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 (August 2006)
Date	14/09/2006
Certified by	(Mr. IP Tat-Yan, Environmental Team Leader)
Verified by	(Hong Kong Productivity Council, Independent Environmental Checker)

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EXECUTIVE SUMMARY

This is the sixty-fifth 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 August 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.

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	Installation of GRS piping
Unit L9 Electrical, Instrumentation & Control Erection	Cable Tray Cover Installation
Transmission System	Backfilling above portal structure for Cable Duct 2 and cable trench from N4 landing point to Cable Duct no.2 Entrance
Miscellaneous	Slurry ash piping & filling

Environmental Monitoring Works

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

Independent Environmental Checker (IEC) conducted a site inspection on 16/08/2006. 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	Permit No.	Valid Period		Issued To	Date of Issuance
		From	To		
Varied Environmental Permit	EP-071/2000/C	18/05/05	-	HEC	18/05/05
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-RS0278-06	24/05/06	19/11/06	Contractor	24/05/06
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

Description	Permit No.	Valid Period		Issued To	Date of Issuance
		From	To		
WPCO Discharge Licence	EP890/W2/XD008 (V.1)	29/06/06	30/11/09	HEC	29/06/06
APCO Specified Process Licence	L-7-028	22/06/06	31/12/08	HEC	22/06/06

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.

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 August 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.

1.3 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 activity for Unit L9 mechanical erection was GRS piping installation. Construction activity for Unit L9 electrical, instrumentation & control erection was Cable Tray Cover installation. Construction activities for Unit L9's associated transmission system were backfilling above portal structure for Cable Duct 2 and cable trench from N4 landing point to Cable Duct no.2 Entrance. Layout plans for construction site and transmission system are shown in Figure 1.1 and Figure 1.2 respectively.

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	Environmental Mitigation Measures
Unit L9 Civil and Building 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.
2	275kV Switching 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	Environmental Mitigation Measures
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.
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. **Waste Management** – Waste Management Plan submitted and implemented.

Item	Construction Activities	Environmental Mitigation Measures
7	C.W. Culvert System & Equipment Room	**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.
8	C.W. Pump Equipment Room	**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.
9	Gas Receiving Station	**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.
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.

Item	Construction Activities	Environmental Mitigation Measures
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.
Construction of Transmission System		
12	Backfilling above portal structure for Cable Duct 2 and cable trench from N4 landing point to Cable Duct no.2 Entrance	**Terrestrial Ecology** – 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	Backfilling & Cable Protection	**Noise** – General noise mitigation measures employed at all work sites throughout the construction phase.
Unit L9 Mechanical Erection		
14	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.

Item	Construction Activities	Environmental Mitigation Measures
Unit L9 Electrical, Instrumentation & Control Erection		
15	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.
Miscellaneous		
16	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.

