Dredged Materials
Cap466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?
Cap466	Are wastes disposed of at licensed sites?
	Construction Waste and Excavated Materials
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?
Cap354	Are wastes disposed of at licensed sited?
	Chemical Waste
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?
Cap354C	Has the Contractor registered as a chemical waste producer?
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?

### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: M1	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?					

Page 2 of 4

23. MAY. 2006 (TUE) 10:06 COMMUNICATION No. 23 PAGE. 2

N	O	Т	Ċ.	К

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	Y				
EM&A L2 ~ L5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?				i	
NCO	Are valid construction noise permits, if required, available for inspection?		<b>*</b>		:	LPS sites
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?		~			
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?		1	. ;		:

### TERRESTRIAL ECOLOGY

Ref.	Checklist Condition	!		IV/A	Yes	No	Unk	Remarks	
EM&A: O1	Are the construction activities at a monitored to avoid impact on the species Celtis biondii, Pteris disprestricted plants Viiis balansaeam and Rhapis excellsa?	uncommon and rare plant ur and Ardicia pusilla, and the			~				
EM&A: O2	Are fences erected in accordance in good condition along the bound prevent tipping, vehicle indvener personnel into adjacent wooded a uncommon and restricted plant sp	dary of construction sites to his, and encroachment of reas, particularly where the rare	The second secon		·				
EM&A: Q3	Has regular checking been perform boundaries are not exceeded and surrounding areas?		-		~				
EM&A: Q4	Is open fire prohibited and preven boundary during construction? Is equipment provided in the work a	temporary fire fighting			~			Printed half and the street of	
		Traffic		·	Con the		ion act	ivities insid	e
	Major noise source(s)	Construction activities outside the site		1	Oth	ors:			

Page 3 of 4

23. MAY. 2006 (TUE) 10:06

COMMUNICATION No. 23

PAGE. 4

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension - Construction of Transmission System Weekly Site Inspection Checklist

It	spection o	late 24/05/06 Time 09:30 Inspec	ted by	ET;			
S	ite	Transmission Route (Civil Work)		Cont	racto	r; Kier	
W	eather			· '.			
C	ondition	Sunny Fine Overcast Hazy	~	Driz	zle [	Ra	nin Storm
T	emperatu	re 28 °C Humidity / High Moderat	te	Lov	v		
W	ind	Calm  Light  Breeze  Strong					
GF	NERAL		_				
R	ef.	Checklist Condition	N/A	Yes	No	Unk	Remarks
V	EP 1.5	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?		<b>/</b>			
V	EP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		<b>✓</b>			
	R QUALI ef.	TY Checklist Condition	N/A	Yes	No	Unk	Remarks
-		General Requirements		L			
C	ap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice? If yes, did the contractors notify EPD of the change?	~				
	ap311R: ch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Has this been observed?	<b>✓</b>				
		Stockpiling of dusty materials					
S	ap311R: th 18 M&A:J1	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?		<b>√</b>			
		Use of vehicles					
	ap311R: ch 21(2)	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	<b>√</b>				
		Miscellaneous					
-	ap311R:	Are completed earthworks sealed and hydroseeded and planted as					

I	Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
C	[ap3110]	ls open burning prohibited?		<b>✓</b>			
(	Cap311	Is black smoke emission from plant/equipment avoided?		✓			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks		
	Dredged Materials					l		
Сар466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?	<b>~</b>						
Сар466	Are wastes disposed of at licensed sites?	<b>✓</b>						
	Construction Waste and Excavated Materials		<u> </u>			· · · · · · · · · · · · · · · · · · ·		
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	✓						
Cap354	Are wastes disposed of at licensed sited?	1						
	Chemical Waste							
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	1						
Cap354C	Has the Contractor registered as a chemical waste producer?		~					
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	/						

R	ef	Checklist Condition	N/A	Yes	No	Unk	Remarks
E	M&A: II	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?	✓				

### NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	1				7.
EM&A: L2 ~ L5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?	1				7
NCO	Are valid construction noise permits, if required, available for inspection?	<b>/</b>				T + 1 de
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?	<b>/</b>	7			
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?	1				

### TERRESTRIAL ECOLOGY

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: O1	Are the construction activities at la monitored to avoid impact on the uspecies Celtis biondii, Pteris disparestricted plants Vitis balansaeana, and Rhapis excellsa?	incommon and rare plant r and Ardicia pusilla, and the		<b>V</b>			
EM&A: O2	Are fences erected in accordance win good condition along the boundary prevent tipping, vehicle movement personnel into adjacent wooded are uncommon and restricted plant spe	ary of construction sites to s, and encroachment of eas, particularly where the rare,		<b>√</b>			
EM&A: Q3	Has regular checking been perform boundaries are not exceeded and the surrounding areas?			1			
EM&A: Q4	Is open fire prohibited and prevent boundary during construction? Is to equipment provided in the work ar	emporary fire fighting		<b>✓</b>			
		Traffic	<b>4</b>	Con the		ion act	tivities inside
	Major noise source(s)  Construction activities outside the site			Oth	ers:		

Abbreviation		
VEP: Cap311R: Cap311O: Cap311: Cap466:	Varied Environmental Permit APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance Dumping at Sea Ordinance	EM&A: EM&A Manual (Construction Phase) NCO: Noise Control Ordinance Cap354: Waste Disposal Ordinance Cap354c: WDO (Chemical Waste) (General) Regulation Unk: Unknown
Remark		
Signatures		
	letters:  (Name in Block le  C.K. LAW  sident Engineer	•
		0

20th December 2001

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – Construction of Transmission System Weekly Site Inspection Checklist

Inspection d	ate $4/5/06$ Time $0:3$ Inspect	ted by	ET:	k	L	LAN
Site	OUSIDE LANDING POINT I, N2 XWG		Cont	racto	r: J	-Parensly
Veather						
Condition	Sunny Fine Overcast Hazy		Driz	zle [	Ra	in Storm
Temperatu	re Modera	te	Lov	v		
Wind	Calm Light Breeze Strong					
ENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?					
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/			
IR QUALI	TY Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements	L		<u> </u>		
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice? If yes, did the contractors notify EPD of the change?					
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person.  Has this been observed?	/				
	Stockpiling of dusty materials					
Cap311R: Sch 18 EM&A:J1	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?					
	Use of vehicles		<b></b>			
Cap311R: Sch 21(2)	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					

Are completed earthworks sealed and hydroseeded and planted as

Miscellaneous

soon as possible?

Cap311R: Sch 16

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
Cap311O	Is open burning prohibited?					
Cap311	Is black smoke emission from plant/equipment avoided?	/				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials	•	•	•	<u> </u>	
Cap466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?					
Cap466	Are wastes disposed of at licensed sites?		/			
	Construction Waste and Excavated Materials					
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?					
Cap354	Are wastes disposed of at licensed sited?	1				
	Chemical Waste		•			
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?					
Cap354C	Has the Contractor registered as a chemical waste producer?	/				
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	/				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: M1	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?					

M	^			
N	U	1	Э.	Ľ.

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	/				
EM&A: L2 ~ L5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?	/				
NCO	Are valid construction noise permits, if required, available for inspection?	/				
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?	/				
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?	/				**************************************

### TERRESTRIAL ECOLOGY

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks	
EM&A: O1	monitored to avoid impact on the species Celtis biondii, Pteris dis	construction activities at landing points N4 & N5 closely and to avoid impact on the uncommon and rare plant Celtis biondii, Pteris dispar and Ardicia pusilla, and the plants Vitis balansaeana, Pterospermum heterophyllum pois excellsa?						
EM&A: O2	Are fences erected in accordance in good condition along the bour prevent tipping, vehicle movement personnel into adjacent wooded uncommon and restricted plant s	/						
EM&A: Q3	Has regular checking been performed boundaries are not exceeded and surrounding areas?	ormed to ensure that the work site it that no damage occurs to	/					
EM&A: Q4	Is open fire prohibited and preve boundary during construction? I equipment provided in the work	/						
		☐ Traffic		Construction activities inside the				
· · · · · · · · · · · · · · · · · · ·	Major noise source(s)	Construction activities	site Others					

### Abbreviation

VEP: Cap311R: Varied Environmental Permit

Cap3110:

APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance

Cap311: Cap466:

Dumping at Sea Ordinance

EM&A: EM&A Manual (Construction Phase)

NCO: Noise Control Ordinance Cap354: Waste Disposal Ordinance

Cap354c: WDO (Chemical Waste) (General) Regulation

Unk: Unknown

Remark	· · · · · · · · · · · · · · · · · · ·	<del></del>	 	
VIA				
Signatures		 	 	

ET Member

Contractor's Representative

(Name in Block letters:

## The Hongkong Electric Co. Ltd. Lamma Power Station Extension – Construction of Transmission System Weekly Site Inspection Checklist

Inspection of	late $(2/5/66)$ Time $(0:30)$ Inspect	ted by	ET:			LAU
Site	OUTSIDE LAWDING POWD II, N2 & NO	¥	Cont	racto	r: J -	Pawon Sys
Veather						. , , , ,
Condition	Sunny Fine Overcast Hazy		Driz	zle [	R	ain Storm
Temperatu	re 26°C Humidity High Moderat	te	Lov	v		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?					
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?				<u> </u>	
LIR QUAL	T	T		T	<u> </u>	<b>I</b>
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements			γ	r	
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice? If yes, did the contractors notify EPD of the change?					
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person.  Has this been observed?					
	Stockpiling of dusty materials					
Cap311R: Sch 18 EM&A:J1	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	/				
	Use of vehicles		<b>-</b>	4	<u> </u>	
Cap311R: Sch 21(2)	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?	1				
	Miscellaneous		1			
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
Cap3110	Is open burning prohibited?					
Cap311	Is black smoke emission from plant/equipment avoided?					