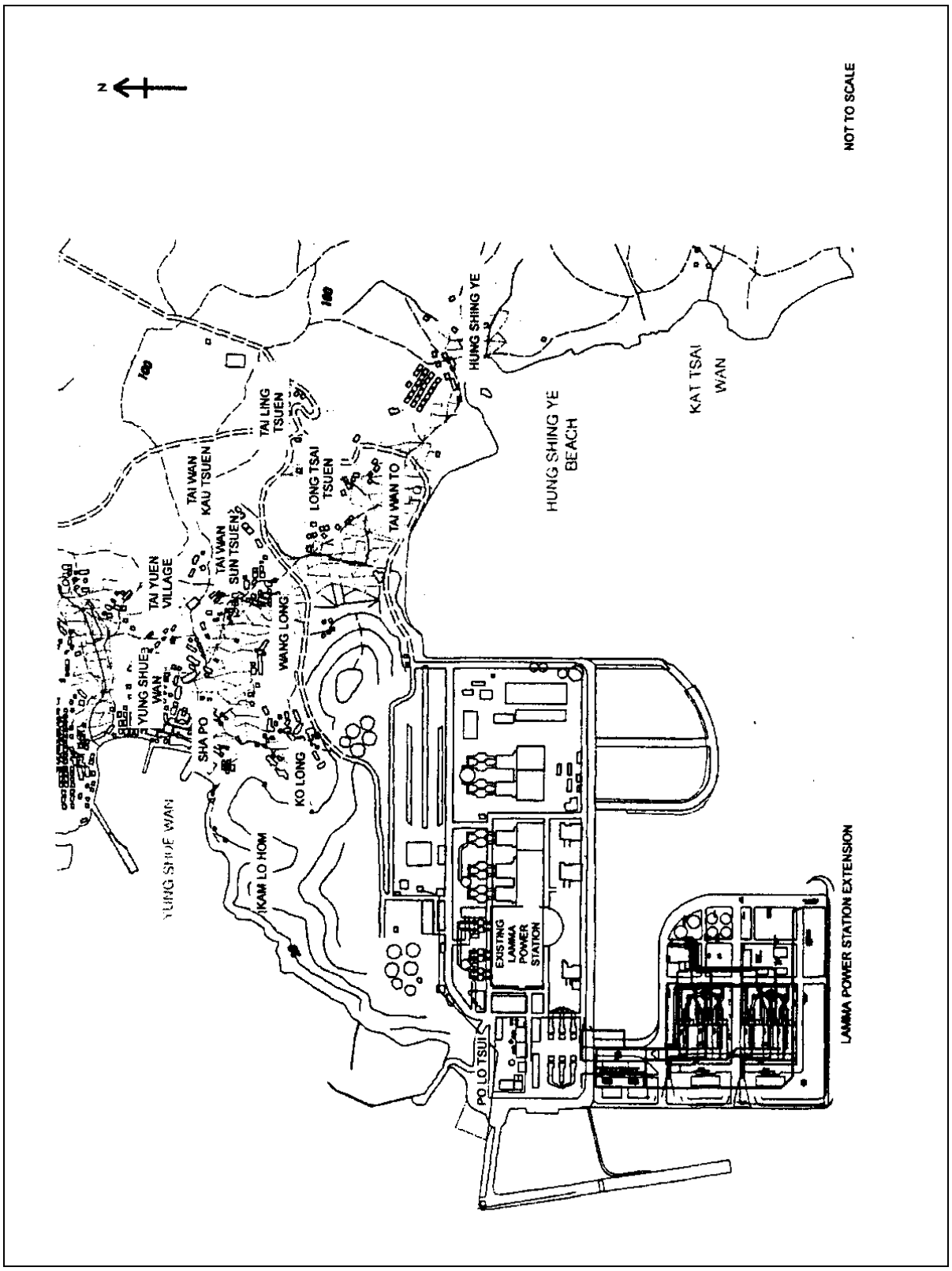


Figure 1.1 Layout of Work Site

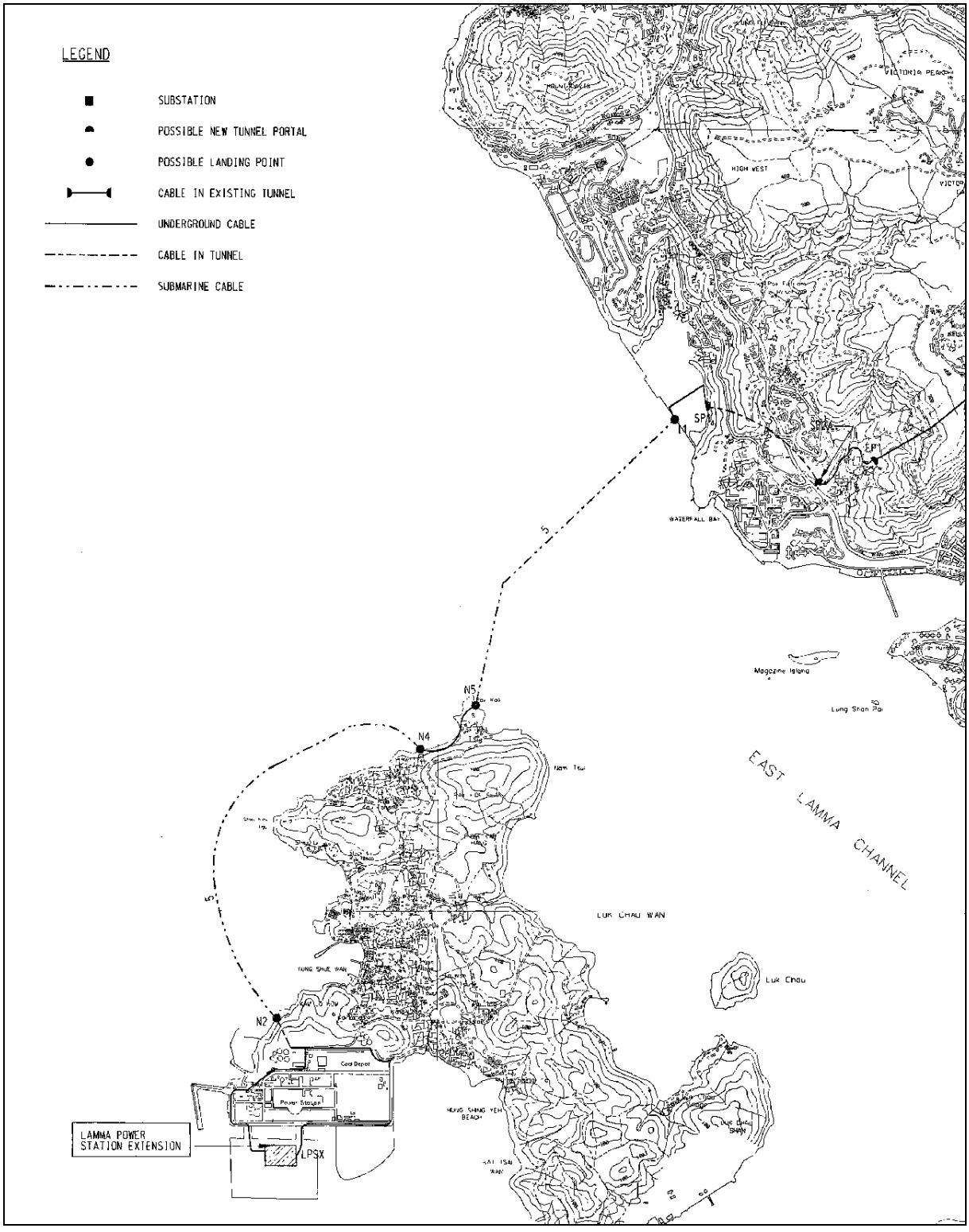


Figure 1.2 Cable Route of Transmission System

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
	24-hour TSP	24	Once every 6 days
AM2	1-hour TSP	1	3 hourly samples every 6 days
	24-hour TSP	24	Once every 6 days
AM3	1-hour TSP	1	3 hourly samples every 6 days
	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:

    - Mass concentration;
    - Total mass;
    - Frequency of the tapered element;
    - Electrical noise;
    - Main flow;
    - 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

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.