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials		•			
Cap466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?					
Cap466	Are wastes disposed of at licensed sites?		/			
	Construction Waste and Excavated Materials	<del>1</del>				
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?	/				
Cap354	Are wastes disposed of at licensed sited?	/				
	Chemical Waste					
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?					
Cap354C	Has the Contractor registered as a chemical waste producer?					
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?	/				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: M1	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?	/				

N	1	٦	1	C	T

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	/				
EM&A: L2 ~ L5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?					
NCO	Are valid construction noise permits, if required, available for inspection?					
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?	/				
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?	/				

### TERRESTRIAL ECOLOGY

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: O1	Are the construction activities at landing points N4 & N5 closely monitored to avoid impact on the uncommon and rare plant species Celtis biondii, Pteris dispar and Ardicia pusilla, and the restricted plants Vitis balansaeana, Pterospermum heterophyllum and Rhapis excellsa?						
EM&A: O2	Are fences erected in accordance in good condition along the bour prevent tipping, vehicle moveme personnel into adjacent wooded uncommon and restricted plant s						
EM&A: Q3	Has regular checking been perfo boundaries are not exceeded and surrounding areas?	rmed to ensure that the work site that no damage occurs to					
EM&A: Q4	Is open fire prohibited and preve boundary during construction? I equipment provided in the work	s temporary fire fighting					
		☐ Traffic	Construction activities inside the				
	Major noise source(s)	Construction activities outside the site		Other	s		

### Abbreviation

EM&A: EM&A Manual (Construction Phase) VEP: Varied Environmental Permit Cap311R: Cap311O: Noise Control Ordinance APC (Construction Dust) Regulation APC (Open Burning) Regulation Air Pollution Control Ordinance Cap354: Waste Disposal Ordinance Cap311: Cap354c: WDO (Chemical Waste) (General) Regulation Unknown Cap466: Dumping at Sea Ordinance Unk: Remark N/A Signatures **ET Member** Contractor's Representative

(Name in Block letters:

k LIM)

(Name in Block letters:

BERRY YUEN

# The Hongkong Electric Co. Ltd. Lamma Power Station Extension – Construction of Transmission System Weekly Site Inspection Checklist

Inspected by ET: K Lugu

[18/5/06] Time [1/: DR

Inspection date

		Contractor: J-power sys					
Site	OUTSIDE LANDING PDINTS I, NO 2N4.						
Weather							
Condition	Sunny Fine Overcast Hazy		Driz	zle [	R	ain Storm	
Temperatu	re 27 °C Humidity High Modera	te	Lov	v			
Wind	Calm Light Breeze Strong		_				
GENERAL							
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks	
VEP 1.5	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?		5				
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		1		-		
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks	
	General Requirements	·					
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice? If yes, did the contractors notify EPD of the change?						
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person. Has this been observed?	/					
	Stockpiling of dusty materials						
Cap311R: Sch 18 EM&A:J1	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?						
	Use of vehicles						
Cap311R: Sch 21(2)	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?						
	Miscellaneous						
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?		1				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
Cap3110	Is open burning prohibited?	1				
Cap311	Is black smoke emission from plant/equipment avoided?	V				

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					<del></del>
Cap466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?					
Cap466	Are wastes disposed of at licensed sites?		1			
	Construction Waste and Excavated Materials	<u></u>				•
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?					
Cap354	Are wastes disposed of at licensed sited?					
	Chemical Waste					
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	/				
Cap354C	Has the Contractor registered as a chemical waste producer?					_
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?					

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: M1	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?					

N		ь
N	0	Е.

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	/				
EM&A: L2~L5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?	/				
NCO	Are valid construction noise permits, if required, available for inspection?					
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?					
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?					

#### TERRESTRIAL ECOLOGY

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: O1	monitored to avoid impact on the species Celtis biondii, Pteris dis	t landing points N4 & N5 closely the uncommon and rare plant spar and Ardicia pusilla, and the ana, Pterospermum heterophyllum	/				
EM&A: O2	Are fences erected in accordance in good condition along the bout prevent tipping, vehicle movement personnel into adjacent wooded uncommon and restricted plant:						
EM&A: Q3		Has regular checking been performed to ensure that the work site boundaries are not exceeded and that no damage occurs to surrounding areas?					
EM&A: Q4	Is open fire prohibited and preve boundary during construction? I equipment provided in the work	s temporary fire fighting	/				
		☐ Traffic	9	Construction activities inside the			
	Major noise source(s)	Construction activities outside the site	Others				

#### Abbreviation

VEP: EM&A: EM&A Manual (Construction Phase) Varied Environmental Permit APC (Construction Dust) Regulation APC (Open Burning) Regulation NCO: Noise Control Ordinance Cap354: Waste Disposal Ordinance Cap311R: Cap311O: Cap311: Air Pollution Control Ordinance Cap354c: WDO (Chemical Waste) (General) Regulation Unk: Cap466: Dumping at Sea Ordinance Unknown Remark Signatures ET Member Contractor's Representative

(Name in Block letters:

Page 4 of 4

(Name in Block letters:

# The Hongkong Electric Co. Ltd. Lamma Power Station Extension – Construction of Transmission System Weekly Site Inspection Checklist

Inspection	late 2b/S/ob Time 10:45 Inspec	ted by	ET:	K		LAU
Site	DUTING CANDING POINTS. 7, IN) &	N4	Cont	racto	or:	-Powars
Veather						
Condition	Sunny Fine Overcast Hazy		Driz	zle [	R	ain Stor
Temperatu	re 27 °C Humidity High Modera	te _	Lov	v		
Wind	Calm Light Breeze Strong					
GENERAL						
Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
VEP 1.5	Has a copy of the most updated Environmental Permit been displayed at all vehicular site entrances/exits for public information?					
VEP 1.6	Is a copy of EIA report kept in Engineers' and Contractors' offices on site?		/			
AIR QUALI	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements	1	L		L	L
Cap311R:	Has the contractors notified EPD of the construction site which is classified as a notifiable work in a specified form? If there is any change in the notice? If yes, did the contractors notify EPD of the change?	1				
Cap311R: Sch 12(3)	A compressed air jet shall not be used for cleaning or clearing dust from any vehicle, equipment, other materials or person.  Has this been observed?	1				
	Stockpiling of dusty materials					
Cap311R: Sch 18 EM&A:J1	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to maintain the entire surface wet to prevent dust emission?	/				
	Use of vehicles	•		•		
Cap311R: Sch 21(2)	Is every load of dusty material on the vehicles leaving the construction site covered entirely by clean impervious sheeting?					
	Miscellaneous					<del></del>
Cap311R: Sch 16	Are completed earthworks sealed and hydroseeded and planted as soon as possible?					

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
Cap3110	Is open burning prohibited?					
Cap311	Is black smoke emission from plant/equipment avoided?					

#### WASTE/CHEMICAL WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
Cap466	Does the appropriate contractor possess valid dumping permits for dredged marine mud and have them available for inspection?					
Cap466	Are wastes disposed of at licensed sites?		/			
	Construction Waste and Excavated Materials					
Cap354	Does the Contractor possess a valid Public Dumping License for construction waste and excavated materials and make it available for inspection?					
Cap354	Are wastes disposed of at licensed sited?					
	Chemical Waste					
Cap354C	Has the contractor obtained the necessary disposal permits from the relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	/				
Cap354C	Has the Contractor registered as a chemical waste producer?	/				
Cap354C	Is chemical waste handled according to the "Code of Practice on the Packaging, Handling and Storage of Chemical Waste"?					

#### MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: M1	Are rubble mound seawalls constructed for the landing and launching points at Lamma Island?	/				`

١	N	4	`	ī	S	L
ı		u		4		•

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: L1	Are quiet PMEs or standard PMEs with modest source noise controls used at the cable route from N4 to N5?	/				
EM&A: L2 ~ L5	Are quiet PMEs (particularly the barge-mounted crane) or PMEs with comparably effective source noise controls used at landing point N5?	/				
NCO	Are valid construction noise permits, if required, available for inspection?	/				
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?	/				
NCO	Are valid noise emission labels fixed at air compressors and hand held percussive breakers?	/				

#### TERRESTRIAL ECOLOGY

Ref	Checklist Condition		N/A	Yes	No	Unk	Remarks
EM&A: O1	monitored to avoid impact on the species Celtis biondii, Pteris dis		/				
EM&A: O2	in good condition along the bour prevent tipping, vehicle movement	ents, and encroachment of areas, particularly where the rare,					
EM&A: Q3	Has regular checking been perfo boundaries are not exceeded and surrounding areas?	rmed to ensure that the work site that no damage occurs to	/				
EM&A: Q4	Is open fire prohibited and preve boundary during construction? I equipment provided in the work	s temporary fire fighting	/				
		☐ Traffic	Q	Consti	ructio	n activ	ities inside the
	Major noise source(s)	Construction activities outside the site		Other	s		

#### Abbreviation

VEP: Varied Environmental Permit EM&A: EM&A Manual (Construction Phase) APC (Construction Dust) Regulation APC (Open Burning) Regulation Cap311R: NCO: Noise Control Ordinance Cap354: Waste Disposal Ordinance Cap3110: Cap311: Air Pollution Control Ordinance Cap354c: WDO (Chemical Waste) (General) Regulation Cap466: Dumping at Sea Ordinance Unk: Unknown Remark Signatures ET Member Contractor's Representative (Name in Block letters: (Name in Block letters:

# **Appendix I: Summary of EMIS**

## I.1. Power Station – Unit L9 Civil and Building Works (Part B of EIA Report)

# **Table I.1** Construction Phase Mitigation Measures and their Implementation

EM&A Log Ref.	Mitigation Measures	Implementation Status
	AIR QUALITY	
A1	For general construction works, the dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation shall be complied with, such as:	
	the haul roads shall be sprayed with water to keep the entire road surface wet.	С
	• the load carried by vehicle shall be covered by impervious sheeting to ensure no leakage of dusty materials from the vehicle.	С
	the heights from which fill materials are dropped shall be controlled to a practical level to minimise the fugitive dust arising from unloading.	С
A2	For the concrete batching plant, the following control measures are recommended:	
	• loading, unloading, handling, transfer or storage or any dusty materials shall be carried out in a totally enclosed system.	N/A
	The materials which may generate airborne dust emissions shall be wetted by water spray system.	N/A
	All receiving hoppers shall be enclosed on three sides up to 3m above unloading point.	N/A
	All conveyor transfer points shall be totally enclosed.	N/A
	WATER QUALITY	
B1	The following configurations and maximum rates of dredging shall be allowed:	
	3 large grab dredgers and 1 small grab dredger operating concurrently, each with rates of working of 12,000 m³ day⁻¹ and 8,000 m³ day⁻¹ respectively. During the flood phase of the tidal cycle the total number of large dredgers working shall be reduced by one, while during the ebb phase of the tidal cycle no reductions in the total number of dredgers shall be required.	N/A
	• 1 trailer dredger with a rate of working of 8,000 m <sup>3</sup> day <sup>-1</sup> , and 2 large grab dredgers, each with rates of working of 12,000 m <sup>3</sup> day <sup>-1</sup>	N/A
B2	Silt curtains shall be installed on the eastern, southern and north western sides of the reclamation site during dredging for the reclamation construction. This is a required mitigation measure for the construction works and shall be implemented prior to the commencement of bulk dredging.	N/A
В3	As a necessary operational constraint combined bulk dredging and sand filling for site formation shall not be permitted at any time. In addition, sand filling for site platform shall take place behind constructed sea walls which pierce the water surface.	N/A
B4	HEC shall ensure design to divert all storm drains away from Hung Shing Ye Bay.	С