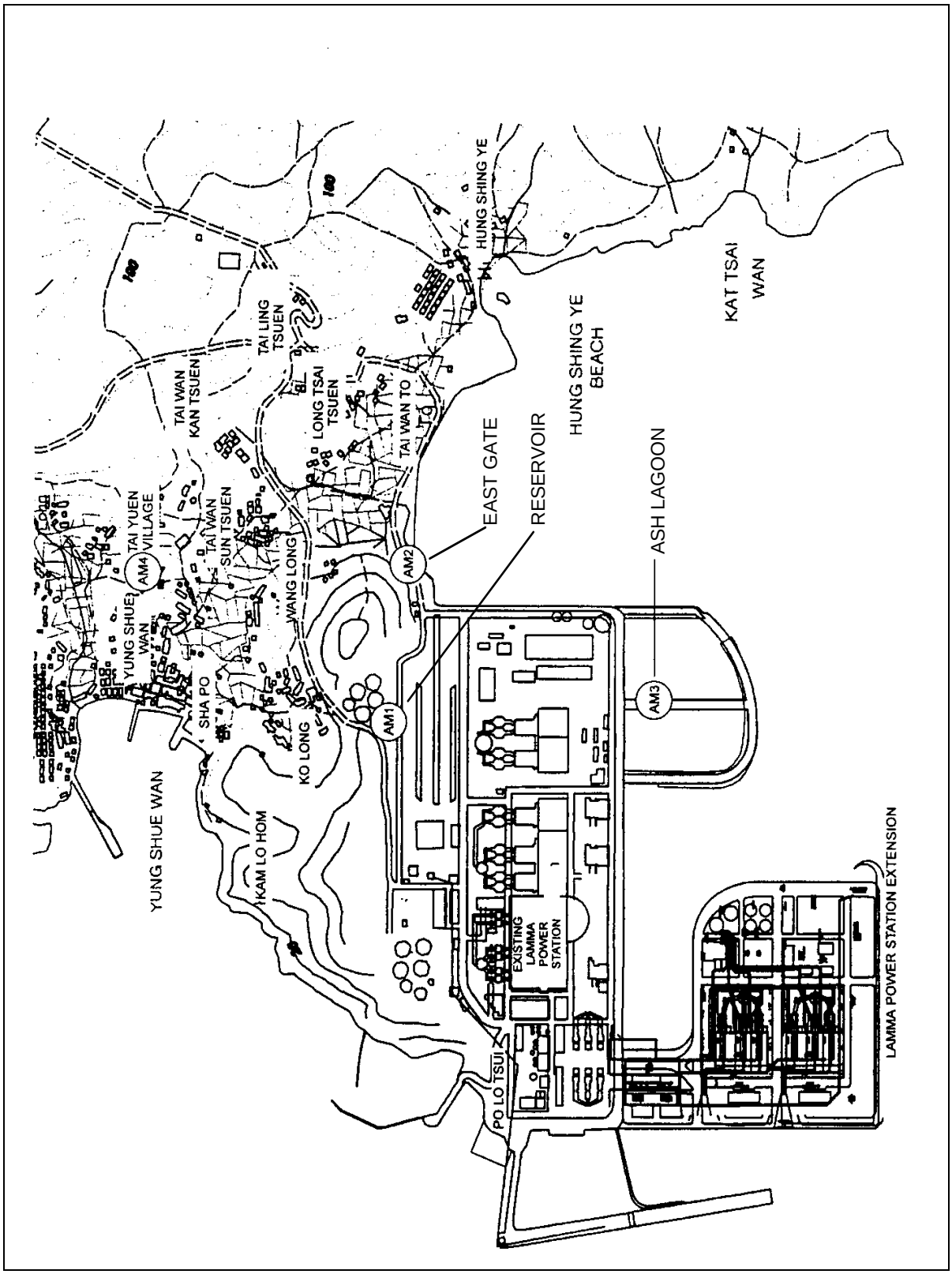


Figure 2.1 Location of Air Quality Monitoring Stations

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	**Monitoring Location**
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**	
	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
Ash Lagoon Ching Lam	Daytime: 0700-1900 hrs on normal weekdays	Daytime: 30 minutes	30-min L_{Aeq}
	Evening-time & holidays: 0700-2300 hrs on holidays; and 1900-2300 hrs on all other days	Evening-time & holidays: 5 minutes	5-min L_{Aeq}
	Night-time: 2300-0700 hrs of next day	Night-time: 5 minutes	5-min L_{Aeq}
Pak Kok Tsui residences	0700-1900 hrs on normal weekdays	Twice per week	30-min L_{Aeq}

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_{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 re-measured.

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.