EM&A Log Ref.	Mitigation Measures	Implementation Status
B5	Sand fill for the rubble mound seawalls shall be placed by controlled pumping down the trailer arm.	N/A
B6	EM&A shall confirm the acceptability of any impacts during construction and should any unacceptable impacts be found then one or more of the following mitigation measures shall be implemented:	N/A
	<ul> <li>reducing the number of dredgers working at any one time;</li> <li>reducing the rate of working of the dredgers;</li> <li>temporary suspension of operations;</li> <li>phasing of the works so that dredging / filling is only undertaken at certain stages of the tidal cycle.</li> </ul>	
В7	In addition to the above specific measures the following general working procedures shall be adopted.	
	fully-enclosed or watertight grabs shall be used to minimise loss of sediment during the raising of loaded grabs through the water column;	N/A
	the descent speed of grabs shall be controlled to minimise the seabed impact speed and to reduce the volume of over dredging;	N/A
	barges shall be loaded carefully to avoid splashing of material;	N/A
	all barges used for the transport of dredged materials shall be fitted with tight bottom seals in order to prevent leakage of material during loading and transport;	N/A
	all barges shall be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action;	N/A
	• the speed of trailer dredgers shall be controlled to prevent propeller wash from stirring up the sea bed sediments;	N/A
	"rainbowing" sand fill from trailer dredgers shall not be permitted; and	N/A
	the works shall cause no visible foam, oil, grease or litter or other objectionable matter to be present in the water within and adjacent to the dredging site and along the route to the disposal site.	N/A
B8	Cumulative impacts shall be assessed through EM&A. Co-ordination with the EM&A consultants for other projects to determine if any exceedances are caused by the other projects or by HEC's activities. Should monitoring results indicate exceedances at sensitive receivers due to HEC's activities, then the above described mitigation measures shall be implemented until impacts reduce to acceptable levels.	N/A
	NOISE	
C1	General noise mitigation measures shall be employed at all work sites throughout the construction phase.	С
C2	Mitigate against general construction noise during Sunday's and public holidays, either at source with portable noise barriers, or by rescheduling of some PMEs to less sensitive time periods.	С
C3	Mitigate against night time noise from dredging equipment, with silencers or mufflers.	N/A

EM&A Log Ref.	Mitigation Measures	Implementation Status
	LANDSCAPE & VISUAL IMPACTS	
D1	The following mitigation measures shall be allowed for landscape and visual improvement:	
	Use rubble mound seawall along south and west edges of the reclamation to provide a more natural look.	С
	Break the mass of main buildings by varying the height/division into smaller units.	С
	Plant trees and vegetation for screening.	С
	Adopt colour scheme to blend the buildings into the scenery.	С
	WASTE MANAGEMENT	
E1	HEC to submit a Waste Management Plan for the construction phase to EPD. The Plan shall be verified by the IEC and shall describe the arrangements for avoidance, reuse, recovery and recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities and shall take into account the recommendations of the EIA report.	С
l	Dredging Waste	
E2	All vessels for marine transportation of dredged sediment shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials. In addition, loading of barges and hoppers shall be controlled to prevent splashing of dredged material into the surrounding water, and barges or hoppers should under no circumstances be filled to a level which shall cause the overflowing of materials or polluted water during loading or transportation	N/A
	Storage, Collection and Transport of Waste	
E3	Minimise windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed containers.	С
	Obtain the necessary waste disposal permits from the appropriate authorities, if they are required, in accordance with the Waste Disposal Ordinance (Cap.354), Waste Disposal (Chemical Waste) (General) Regulation (Cap.354), the Crown Land Ordinance (Cap 28), Dumping at Sea Ordinance (Cap 466) and Work Branch Technical Circular No. 22/92, Marine Disposal of Dredged Mud.	С
	Disposal of waste at Licensed sites;	С
	Develop procedures such as a ticketing system to facilitate tracking of marine mud and chemical waste, and to ensure that illegal disposal does not occur;	N/A
	<ul> <li>Segregate and sort the waste materials into 3 categories:</li> <li>public fill (e.g. concrete and rubble) for re-use on-site or disposal at a public filling area;</li> <li>re-use and/or recycling waste (e.g. steel and other metals);</li> <li>waste which cannot be re-used and/or recycled (e.g. wood, glass and plastic) for landfill disposal.</li> <li>The sorting process shall be carefully monitored to avoid missing of the 3 categories. Different types of wastes shall be stockpiled and stored in</li> </ul>	N/A
	different containers or skips to enhance re-use or recycling of materials and their proper disposal.  Maintain records of the quantities of wastes generated and disposed off-site for each category of waste.	С

EM&A Log Ref.	Mitigation Measures	Implementation Status
E4	Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes	N/A
	LAND CONTAMINATION	
F1	No land Contamination mitigation measures are required during the construction phase.	N/A
	MARINE ECOLOGY	
G1	All percussive piling works shall be conducted on reclaimed land to avoid noise impact to marine mammals	N/A
G2	All construction related vessels shall approach the extension site from the north and via the East Lamma Channel to avoid disturbance to the finless porpoise	С
G3	Rubble mound seawall to the south and west edges of the reclamation to enhance recolonisation of marine organisms	С
G4	Artificial Reefs of a volume not less than 400 m <sup>3</sup> shall be deployed in a location to be decided upon consultation with the Director of Agriculture and Fisheries to serve the purpose of an Additional Habitat Enhancement Measure.	С
	FISHERIES	
H1	No Fisheries-specific mitigation measures are required during the construction phase.	N/A
	RISK ASSESSMENT	
I1	No risk mitigation measures are required during the construction phase.	N/A

# **I.2.** Power Station – Unit L9 Mechanical Erection (Part B of EIA Report)

 Table I.2
 Construction Phase Mitigation Measures and their Implementation

EM&A Log Ref.	Mitigation Measures	Implementation Status
	AIR QUALITY	
A1	For general construction works, the dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation shall be complied with, such as:	
	the haul roads shall be sprayed with water to keep the entire road surface wet.	С
	the load carried by vehicle shall be covered by impervious sheeting to ensure no leakage of dusty materials from the vehicle.	N/A
	the heights from which fill materials are dropped shall be controlled to a practical level to minimise the fugitive dust arising from unloading.	N/A
A2	For the concrete batching plant, the following control measures are recommended:	
	• loading, unloading, handling, transfer or storage or any dusty materials shall be carried out in a totally enclosed system.	N/A
	The materials which may generate airborne dust emissions shall be wetted by water spray system.	N/A
	All receiving hoppers shall be enclosed on three sides up to 3m above unloading point.	N/A
	All conveyor transfer points shall be totally enclosed.	N/A
	WATER QUALITY	
B1	The following configurations and maximum rates of dredging shall be allowed:	
	3 large grab dredgers and 1 small grab dredger operating concurrently, each with rates of working of 12,000 m³ day⁻¹ and 8,000 m³ day⁻¹ respectively. During the flood phase of the tidal cycle the total number of large dredgers working shall be reduced by one, while during the ebb phase of the tidal cycle no reductions in the total number of dredgers shall be required.	N/A
	• 1 trailer dredger with a rate of working of 8,000 m <sup>3</sup> day <sup>-1</sup> , and 2 large grab dredgers, each with rates of working of 12,000 m <sup>3</sup> day <sup>-1</sup>	N/A
B2	Silt curtains shall be installed on the eastern, southern and north western sides of the reclamation site during dredging for the reclamation construction. This is a required mitigation measure for the construction works and shall be implemented prior to the commencement of bulk dredging.	N/A
В3	As a necessary operational constraint combined bulk dredging and sand filling for site formation shall not be permitted at any time. In addition, sand filling for site platform shall take place behind constructed sea walls which pierce the water surface.	N/A
B4	HEC shall ensure design to divert all storm drains away from Hung Shing Ye Bay.	N/A

EM&A Log Ref.	Mitigation Measures	Implementation Status
В5	Sand fill for the rubble mound seawalls shall be placed by controlled pumping down the trailer arm.	N/A
В6	EM&A shall confirm the acceptability of any impacts during construction and should any unacceptable impacts be found then one or more of the following mitigation measures shall be implemented:	N/A
	<ul> <li>reducing the number of dredgers working at any one time;</li> <li>reducing the rate of working of the dredgers;</li> <li>temporary suspension of operations;</li> <li>phasing of the works so that dredging / filling is only undertaken at certain stages of the tidal cycle.</li> </ul>	
В7	In addition to the above specific measures the following general working procedures shall be adopted.	
	fully-enclosed or watertight grabs shall be used to minimise loss of sediment during the raising of loaded grabs through the water column;	N/A
	the descent speed of grabs shall be controlled to minimise the seabed impact speed and to reduce the volume of over dredging;	N/A
	barges shall be loaded carefully to avoid splashing of material;	N/A
	all barges used for the transport of dredged materials shall be fitted with tight bottom seals in order to prevent leakage of material during loading and transport;	N/A
	all barges shall be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action;	N/A
	• the speed of trailer dredgers shall be controlled to prevent propeller wash from stirring up the sea bed sediments;	N/A
	"rainbowing" sand fill from trailer dredgers shall not be permitted; and	N/A
	the works shall cause no visible foam, oil, grease or litter or other objectionable matter to be present in the water within and adjacent to the dredging site and along the route to the disposal site.	С
B8	Cumulative impacts shall be assessed through EM&A. Co-ordination with the EM&A consultants for other projects to determine if any exceedances are caused by the other projects or by HEC's activities. Should monitoring results indicate exceedances at sensitive receivers due to HEC's activities, then the above described mitigation measures shall be implemented until impacts reduce to acceptable levels.	N/A
		T
	NOISE	
C1	General noise mitigation measures shall be employed at all work sites throughout the construction phase.	С
C2	Mitigate against general construction noise during Sunday's and public holidays, either at source with portable noise barriers, or by rescheduling of some PMEs to less sensitive time periods.	С
C3	Mitigate against night time noise from dredging equipment, with silencers or mufflers.	N/A

EM&A Log Ref.	Mitigation Measures	Implementation Status
	LANDSCAPE & VISUAL IMPACTS	
D1	The following mitigation measures shall be allowed for landscape and visual improvement:	
	Use rubble mound seawall along south and west edges of the reclamation to provide a more natural look.	N/A
	Break the mass of main buildings by varying the height/division into smaller units.	N/A
	Plant trees and vegetation for screening.	N/A
	Adopt colour scheme to blend the buildings into the scenery.	N/A
	WASTE MANAGEMENT	
E1	HEC to submit a Waste Management Plan for the construction phase to EPD. The Plan shall be verified by the IEC and shall describe the arrangements for avoidance, reuse, recovery and recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities and shall take into account the recommendations of the EIA report.	С
	Dredging Waste	
E2	All vessels for marine transportation of dredged sediment shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials. In addition, loading of barges and hoppers shall be controlled to prevent splashing of dredged material into the surrounding water, and barges or hoppers should under no circumstances be filled to a level which shall cause the overflowing of materials or polluted water during loading or transportation	N/A
	Storage, Collection and Transport of Waste	
E3	Minimise windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed containers.	С
	Obtain the necessary waste disposal permits from the appropriate authorities, if they are required, in accordance with the Waste Disposal Ordinance (Cap.354), Waste Disposal (Chemical Waste) (General) Regulation (Cap.354), the Crown Land Ordinance (Cap 28), Dumping at Sea Ordinance (Cap 466) and Work Branch Technical Circular No. 22/92, Marine Disposal of Dredged Mud.	С
	Disposal of waste at Licensed sites;	С
	Develop procedures such as a ticketing system to facilitate tracking of marine mud and chemical waste, and to ensure that illegal disposal does not occur;	С
	<ul> <li>Segregate and sort the waste materials into 3 categories:</li> <li>public fill (e.g. concrete and rubble) for re-use on-site or disposal at a public filling area;</li> <li>re-use and/or recycling waste (e.g. steel and other metals);</li> <li>waste which cannot be re-used and/or recycled (e.g. wood, glass and plastic) for landfill disposal.</li> <li>The sorting process shall be carefully monitored to avoid missing of the 3 categories. Different types of wastes shall be stockpiled and stored in different containers or skips to enhance re-use or recycling of materials and their proper disposal.</li> </ul>	С
	Maintain records of the quantities of wastes generated and disposed off-site for each category of waste.	С

EM&A Log Ref.	Mitigation Measures	Implementation Status
E4	Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes	С
	LAND CONTAMINATION	
F1	No land Contamination mitigation measures are required during the construction phase.	N/A
	MARINE ECOLOGY	
G1	All percussive piling works shall be conducted on reclaimed land to avoid noise impact to marine mammals	N/A
G2	All construction related vessels shall approach the extension site from the north and via the East Lamma Channel to avoid disturbance to the finless porpoise	N/A
G3	Rubble mound seawall to the south and west edges of the reclamation to enhance recolonisation of marine organisms	N/A
G4	Artificial Reefs of a volume not less than 400 m <sup>3</sup> shall be deployed in a location to be decided upon consultation with the Director of Agriculture and Fisheries to serve the purpose of an Additional Habitat Enhancement Measure.	N/A
	FISHERIES	
H1	No Fisheries-specific mitigation measures are required during the construction phase.	N/A
	RISK ASSESSMENT	
I1	No risk mitigation measures are required during the construction phase.	N/A

### **I.3.** Power Station – Unit L9 Electrical Erection (Part B of EIA Report)

**Table I.3** Construction Phase Mitigation Measures and their Implementation

EM&A Log Ref.	Mitigation Measures	Implementation Status
	AIR QUALITY	
A1	For general construction works, the dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation shall be complied with, such as:	
	• the haul roads shall be sprayed with water to keep the entire road surface wet.	С
	the load carried by vehicle shall be covered by impervious sheeting to ensure no leakage of dusty materials from the vehicle.	N/A
	the heights from which fill materials are dropped shall be controlled to a practical level to minimise the fugitive dust arising from unloading.	N/A
A2	For the concrete batching plant, the following control measures are recommended:	
	• loading, unloading, handling, transfer or storage or any dusty materials shall be carried out in a totally enclosed system.	N/A
	The materials which may generate airborne dust emissions shall be wetted by water spray system.	N/A
	All receiving hoppers shall be enclosed on three sides up to 3m above unloading point.	N/A
	All conveyor transfer points shall be totally enclosed.	N/A
	WATER QUALITY	
B1	The following configurations and maximum rates of dredging shall be allowed:	
	3 large grab dredgers and 1 small grab dredger operating concurrently, each with rates of working of 12,000 m³ day⁻¹ and 8,000 m³ day⁻¹ respectively. During the flood phase of the tidal cycle the total number of large dredgers working shall be reduced by one, while during the ebb phase of the tidal cycle no reductions in the total number of dredgers shall be required.	N/A
	• 1 trailer dredger with a rate of working of 8,000 m <sup>3</sup> day <sup>-1</sup> , and 2 large grab dredgers, each with rates of working of 12,000 m <sup>3</sup> day <sup>-1</sup>	N/A
B2	Silt curtains shall be installed on the eastern, southern and north western sides of the reclamation site during dredging for the reclamation construction. This is a required mitigation measure for the construction works and shall be implemented prior to the commencement of bulk dredging.	N/A
В3	As a necessary operational constraint combined bulk dredging and sand filling for site formation shall not be permitted at any time. In addition, sand filling for site platform shall take place behind constructed sea walls which pierce the water surface.	N/A
B4	HEC shall ensure design to divert all storm drains away from Hung Shing Ye Bay.	N/A

EM&A Log Ref.	Mitigation Measures	Implementation Status
B5	Sand fill for the rubble mound seawalls shall be placed by controlled pumping down the trailer arm.	N/A
B6	EM&A shall confirm the acceptability of any impacts during construction and should any unacceptable impacts be found then one or more of the following mitigation measures shall be implemented:	N/A
	<ul> <li>reducing the number of dredgers working at any one time;</li> <li>reducing the rate of working of the dredgers;</li> <li>temporary suspension of operations;</li> <li>phasing of the works so that dredging / filling is only undertaken at certain stages of the tidal cycle.</li> </ul>	
В7	In addition to the above specific measures the following general working procedures shall be adopted.	
	fully-enclosed or watertight grabs shall be used to minimise loss of sediment during the raising of loaded grabs through the water column;	N/A
	the descent speed of grabs shall be controlled to minimise the seabed impact speed and to reduce the volume of over dredging;	N/A
	barges shall be loaded carefully to avoid splashing of material;	N/A
	all barges used for the transport of dredged materials shall be fitted with tight bottom seals in order to prevent leakage of material during loading and transport;	N/A
	all barges shall be filled to a level which ensures that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action;	N/A
	• the speed of trailer dredgers shall be controlled to prevent propeller wash from stirring up the sea bed sediments;	N/A
	"rainbowing" sand fill from trailer dredgers shall not be permitted; and	N/A
	the works shall cause no visible foam, oil, grease or litter or other objectionable matter to be present in the water within and adjacent to the dredging site and along the route to the disposal site.	N/A
B8	Cumulative impacts shall be assessed through EM&A. Co-ordination with the EM&A consultants for other projects to determine if any exceedances are caused by the other projects or by HEC's activities. Should monitoring results indicate exceedances at sensitive receivers due to HEC's activities, then the above described mitigation measures shall be implemented until impacts reduce to acceptable levels.	N/A
	NOISE	
C1	General noise mitigation measures shall be employed at all work sites throughout the construction phase.	С
C2	Mitigate against general construction noise during Sunday's and public holidays, either at source with portable noise barriers, or by rescheduling of some PMEs to less sensitive time periods.	С
C3	Mitigate against night time noise from dredging equipment, with silencers or mufflers.	N/A

EM&A Log Ref.	Mitigation Measures	Implementation Status
	LANDSCAPE & VISUAL IMPACTS	
D1	The following mitigation measures shall be allowed for landscape and visual improvement:	
	Use rubble mound seawall along south and west edges of the reclamation to provide a more natural look.	N/A
	Break the mass of main buildings by varying the height/division into smaller units.	N/A
	Plant trees and vegetation for screening.	N/A
	Adopt colour scheme to blend the buildings into the scenery.	N/A
	WASTE MANAGEMENT	
E1	HEC to submit a Waste Management Plan for the construction phase to EPD. The Plan shall be verified by the IEC and shall describe the arrangements for avoidance, reuse, recovery and recycling, storage, collection, treatment and disposal of different categories of waste to be generated from the construction activities and shall take into account the recommendations of the EIA report.	С
	Dredging Waste	
E2	All vessels for marine transportation of dredged sediment shall be fitted with tight fitting seals to their bottom openings to prevent leakage of materials. In addition, loading of barges and hoppers shall be controlled to prevent splashing of dredged material into the surrounding water, and barges or hoppers should under no circumstances be filled to a level which shall cause the overflowing of materials or polluted water during loading or transportation	N/A
	Storage, Collection and Transport of Waste	
E3	Minimise windblown litter and dust during transportation by either covering trucks or transporting wastes in enclosed containers.	С
	Obtain the necessary waste disposal permits from the appropriate authorities, if they are required, in accordance with the Waste Disposal Ordinance (Cap.354), Waste Disposal (Chemical Waste) (General) Regulation (Cap.354), the Crown Land Ordinance (Cap 28), Dumping at Sea Ordinance (Cap 466) and Work Branch Technical Circular No. 22/92, Marine Disposal of Dredged Mud.	С
	Disposal of waste at Licensed sites;	С
	Develop procedures such as a ticketing system to facilitate tracking of marine mud and chemical waste, and to ensure that illegal disposal does not occur;	С
	<ul> <li>Segregate and sort the waste materials into 3 categories:</li> <li>public fill (e.g. concrete and rubble) for re-use on-site or disposal at a public filling area;</li> <li>re-use and/or recycling waste (e.g. steel and other metals);</li> <li>waste which cannot be re-used and/or recycled (e.g. wood, glass and plastic) for landfill disposal.</li> <li>The sorting process shall be carefully monitored to avoid missing of the 3 categories. Different types of wastes shall be stockpiled and stored in different containers or skips to enhance re-use or recycling of materials and their proper disposal.</li> </ul>	С
	Maintain records of the quantities of wastes generated and disposed off-site for each category of waste.	С