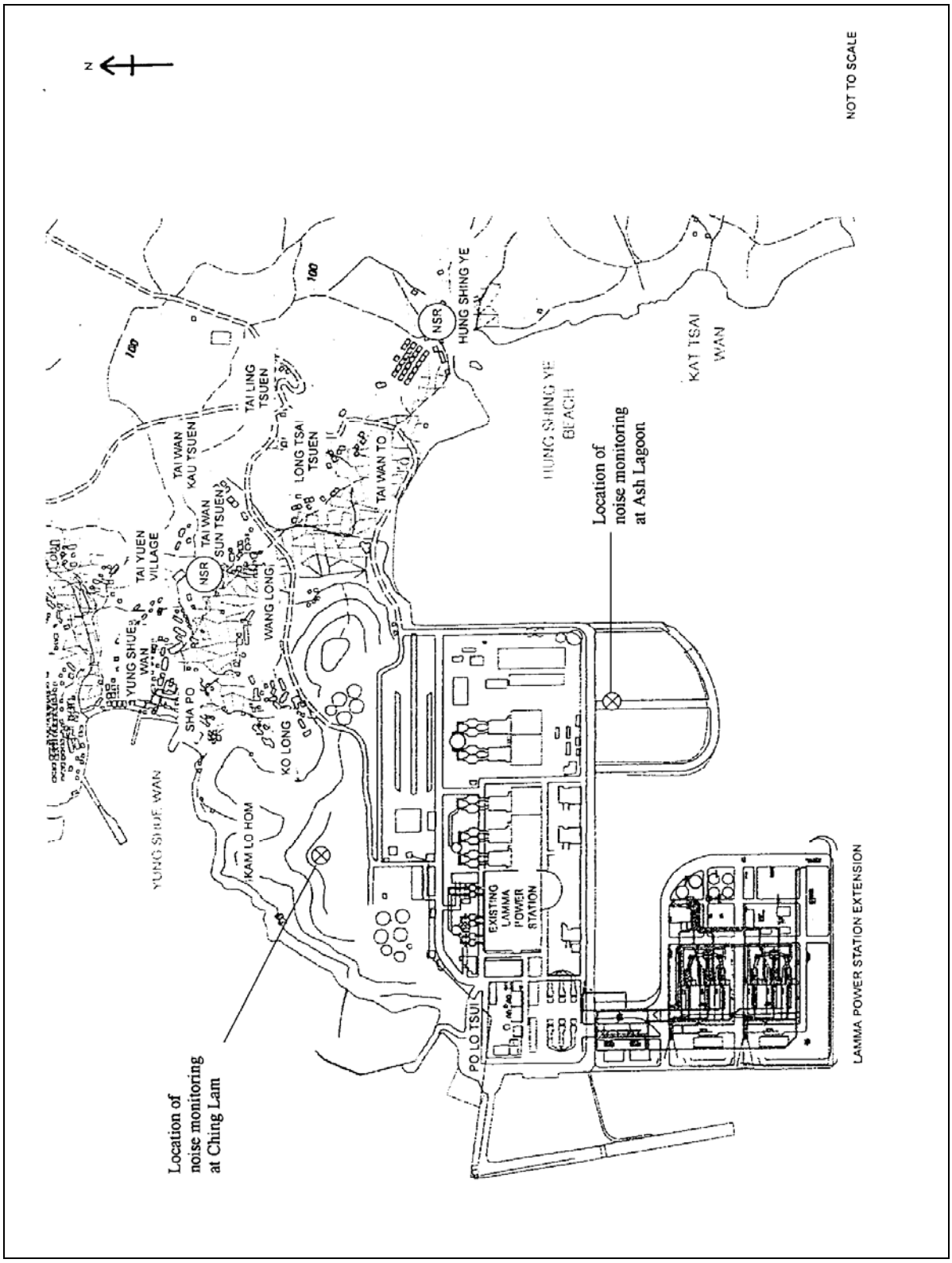


Figure 3.1 Location of Noise Monitoring Stations

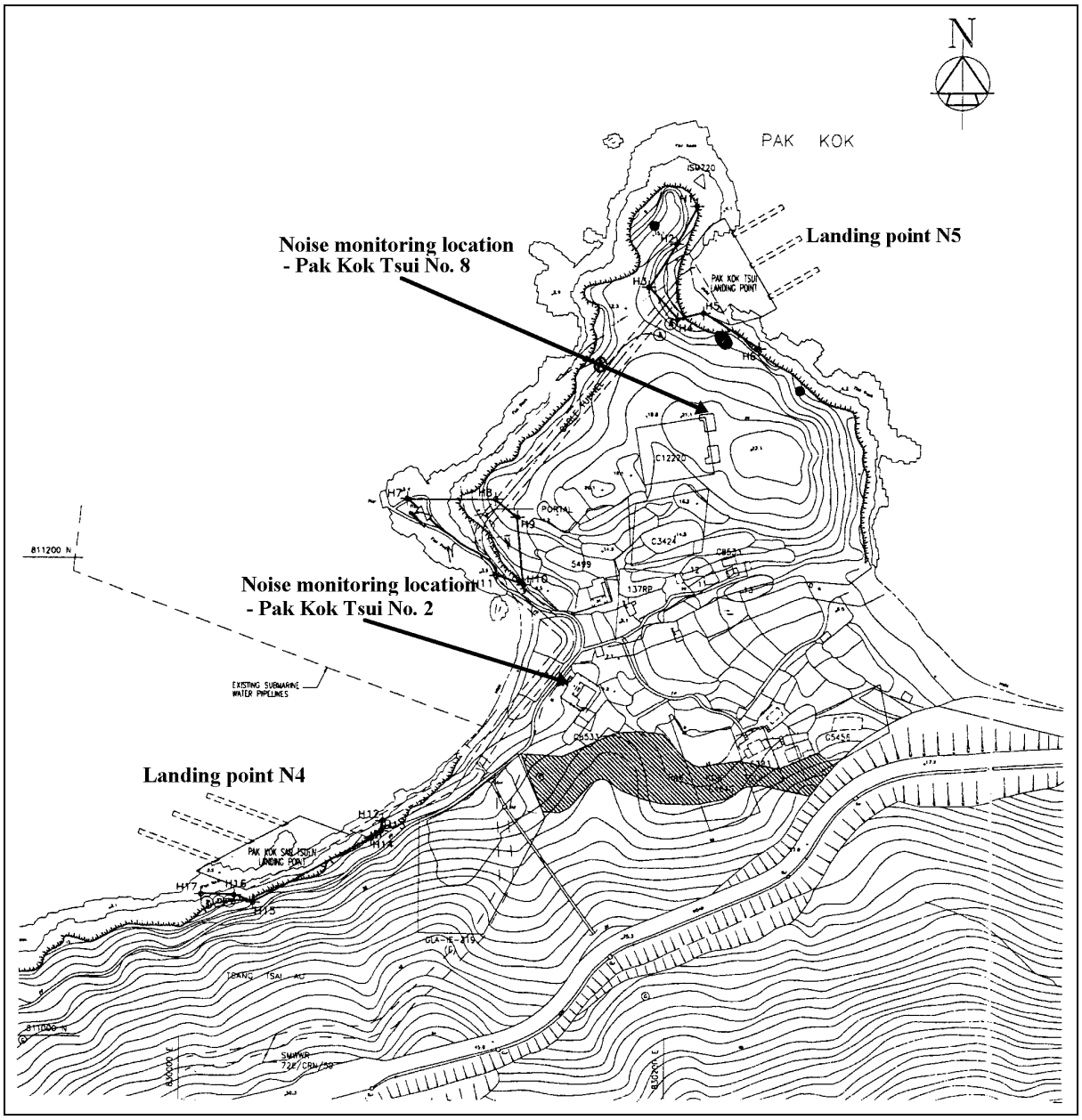


Figure 3.2 Locations of Manual Noise Monitoring

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 and Results
			Action Level	Limit Level	
Air					
1	Ambient TSP (24-hour)	01/08/06-31/08/06	0	0	
2	Ambient TSP (1-hour)	01/08/06-31/08/06	0	0	
Noise					
1	Noise level at the critical NSR's predicted by the noise alarm monitoring system	01/08/06-31/08/06	0	0	
2	Manual noise monitoring at the Pak Kok Tsui residences	01/08/06-31/08/06	0	0	