EM&A Log Ref.	Mitigation Measures	Implementation Status				
E4	Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes	С				
	LAND CONTAMINATION					
F1	No land Contamination mitigation measures are required during the construction phase.	N/A				
	MARINE ECOLOGY					
G1	All percussive piling works shall be conducted on reclaimed land to avoid noise impact to marine mammals	N/A				
G2	All construction related vessels shall approach the extension site from the north and via the East Lamma Channel to avoid disturbance to the finless porpoise	N/A				
G3	Rubble mound seawall to the south and west edges of the reclamation to enhance recolonisation of marine organisms	N/A				
G4						
	FISHERIES					
H1	No Fisheries-specific mitigation measures are required during the construction phase.	N/A				
	RISK ASSESSMENT					
I1	No risk mitigation measures are required during the construction phase.	N/A				

## I.4. Transmission System – Civil Works (Part C of EIA Report)

**Table I.4** Construction Phase Mitigation Measures and their Implementation

EM&A Log Ref.	Mitigation Measures	Implementation Status				
	AIR QUALITY					
J1	To mitigate potential construction related dust impacts, the dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation shall be complied with, such as:					
	all debris or materials shall be either covered or stored in a debris sheltered collection area;	С				
	• prior to any material handling, all dusty material shall be sprayed with water.	С				
	I					
	WATER QUALITY					
K1	No mitigation measures are considered necessary.	N/A				
	NOISE					
L1	N4-N5 Cable Route Selection and use of quiet PMEs, or use of modest source noise controls with standard PMEs	С				
L2	N5 Landing Point Selection and use of quiet PMEs (particularly the barge-mounted crane), or use of comparably effective source noise controls with the PMEs;	С				
L3	For non-percussive piling – use of equipment with a SWL of 113 dB(A) or less if there is no programme overlap of the piling with the site formation works, otherwise offsetting source noise controls shall be required.					
L4	For percussive piling – use of equipment with a SWL of 115 dB(A) or less, otherwise, offsetting source noise controls shall be required.	N/A				
L5	If non-percussive piling and site formation activities are to be carried out simultaneously then careful equipment selection and source controls shall be required for both activities to reduce each by approximately 3 dB(A).	N/A				
	MARINE ECOLOGY					
M1	Construction of rubble mound seawalls for the landing and launching points at Lamma Island.	С				
	FISHERIES					
N1	No fisheries-specific mitigation measures are required during the construction phase	N/A				

EM&A Log Ref.	Mitigation Measures	Implementation Status
	TERRESTRIAL ECOLOGY	
	The following mitigation measures shall be implemented to protect the important plant species and minimizing disturbance to the surrounding environment through good construction practice, as recommended below:	
O1	Avoidance of impact on the uncommon and rare plant species <i>Celtis biondii</i> , <i>Pteris dispar</i> and <i>Ardicia pusilla</i> , and the restricted plants <i>Vitis balansaeana</i> , <i>Pterospermum heterophyllum</i> and <i>Rhapis excelsa</i> , by locating the landing points N4 & N5 and the connecting cable trough in areas outside where these plant species are located (Figures 9.4b & 9.4c, Part C, Volume 2), as well as close monitoring of the construction activity.	С
O2	The erection of fences along the boundary of construction sites before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located.	С
О3	Regular checking to ensue that the work site boundaries are not exceeded and that no damage occurs to surrounding areas.	С
O4	The prohibition and prevention of open fires within the work site boundary during construction and provision of temporary fire fighting equipment in the work area during construction.	С
	LANDSCAPE AND VISUAL IMPACT	
P1	The visual impact of the Cable Landing Point I1 is considered negligible as it would have similar appearance as the existing sea wall and therefore no mitigation is required.	N/A
P2	The proposed landing points N2, N4 and N5, the following landscaping mitigation measures are recommended to minimize the potential impacts:	
	• Although the size of the landing points varies (N2 is 26x70m, N4 is 27x65m and N5 is 33x56m), each has a finished platform level at +6.00mPD. With the Low Water Level at +1.00mPD, the platforms shall be a maximum of some 5m above the water level at low tide. In order to minimize the visual impact of the landing points, the exposed sides of the platforms and the cable slipways shall be screened with irregularly arranged boulders of varying sizes to mimic the natural coastline features. The horizontal platform surface shall be finished with natural materials such as stone pavings or tiles.	С
	• The cable trough in between Landing Points N4 and N5 is 5.5m wide and 260m long. The walkway that is formed above the cable trough shall be shielded by boulders (or, where practicable, shrub planting) from potential viewers from the sea and horizontal surfaces be finished with natural materials such as stone paving.	N/A
	Appropriate compensatory landscaping shall be provided for any disruption to existing vegetation to blend in with the surrounding setting.	N/A

EM&A Log Ref.	Mitigation Measures	Implementation Status
	<ul> <li>As a planning gain, parts of the landing points N4 and N5 and the cable trough between the landing points can be used for amenity and recreational purposes. Some low maintenance fixtures, matching with the natural environment, shall be built or placed on the landing points for public use. HEC shall resolve any management and maintenance requirements of the proposed mitigation measures during the processing stage of wayleave agreements. If required by Government, HEC commit to bear the management and maintenance responsibilities of these facilities.</li> </ul>	N/A

### Remarks:

Compliance with mitigation measure Non-compliance with mitigation measure Not Applicable C -NC -N/A -C

# I.5. Transmission System – Cable Laying (Part C of EIA Report)

 Table I.5
 Construction Phase Mitigation Measures and their Implementation

J1	AID OUALITY					
	AIR QUALITY					
	To mitigate potential construction related dust impacts, the dust control measures stipulated under the Air Pollution Control (Construction Dust) Regulation shall be complied with, such as:					
	• all debris or materials shall be either covered or stored in a debris sheltered collection area;	N/A				
	• prior to any material handling, all dusty material shall be sprayed with water.	N/A				
	WATER OUALITY	1				
	WATER QUALITY	NT/A				
K1	No mitigation measures are considered necessary.	N/A				
		<b>T</b>				
	NOISE					
	N4-N5 Cable Route Selection and use of quiet PMEs, or use of modest source noise controls with standard PMEs					
	N5 Landing Point Selection and use of quiet PMEs (particularly the barge-mounted crane), or use of comparably effective source noise controls with the PMEs;					
	For non-percussive piling – use of equipment with a SWL of 113 dB(A) or less if there is no programme overlap of the piling with the site formation works, otherwise offsetting source noise controls shall be required.					
	For percussive piling – use of equipment with a SWL of 115 dB(A) or less, otherwise, offsetting source noise controls shall be required.	N/A				
	If non-percussive piling and site formation activities are to be carried out simultaneously then careful equipment selection and source controls shall be required for both activities to reduce each by approximately 3 dB(A).	N/A				
	MARINE ECOLOGY					
	Construction of rubble mound seawalls for the landing and launching points at Lamma Island.	N/A				
	FISHERIES					
	No fisheries-specific mitigation measures are required during the construction phase	N/A				

EM&A Log Ref.	og Ref.					
	TERRESTRIAL ECOLOGY					
	The following mitigation measures shall be implemented to protect the important plant species and minimizing disturbance to the surrounding environment through good construction practice, as recommended below:					
O1	Avoidance of impact on the uncommon and rare plant species <i>Celtis biondii</i> , <i>Pteris dispar</i> and <i>Ardicia pusilla</i> , and the restricted plants <i>Vitis balansaeana</i> , <i>Pterospermum heterophyllum</i> and <i>Rhapis excelsa</i> , by locating the landing points N4 & N5 and the connecting cable trough in areas outside where these plant species are located (Figures 9.4b & 9.4c, Part C, Volume 2), as well as close monitoring of the construction activity.	N/A				
O2	The erection of fences along the boundary of construction sites before the commencement of works to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located.	N/A				
О3	Regular checking to ensue that the work site boundaries are not exceeded and that no damage occurs to surrounding areas.	N/A				
O4	The prohibition and prevention of open fires within the work site boundary during construction and provision of temporary fire fighting equipment in the work area during construction.	N/A				
	LANDSCAPE AND VISUAL IMPACT					
P1	The visual impact of the Cable Landing Point I1 is considered negligible as it would have similar appearance as the existing sea wall and therefore no mitigation is required.	N/A				
P2	The proposed landing points N2, N4 and N5, the following landscaping mitigation measures are recommended to minimize the potential impacts:					
	• Although the size of the landing points varies (N2 is 26x70m, N4 is 27x65m and N5 is 33x56m), each has a finished platform level at +6.00mPD. With the Low Water Level at +1.00mPD, the platforms shall be a maximum of some 5m above the water level at low tide. In order to minimize the visual impact of the landing points, the exposed sides of the platforms and the cable slipways shall be screened with irregularly arranged boulders of varying sizes to mimic the natural coastline features. The horizontal platform surface shall be finished with natural materials such as stone pavings or tiles.	N/A				
	• The cable trough in between Landing Points N4 and N5 is 5.5m wide and 260m long. The walkway that is formed above the cable trough shall be shielded by boulders (or, where practicable, shrub planting) from potential viewers from the sea and horizontal surfaces be finished with natural materials such as stone paving.	N/A				
	<ul> <li>Appropriate compensatory landscaping shall be provided for any disruption to existing vegetation to blend in with the surrounding setting.</li> </ul>	N/A				

EM&A Log Ref.	Mitigation Measures	Implementation Status
	<ul> <li>As a planning gain, parts of the landing points N4 and N5 and the cable trough between the landing points can be used for amenity and recreational purposes. Some low maintenance fixtures, matching with the natural environment, shall be built or placed on the landing points for public use. HEC shall resolve any management and maintenance requirements of the proposed mitigation measures during the processing stage of wayleave agreements. If required by Government, HEC commit to bear the management and maintenance responsibilities of these facilities.</li> </ul>	N/A