Waste Management Records

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

Table 4.2 Estimated Amounts of Waste Generated in August 2006

Waste Type	Examples	Estimated Amount
Construction Waste	Concrete Waste, Used formwork, reinforcement and wooden waste	0.02 Tonne
		90 m^3
General Refuse	Domestic wastes collected on site	20 m^3

4.3 Site Environmental Audit

IEC conducted a site inspection on 16/08/2006. 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
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

Description	Permit No.	Valid Period		Highlights	Status
		From	To		
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
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
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
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

Description	Permit No.	Valid Period		Highlights	Status
		From	To		
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
WPCO Discharge Licence	EP890/W2/XD008 (V.1)	29/06/06	30/11/09	Lamma Power Station and Extension	Valid
APCO Specified Process Licence	L-7-028	22/06/06	31/12/08	Lamma Power Station Extension	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 August 2006, no complaint against the construction activities was received.

Table 4.4 Environmental Complaints / Enquiries Received in August 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

5. FUTURE KEY ISSUES

5.1 Status of Natural Gas supply

Natural gas supply has been delivered to Lamma Power Station Extension.

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 September 2006 to November 2006. The tentative construction programs for the next 3 months are shown in Appendix J.

6. CONCLUSION

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. No prosecution was received for this Project in the reporting period.

The environmental performance of the Project was generally satisfactory.

Appendix A Organization Chart

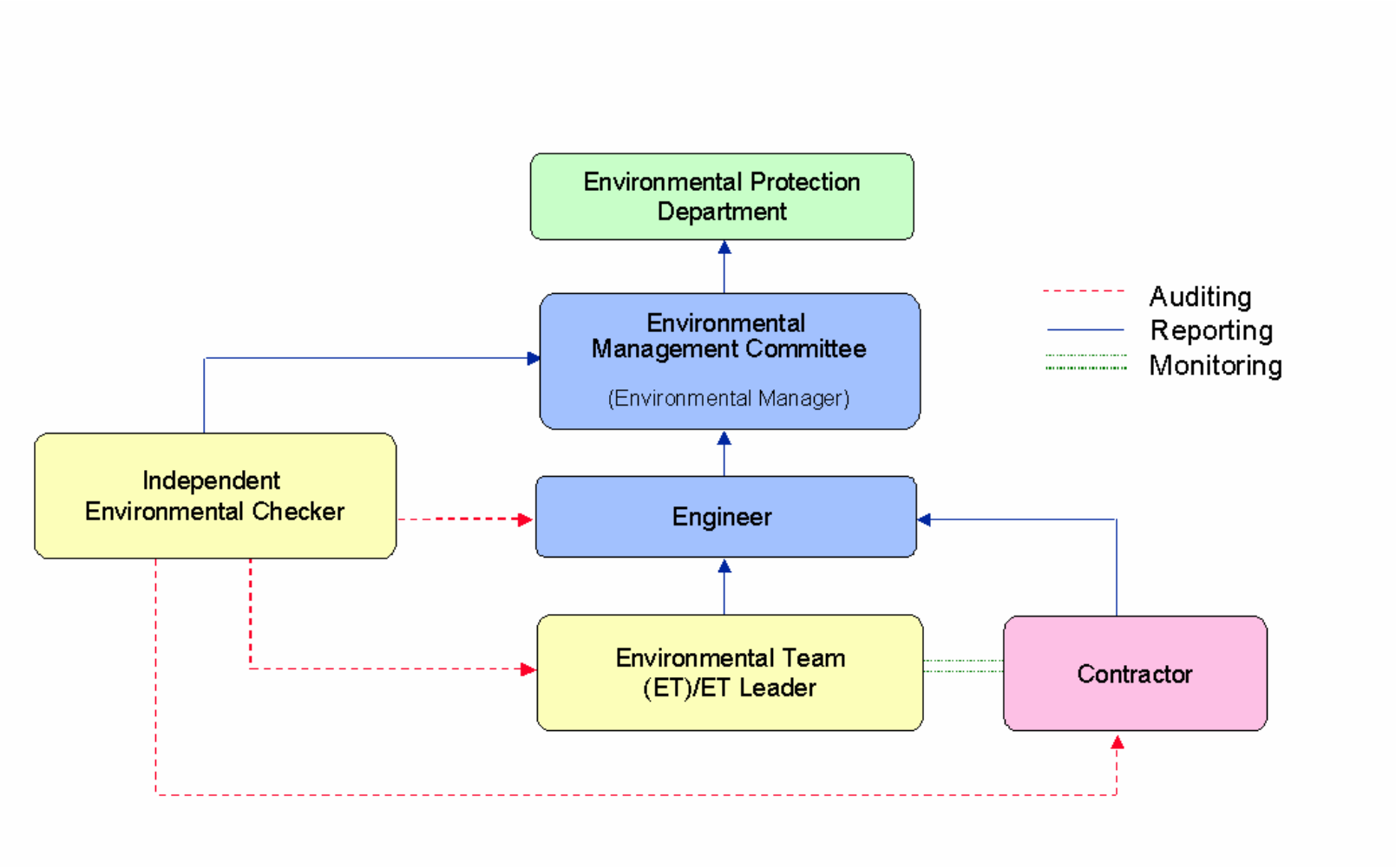


Figure A.1 Organisation of EM&A Programme at Construction Phase

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^3	**Limit Level, μg/m^3**
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	When one or more documented complaints are received	a. 75 dB(A) in $L_{Aeq,30\ min}$ (07:00-19:00 hrs on normal weekdays) (Note 1) b. subject to statutory control under the Noise Control Ordinance (07:00-23:00 hrs on holidays and 19:00-23:00 hrs on all other days). Set to 60 dB(A) in $L_{Aeq,5\ min}$ c. subject to statutory control under the Noise Control Ordinance (23:00-07:00 hrs of next day). Set to 45 dB(A) in $L_{Aeq,5\ min}$
Manual noise monitoring at the nearest Pak Kok Tsui residences to cable landing points N4 and N5		
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 (August 2006 to October 2006)