### Remarks:

Compliance with mitigation measure Non-compliance with mitigation measure Not Applicable C -NC -N/A -C

# Appendix J

Tentative Construction Programme

						July 2006
<u> </u>	Activities	Duration	Start		01 04 07 10 13 16 19 22 25 28	01 04 07 10 13 16 19 22 25 28
	Main Station Bldg. and HRSG	894 days	02 Apr '04	12 Sep '06		
	Pile head treatment	29 days	02 Apr '04	30 Apr '04		
	Earthing system	30 days	11 May '04	09 Jun '04		
	Pile cap and tie beam	110 days	16 May '04	02 Sep '04		
	1/F construction	60 days	26 Dec '04	23 Feb '05		
	2/F Construction	90 days	01 Dec '04	28 Feb '05		
	3/F Construction	45 days	15 Jan '05	28 Feb '05		
	4/F Construction	45 days	01 Feb '05	17 Mar '05		
	5/F Construction	45 days	02 Mar '05	15 Apr '05		
0	R/F Construction	45 days	17 Mar '05	30 Apr '05		
1	Deferred works - East	50 days	21 Apr '05	09 Jun '05		
2	Deferred works - West	76 days	17 May '05	31 Jul '05		
3	Deferred works - South	45 days	15 Oct '05	28 Nov '05		
-	Deferred works - Air Inlet	50 days	01 Jan '06	19 Feb '06		
5	Deferred works - North	25 days	10 Feb '06	06 Mar '06		
6	Deferred works - Tiling at +16.15	60 days	15 Jul '06	12 Sep '06		
7	Deferred works - Firewall at Transformer Bay	46 days	20 Jul '05	03 Sep '05		
8	Deferred works - Metal Fence at Transformer Bay	45 days	01 Mar '06	14 Apr '06		
	275kV Bldg.	651 days	03 May '04	12 Feb '06		
	Pile head treatment	22 days	03 May '04	24 May '04		
	Earthing system	30 days	11 May '04	09 Jun '04		
	Pile cap and tie beam	45 days	16 May '04	29 Jun '04		
	1/F construction	90 days	01 Jun '04	29 Aug '04		
5	2/f construction	90 days	30 Aug '04	27 Nov '04		
3	3/f construction	45 days	28 Nov '04	11 Jan '05		
7	Roof construction	45 days	12 Jan '05	25 Feb '05		
3	Surrounding Cable Trench	120 days	15 Apr '05	12 Aug '05		
	Surrounding External works	60 days	15 Dec '05	12 Feb '06		
)	-					
	No. 4 Chimney	664 days	30 Jun '04	24 Apr '06		
2	Pile head treatment	30 days	30 Jun '04	29 Jul '04		

Lamma Power Station Extension - Unit 9 Civil and Building Work 3-Month Programme

Scheduled Activity

					June 2006	July 2006	August 2006
ID	Activities	Duration	Start		01 04 07 10 13 16 19 22 25 28	01 04 07 10 13 16 19 22 25 28	31 03 06 09 12 15 18 21 24
33	Pile cap construction	63 days	30 Aug '04	31 Oct '04			
34	Superstructure construction	300 days	01 Nov '04	27 Aug '05			
35	Steel and Internal Works	180 days	28 Aug '05	23 Feb '06			
36	Remaining Works	60 days	24 Feb '06	24 Apr '06			
37							
38	Road & Drainage Works	784 days	05 Jul '04	27 Aug '06			
39	Along Loading and Unloading Area	88 days	05 Jul '04	30 Sep '04			
44	North Seafront Road	630 days	09 Jul '04	30 Mar '06			
50	East Bridge Road	579 days	28 Oct '04	29 May '06			
51	Excavation	30 days	28 Oct '04	26 Nov '04			
52	Pipe installation	90 days	27 Nov '04	24 Feb '05			
53	Testing	14 days	04 Mar '05	17 Mar '05			
54	Haunching and Road making good	120 days	11 Mar '05	08 Jul '05			
55	External Utility Work and Ground Finish	45 days	15 Apr '06	29 May '06			
56	Chimney Road	513 days	08 Nov '04	04 Apr '06	-		
57	Excavation	30 days	08 Nov '04	07 Dec '04			
58	Pipe installation	90 days	08 Dec '04	07 Mar '05	-		
59	Testing	30 days	15 Mar '05	13 Apr '05			
60	Haunching and Road making good	120 days	22 Mar '05	19 Jul '05			
61	External Utility Work and Ground Finish	80 days	15 Jan '06	04 Apr '06			
62	Other Areas	90 days	30 May '06	27 Aug '06			
63							
64	C W Culvert System	577 days	15 Aug '04	14 Mar '06			
65	Outlet Section	392 days	15 Aug '04	10 Sep '05			
78	Inlet Section	152 days	13 Oct '04	13 Mar '05			
85							
86	C W Pump Equipment Room	115 days	15 Jul '05	06 Nov '05			
91							
92	Pipe & Cable Rack	296 days	23 May '05	14 Mar '06			
97			-				
98	Gas Receiving Station	236 days	15 Jul '05	07 Mar '06			

Lamma Power Station Extension - Unit 9 Civil and Building Work 3-Month Programme

Scheduled Activity

# 3 month work schedule for Lamma power station extension Unit-9

Item	Description	Start	Finish	Jun			Jul		Aug			
	·			0 2	0 3	1 1	0 2	0 3	0 1	0 2	0 :	31
1	HRSG erection	28 Mar,05	15 Aug,06									
	Character to which a secretic re	04 Man 05	45 4 00									_
	Steam turbine erection	01 Mar,05	15 Aug,06									_
3	Gas turbine erection	15 Mar,05	15 Aug,06									-
	Cao tarbino di cottoni	To Mar, oo	107(49,00									-
4	Generator erection	15 Mar,05	15 Aug,06									
		45 5 1 05	45.4 . 00									
5	Condenser erection	15 Feb,05	15 Aug,06									_
6	Aux equipment erection	01 Apr,05	15 Aug,06									
	•	•	•									
7	Air duct / Inlet filter	25 Apr,05	15 Aug,06									
	LIDOO: L. C. L. C.	04.14	45.4									_
8	HRSG inlet duct	21 May, 05	15 Aug,06									_
9	Piping support / Piping erection	01 Jun,05	15 Aug,06									$\dashv$
	i iping eappert? I iping erection	01 0411,00	107(49,00									_
10	Insulation work	23 Feb,05	15 Aug,06									
11	Platform installation	11 Apr, 05	15 Aug,06									
40	 	00.4	45.4									_
12	Pipe rack installation	26 Aug, 05	15 Aug,06									-
13	Intake aux equipment installation	08 Aug, 05	15 Aug,06									$\dashv$
			, <u></u>									$\exists$
14	Bop piping installation	08 Aug, 05	15 Aug,06									
												$\Box$
15	GRS piping installation	20 Dec, 05	Cont									4

# CONTRACT NO. 04/9013 LAMMA POWER STATION EXTENSION UNIT 9 COMPLETE ERECTION, INSPECTION, TESTING & COMMISSIONING OF POWER BLOCK ELECTRICAL, INSTRUMENTATION AND CONTROL FACITILITIES

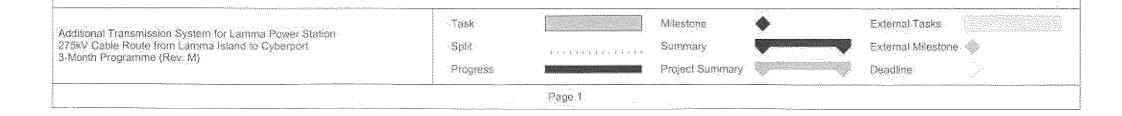
#### 3 MONTH PROGRAMME (JUNE 2006 TO AUGUST 2006)

					June				Ju	ly			A	agust		
ID	Task Name	Start	Finish	1/5	8/5	15/5	22/5	28/5	5/6	12/6	19/6	26/6	3/7	10/7	17/7	24/7
1																
2	L9 Electrical Erection	Thu 1/6/06	Thu 31/8/06													
3	Cable Tray Cover Installation	Thu 1/6/06	Thu 31/8/06													
4	Instrument Piping Installation Thu 1/6/06		Thu 31/8/06													
5	Cable Termination	Thu 1/6/06	Thu 31/8/06													

SANKO SETSUBI CO., LTD.

					June					,
ID	Task Name	Start	Finish	28/5	-	4/6	11/6	18/6	25/6	
1		The 45/0/00	F.: 00/0/00				,			
2	Pipeline Installation	Thu 15/6/06	Fri 30/6/06							
3	1 11 1 21 1 11 2	Th 45/0/00	F:: 00/0/00							
4	Initial Charging with Gas	Thu 15/6/06	Fri 30/6/06							
	<b>5 6 4 5 . .</b>		Task			Milestone	<b>^</b>	External Tasks		
	Power Station Extension and Installation of Submarine Gas Pipelin Programme	ne					<b>V</b>			
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mma pply a /lonth	Programme	I								
nma oply a lonth	Programme		Progress			Project Summary		Deadline	$\overline{\Box}$	