24hr TSP Monitoring	1hr TSP Monitoring
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
05/Sep/2006	05/Sep/2006 1500hr to 1800hr
11/Sep/2006	11/Sep/2006 1500hr to 1800hr
17/Sep/2006	17/Sep/2006 1500hr to 1800hr
23/Sep/2006	23/Sep/2006 1500hr to 1800hr
29/Sep/2006	29/Sep/2006 1500hr to 1800hr
05/Oct/2006	05/Oct/2006 1500hr to 1800hr
11/Oct/2006	11/Oct/2006 1500hr to 1800hr
17/Oct/2006	17/Oct/2006 1500hr to 1800hr
23/Oct/2006	23/Oct/2006 1500hr to 1800hr
29/Oct/2006	29/Oct/2006 1500hr to 1800hr

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

Date	Monitoring Start Time
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
01/Sep/2006	14:00
05/Sep/2006	10:00
08/Sep/2006	14:00
12/Sep/2006	10:00
15/Sep/2006	14:00
19/Sep2006	10:00
22/Sep/2006	14:00
26/Sep/2006	10:00
29/Sep/2006	14:00
03/Oct/2006	10:00
06/Oct/2006	14:00
10/Oct/2006	10:00
13/Oct/2006	14:00
17/Oct/2006	10:00
20/Oct/2006	14:00
24/Oct/2006	10:00
27/Oct/2006	14:00
31/Oct/2006	10:00
03/Nov/2006	14:00
07/Nov/2006	10:00
10/Nov/2006	14:00
14/Nov/2006	10:00
17/Nov/2006	14:00
21/Nov/2006	10:00
24/Nov/2006	14:00
28/Nov/2006	10:00

APPENDIX D AIR QUALITY MONITORING RESULTS

Site: Lamma Power Station Extension

Month: August 2006

24 hour TSP Measurement:-

Date	TSP concentration (μg/m^3)				Weather Information (From Hong Kong Observatory)		
	Reservoir (AM1)	East Gate (AM2)	Ash Lagoon (AM3)	Tai Yuen Village (AM4)	Mean Wind Speed (km/hr)	Prevailing Wind Dir. (°)	Mean R.H. (%)
06/08/2006	27	28	44	22	16.7	100	91
12/08/2006	25	25	33	44	20.7	100	84
18/08/2006	32	41	39	35	21.8	260	78
24/08/2006	22	26	24	25	21.2	110	92
30/08/2006	22	26	26	24	17.2	240	77

1 hour TSP Measurement:-

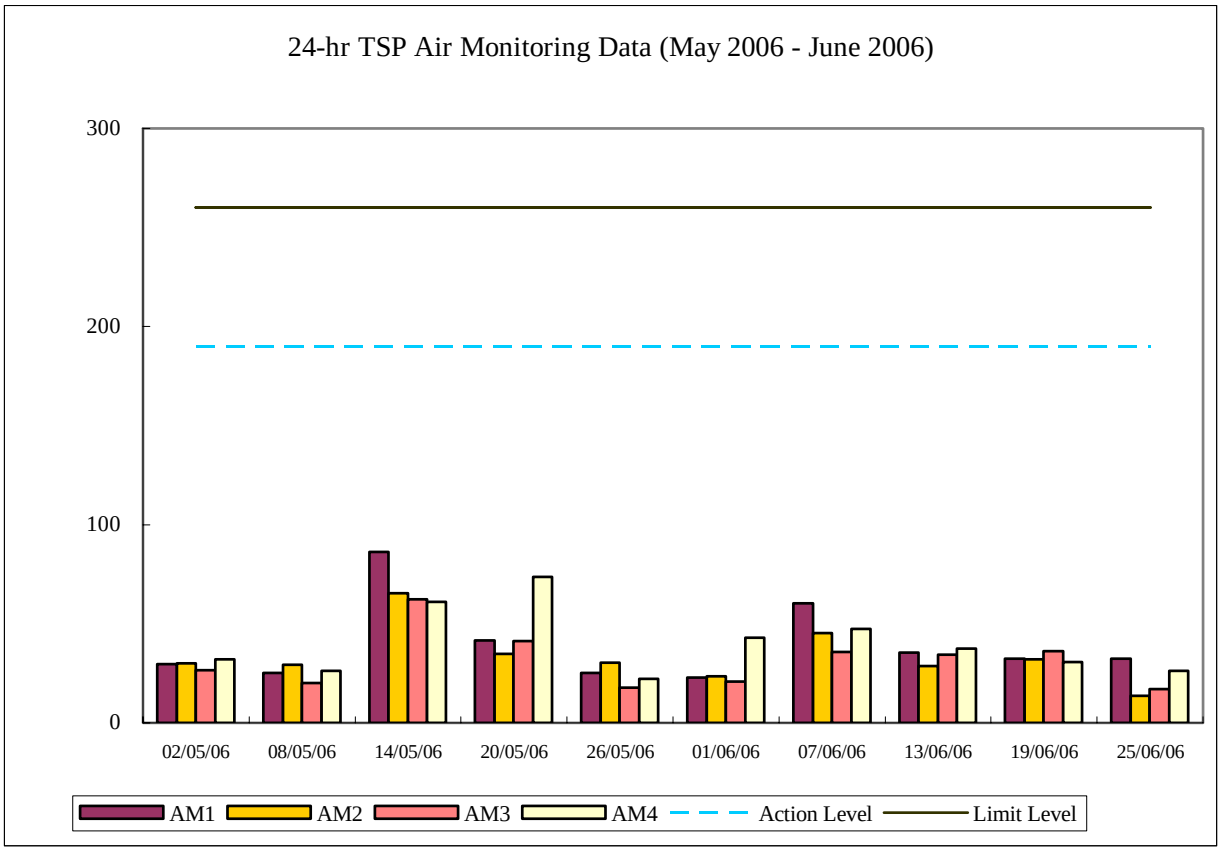
Date	Time	TSP concentration (μg/m^3)		
		Reservoir (AM1)	East Gate (AM2)	Ash Lagoon (AM3)
06/08/2006	15:00-15:59	18	21	23
	16:00-16:59	13	19	17
	17:00-17:59	20	26	20
12/08/2006	15:00-15:59	2	11	13
	16:00-16:59	9	14	12
	17:00-17:59	13	19	17
18/08/2006	15:00-15:59	41	52	43
	16:00-16:59	53	82	61
	17:00-17:59	29	54	35
24/08/2006	15:00-15:59	26	31	32
	16:00-16:59	9	23	5
	17:00-17:59	22	28	33
30/08/2006	15:00-15:59	15	28	8
	16:00-16:59	17	21	16
	17:00-17:59	23	23	15

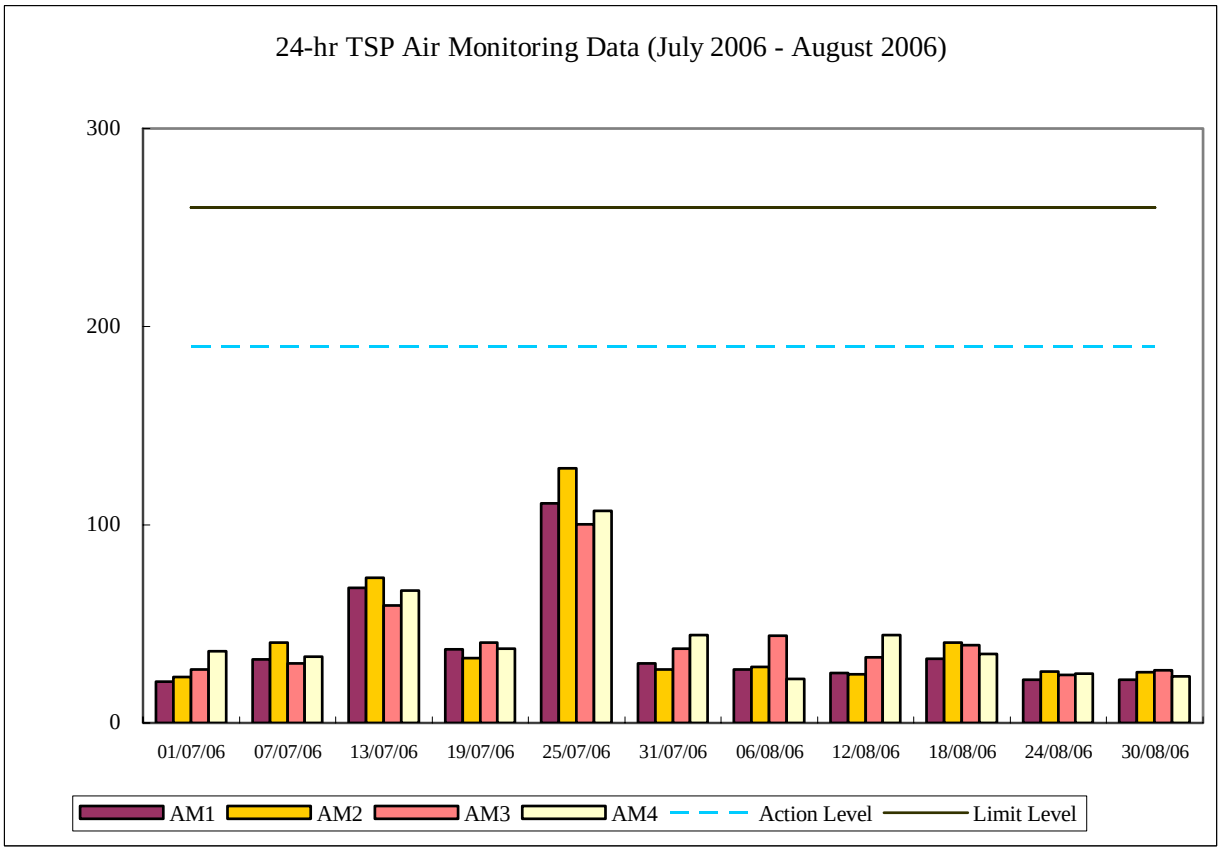
	1-hr TSP (μg/m^3)	24-hr TSP (μg/m^3)
Action Level	340	190
Limit Level	500	260