	######################################			Jung July: August 1
	Task Name	Start	Fielsh	28/5 4/6 11/6 18/6 25/6 2/7 9/7 16/7 23/7 30/7 6/8 13/8 20/8 27/8
1	Civil Works			
3	Site Procession & Preparation Work	Tue 25/5/04	Mor. 12/7.04	
4	saire (1.) parentine (1.96.) Trefrance extract (1.4.6 a) (1.			
	Within Lamma Power Station			
6	Construction of Cable Duct	Mon 4/10/04	Thu 29/9/05	
7	Construction of Cable Duct North Portal	Mon 12/7/04	Tue 31/1/06	
oroinumenen E		Mon 3/5/06	Wed 31/5/06	
	Backfilling Work inside Cable Duct after Cable Laying	38641.11/38/00	7460 9 1/24/0	
GE 197 valotetetatistetatatatatete				
19:	Yung Shue Wan South (N2)	33 69.93.04.	5	
1.1	Construction of Cable Landing Point	Mon 12/7/04	Sat 31/12/05	
12:	Construction of Cable Duct South Portal	Mon 12/7/04	Sat 31/12/05	
13	Backfilling Work at Landing Point after Cable Laying	Thu 1/6/06	Sat 30/9/06	
14				
15	Pak Kok San Tsuen (N4)			
16	Construction of Cable Landing Point	Tue 24-8/04	Fri 14/10/05	
17	Construction of Cable Trenches	Sat 30/7/05	Sat 31/12/05	
18	Construction of Cable Duct	Thu 25/11/04	Fri 30/9/05	
10	Construction of Cable Duct South Portal	Wed 25/8/04	Man 16/1/06	
	Backfilling Work inside Cable Duct after Cable Laying	Sal 1/4/05	Sun 30/4/05	mag 
21	Backfilling Work at Cable Trenches after Cable Laying	Thu 1/6/196	Sai 30/9/06	THE STATE OF THE S
a.2	Backfilling Work at Landing Point after Cable Laying	Thu \$16/06	Sat 30/9/06	
23				
24	Pak Kok Tsul (N5)		ļ	
25	Construction of Cable Landing Point	Mon 12/7/04	Wed 14/9/05	iggianness
126	Gonstruction of Cable Duct North Portal	Mon 12/7/04	Sat 31/12/05	wygosoonet.
Au.	Backfilling Work at Landing Point after Cable Laying	Mon 15/5/06	Sat 30/9/06	ZAN BANGAN PANAN PANA



# J-Power Systems Corp.

Contract No.: 01/9046

Project: Installation of 275kV/Communication Submarine and Land Cables with Accessories for Lamma - Cyberport Circuits

### CONSTRUCTION SCHEDULE (FORECAST FOR 3 MONTHS)

Issue: 24 Date: 25-May-06

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Dredging/Excavation of Submarine																																											$\Box$
1 Cable Trench outside N2 Landing Point																																											
(Completed)																																											$\perp \!\!\! \perp \!\!\! \parallel$
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2 Cable Trench outside N4 Landing Point (Completed)																																											
Dredging/Excavation of Submarine	+	H		$+\!+\!+\!-$		+	+++		+			++				++						+	++	++				++	+		++		+	++		$\vdash$	+	+	++				+
3 Cable Trench outside N5 Landing Point																																											
(Completed)																																											
Dredging/Excavation of Submarine				$\Box$															11																								$\top$
4 Cable Trench outside I1 Landing Point																																											
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Removing Seabed Obstructions and																																											
5 subsequently backfilling between N2 &																																											
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6 I1 Landing Points																																											
(Completed)																																											
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7 N4 Landing Points																																											
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Preparation & Installation of Submarine																																											
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Preparation & Installation of Submarine																																											
Cables between N2 & N4 (Completed)																																											
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Backfilling & Cable Protection outside Not Landing Point	5																																										
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Backfilling & Cable Protection outside I1				$\perp \perp \downarrow$																																							
Landing Point																																											
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<note></note>																																											
	1. 8	1. Schedule will be modified due to the progress of works and weather conditions.																																									

# Appendix K

Supply and Installation of Submarine Gas Pipeline

Monthly EM&A Report prepared by a Consultant as one of the ET Members

# LAMMA POWER STATION EXTENSION Supply and Installation of Submarine Gas Pipeline

# **Environmental Monitoring and Audit Report**

May 2006

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REV	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	PURCHASER

STATUS CODE : A = Issued for comments – B = Issued for approval – C = Approved for Construction

TOTAL OR PARTIAL REPRODUCTION AND/OR UTILIZATION OF THIS DOCUMENT ARE FORBIDDEN WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE OWNER

# THE HONGKONG ELECTRIC CO., LTD. LAMMA POWER STATION EXTENSION pply and Installation of Submarine Gas Pipeli

Supply and Installation of Submarine Gas Pipeline Contract No. 03/9008





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Doc. Title: Environmental Monitoring and Audit Report (May 06)

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# **TABULATION OF REVISED PAGES**

PAGE	REVISIONS						PAGE	REVISIONS											
	0	1	2	3	4	5	6	7			0	1	2	3	4	5	6	7	
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LAMMA POWER STATION EXTENTION; Contract 03/9008

Doc No. : LTLD-32-1-138-G

Revision: 0

Date : 05.06.2006





Saipem

Doc. Title: Environmental Monitoring and Audit Report (May 06)

Page ii

# Saipem Asia Sdn. Bhd

# Lamma Power Station ExtensionSupply and Installationof Submarine Gas Pipeline

Environmental Monitoring and Audit Report (Version 0.A)

May 2006

Approved By

(Project Director: Dr. HF Chan)

#### REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties.

#### **CINOTECH CONSULTANTS LTD**

Room 1602-1610, Delta House, 3 On Yiu Street, Shatin, NT, Hong Kong Tel: (852) 2151 2083 Fax: (852) 3107 1388

Email: info@cinotech.com.hk





# Saipem

Doc. Title: Environmental Monitoring and Audit Report (May 06)

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B Complaint Log





# Saipem

Doc. Title: Environmental Monitoring and Audit Report (May 06)

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# **LIST OF ABBREVIATION**

EIA	Environmental Impact Assessment
EM&A	Environmental Monitoring and Audit
ET	Environmental Team
GRS	Gas Receiving Station
HEC	Hong Kong Electric Co. Ltd
LNG	Liquefied Natural Gas

#### **EXECUTIVE SUMMARY**

#### Introduction

1. This is the sixteenth Environmental Monitoring and Audit (EM&A) Report prepared by Cinotech Consultants Limited (ET-Cinotech) for the project "Lamma Power Station Extension – Supply and Installation of Submarine Gas Pipeline" (the Project). This document reported the findings of EM&A Works conducted in May 2006.

# **Environmental Monitoring Works**

Water Quality

2. No water quality monitoring for the Project was carried out in Hong Kong waters in the reporting month.

# **Complaints and Prosecutions**

3. No environmental complaint and prosecution was received during the reporting month.

#### **Current Key Issues**

4. No construction activity related to the Project was undertaken in Hong Kong waters in the reporting month.

#### 1 INTRODUCTION

#### **Background**

- 1.1 Hong Kong Electric Co., Ltd. (HEC) proposed to develop a 1,800 MW power station in Hong Kong Special Administrative Region (HKSAR) to meet the forecast increase in electricity demand to cope with the social and economical growth of the HKSAR. The proposed power station is located at reclaimed land in the south of the existing Lamma Power Station at the western edge of Lamma Island, termed Lamma Power Station Extension.
- 1.2 The proposed Power Station will use natural gas as fuel to generate electricity. The natural gas will be supplied from Guandong Liquefied Natural Gas (GD LNG) Terminal located at Cheng Tou Jiao of Shenzen PRC via a 20 inches diameter gas submarine pipeline.
- 1.3 HEC commissioned Saipem Asia Sdn. Bhd. (hereafter called "the Contractor) for the design, engineering, supply of materials, fabrication, testing at works, delivery to site, complete erection including pre-trenching, pipe laying, rock dumping, testing and pre-commissioning at site, preservation during the Defects Liability Period of Submarine Gas Pipeline under to Project titled "Lamma Power Station Extension Supply and Installation of Submarine Gas Pipeline" (hereinafter called "the Project"). Cinotech Consultants Limited was subsequently commissioned by the Contractor as the Environmental Team (ET-Cinotech) to provide environmental consultancy services and to undertake the Environmental Monitoring and Audit (EM&A) works for the Project.
- 1.4 The Project works include Pre-Trenching works, Pipe-Lay installation, Post-Lay Trenching (Jetting) and Rock Dumping works related to the installation of 92 km of 20 inches diameter Submarine Gas Pipeline between Guandong Liquefied Natural Gas Terminal (GD LNG) and the receiving point at Gas Receiving Station (GRS) at South-West of Lamma Extension on Lamma Island of Hong Kong SAR. An Environmental Permit (EP) has been issued for the Lamma Power Station Extension project. Variations to the EP requirements have been proposed recently for the Project works and the VEP no. EP-071/2000/C was issued on 18<sup>th</sup> May 2005.
- 1.5 The Pre-Trenching works, Pipe-Lay installation, Post-Lay Trenching (Jetting) and rock dumping have been completed. Pipeline discharge work is the major current activity. The hydrotest medium discharge was commenced on 30 April in Mainland China waters in accordance with instruction from HEC and the discharge license from the PRC Authorities.

#### **Project Organizations**

- 1.6 Different parties with different levels of involvement in the project organization include:
  - Project Proponent –Hong Kong Electric Co., Ltd. (HEC)
  - Contractor Saipem Asia Sdn. Bhd.
  - Environmental Team (ET-Cinotech) Cinotech Consultants Limited

1.7 The responsibilities of respective parties are detailed in Section 3 of the EM&A Requirements Review (Review) and the project organization chart is presented in Figure 3.1 of the Review. The key contacts of the ET- Cinotech are shown in Table 1.1.

**Table 1.1 Key Project Contacts** 

Party	Name	Role	Phone No.	Fax No.
	Dr. Priscilla Choy	Project Manager	2151 2089	3107 1388
ET- Cinotech	Mr. Kenneth Lam	Coordinator	2151 2078	3107 1388
	Mr. Henry Leung	Monitoring Team Leader	2151 2087	3107 1388

#### 2 WATER QUALITY MONITORING

2.1 No water quality monitoring for the Project was carried out in Hong Kong waters in the reporting month.

#### 3 ENVIRONMENTAL AUDIT

#### **Implementation Status of Mitigation Measures**

3.1 The implementation status of mitigation measures is summarized in Appendix A.

# Summary of Non-compliance of the Environmental Quality Performance Limit

3.2 No non-compliance was recorded during the site audits in the reporting month.

#### **Summary of Complaints and Prosecution**

- 3.3 No environmental complaint and prosecution was received during the reporting month.
- 3.4 The complaint log for the Project is provided in Appendix B.

#### 4 CURRENT KEY ISSUES

#### **Key Issues for the Coming Month**

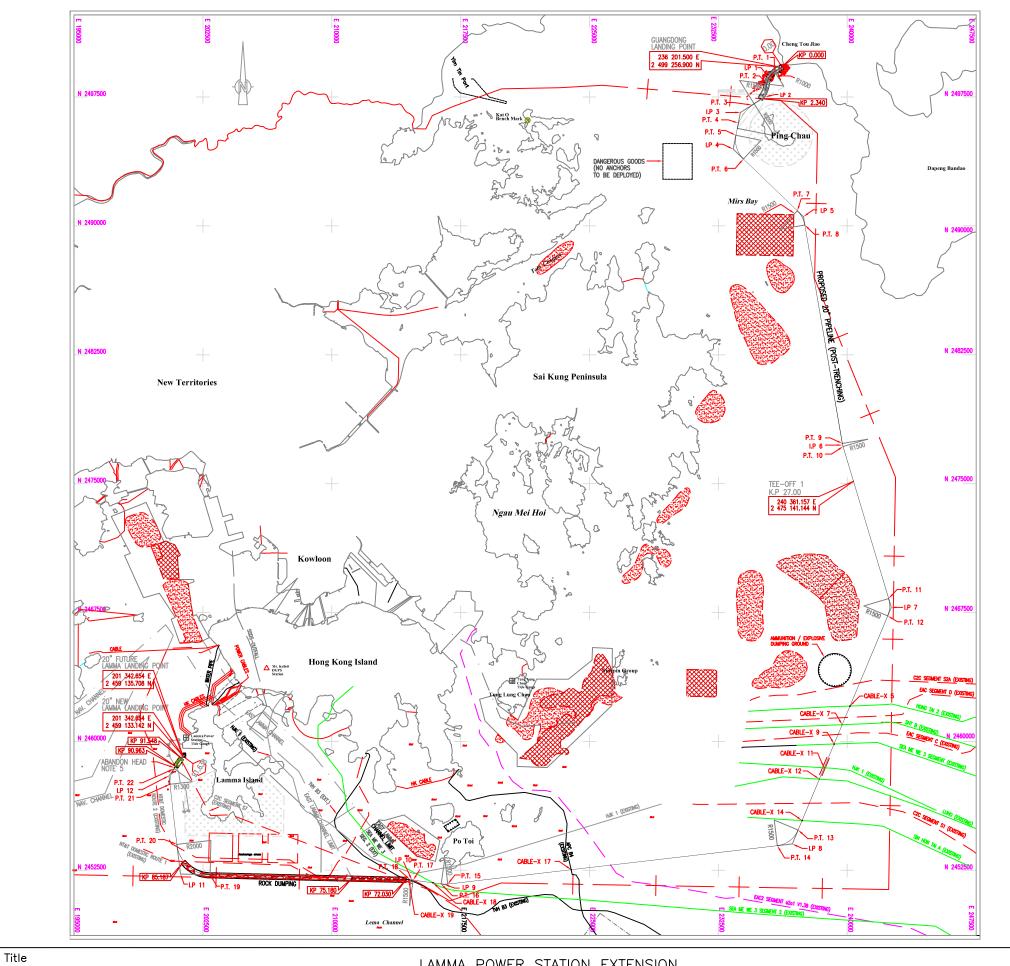
4.1 No key issue is anticipated in the coming month.

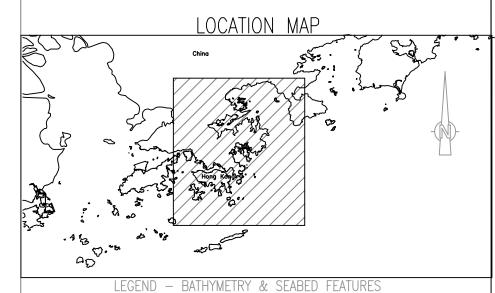
#### 5 CONCLUSIONS AND RECOMMENDATIONS

#### **Conclusions**

- 5.1 No water quality monitoring for the Project was carried out in Hong Kong waters in the reporting month.
- 5.2 No construction activity was undertaken in Hong Kong waters in the reporting month.

# **FIGURE**





--- NEW 20" PROPOSED PIPELINE ROUTING SEABED WITH DUMPED MATERIALS PIPELINE SHOWING ALTER-COURSE POINT SOUNDING VALUE IN METRES BELOW CHART DATUM SEABED WITH HIGH REFLECTIVITY BATHYMETRIC CONTOURS IN METRES BELOW CHART DATUM SAND BODIES P.T. POINT OF TANGENCY MUD DISPOSAL AREA TEE OFF 0 GAZETTE AREA ---- SURVEY BOUNDARY POTENTIAL MARINE PARKS AMMUNITION / EXPLOSIVE DUMPING GROUND EXISTING BURIED CABLE PROPOSED SSDS ALTERNATIVE OUTFALLS HONG KONG WATER BOUNDARY SAND WAVES ANCHOR / TRAWL MARKS FLOATER SMALL TARGETS NUMEROUS TRAWL SCARS / TRAWL SCARS

# GEODETIC PARAMETERS

DATUM SPHEROID

: WGS 84 : UNIVERSAL TRANSVERSE MERECATOR ZONE 50 PROJECTION

#### GENERAL NOTES

- ALL DIMENSIONS AND COORDINATE ARE IN METER UNLESS OTHERWISE NOTED
   POINT OF TANGENCY (P.T), INTERSECTION POINT (I.P) AND CABLES -X COORDINATES ARE PRESENTED ON PIPELINE ALIGNMENT SHEET FROM K.P 0.00 TO K.P 91.638
   K.P. 0.00 IS FROM GUANGDONG TERMINAL

- 4. PIPELINE TRENCHING IS FROM (K.P. 0.00 TO K.P. 91.596)

  5. ABANDON HEAD FOR FUTURE 20" CONNECTION

  6. THE ROUTE HAS BEEN CHANGED SLIGHTLY TO AVOID ITEMS No. 2, 3 AND 4, WITH THE NEW ROUTE STILL WITHIN THE SURVEYED CORRIDOR.

	ROCK DUMPING									
ITEM	DESCRIPTION	LOCATION			INATES	LENGTH	REMARKS			
	52551111 11511			EASTING	NORTHING	(m)				
1	LAMMA NAVIGATION CHANNEL	START KP	91.492	201257.067	2459014.325	597	PRE-TRENCH (DREDGING METHOD)			
		END KP	90.895	200908.315	2458530.164	597				
2	SOUTH LAMMA ANCHORAGE ZONE	START KP	85.187	201388.269	2453015.705	40000	POST-TRENCH			
		END KP	75.180	211178.791	2452029.904	10000	(JETTING METHOD)			
3	EAST LAMMA CHANNEL & SOUTH	START KP	75.180	211177.747	2452029.928	3150	POST-TRENCH			
	OF PO TOI	END KP	72.030	214327.791	2451950.529	3130	(JETTING METHOD)			
4	SHENZHEN SHORE APPROACH	START KP	2.340	234934.490	2497405.926	2340	PRE-TRENCH			
			0.000	236201.500	2499256.900	2540	(DREDGING METHOD)			

	DUMPED MATERIALS (NOTE 6)							
ITEM	LOCATION	TOTAL LENGTH (m)	SEABED TYPE	BURIAL METHOD				
1	KP 0.5 - KP 1.5	475.53	SEABED WITH DUMPED MATERIALS	PRE-TRENCH				
2	KP 4 - KP 4.5	15.52	SEABED WITH DUMPED MATERIALS	POST-TRENCH				
3	KP 70 - KP 70.5	168.78	SEABED WITH HIGH REFLECTIVITY	POST-TRENCH				
4	KP 89.5 - KP 90.5	60.5	SEABED WITH DUMPED MATERIALS	POST-TRENCH				

LAMMA POWER STATION EXTENSION

LAYOUT OF THE SUBMARINE GAS PIPELINE

Scale Project No. 1 : 220 000 A3 MA4017 Date Figure No. 2005 1.1



APPENDIX A
CONSTRUCTION PHASE MITIGATION
MEASURES AND THEIR
IMPLEMENTATION (GAS PIPELINE)

#### Appendix A – Construction Phase Mitigation Measures and their Implementation (Gas Pipeline)

EP- 071/200 0/C	EM&A Log Ref.	Mitigation Measures	Implemen- tation Status
		AIR QUALITY	
	Q1	For the fuel gas supply system, equipment shall be chosen and measures taken, so as to prevent CH <sub>4</sub> leakage from the system. In accordance with this recommendation, HEC shall be implementing the following:	
		corrosion-preventing coatings on the pipeline;	С
		welded pipe joints; and	С
		<ul> <li>laying of pipeline below sea bed such that it is well protected from potential damages by marine activities.</li> </ul>	С
	Q2	HEC shall submit to EPD for review, a report of the above actions.	С
		WATER QUALITY	
3.8	R1	The following rates of dredging for the trenches at the Shenzhen and Lamma approaches and the rate of progress of the jetting shall be adopted:	
		a single small grab dredger with a maximum daily rate of working of 2,400m <sup>3</sup>	NA
		maximum forward speed of the jetting machine shall be 7 m per minute	NA
	R2	No further mitigation measures were considered necessary, however if unacceptable impacts were to be found in the course of the EM&A programme for the pipeline jetting, then the following measures shall be implemented:	
		reducing the speed of the water jetting machine; and	NA
		temporary suspension of the works.	NA
3.10		Pipeline jetting shall only be carried out in the open sea which is far away from sensitive receivers as recommended in the application document for variation of an environmental permit (the Application VEP-174/2005) and indicated in the Figure C1 at the Appendix C of the Permit during the initial jetting operation. Water quality monitoring shall be conducted during the pipeline jetting.	NA
		MARINE ECOLOGICAL IMPACTS	
3.9	S1	To avoid disruption to the <i>Neophocaena phocaenoides</i> (finless porpoise) population in the southwestern coastal waters of Lamma Island, pipeline jetting works located off the coast of southwest Lamma shall not be carried out during spring time from March to May.	С
		HAZARDS	
	T1	Detail quantitative risk study shall be conducted in accordance with the requirements in the Gas Safety Ordinance (Cap.51) to satisfy EMSD's requirements which shall ensure adequate design of the pipeline to protect against third party damage and safe operation of the pipeline system.	С
	T2	HEC shall review their existing safety management system against current best practice.	С

#### Remarks:

C - Compliance with mitigation measure NC - Non-compliance with mitigation measure

N/A - Not Applicable

# APPENDIX B COMPLAINT LOG

# **Appendix B - Complaint Log**

Log Ref.	Location	Received Date	Details of Complaint	Investigation/Mitigation Action	Status
001	South of the Lamma anchorage areas	October 2005	The local fishermen raised their concerns on the rock dumping operations of the Project.	The complaint has been handled by Hong Kong Electric Co., Ltd.	N/A