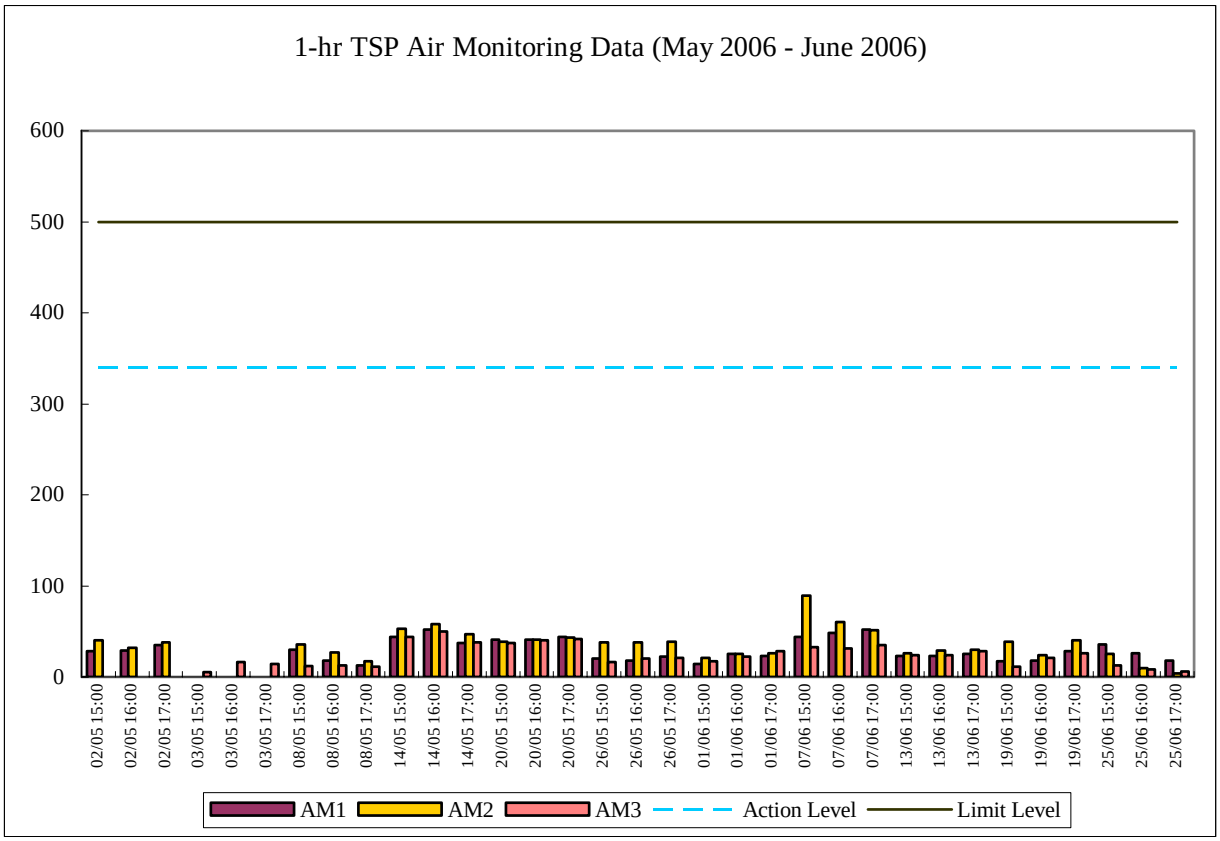
Calibration: Calibration details are shown in appendix F.

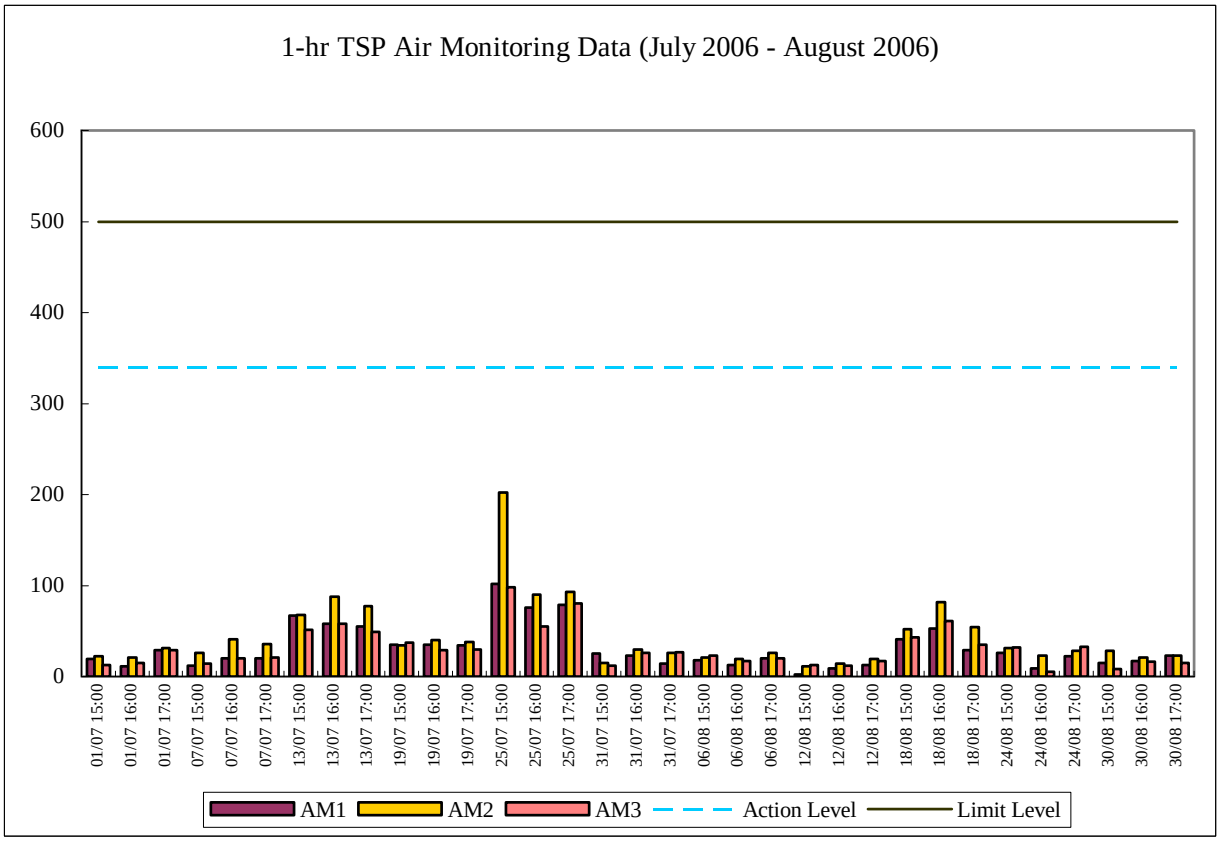
Equipment used:

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


24-hr TSP Air Monitoring Data (May 2006 - June 2006)
300
200
100
0
02/05/06
08/05/06
14/05/06
20/05/06
26/05/06
01/06/06
07/06/06
13/06/06
19/06/06
25/06/06
AM1
AM2
AM3
AM4
Action Level
Limit Level


24-hr TSP Air Monitoring Data (July 2006 - August 2006)
300
200
100
0
01/07/06
07/07/06
13/07/06
19/07/06
25/07/06
31/07/06
06/08/06
12/08/06
18/08/06
24/08/06
30/08/06
AM1
AM2
AM3
AM4
Action Level
Limit Level


1-hr TSP Air Monitoring Data (May 2006 - June 2006)
600
500
400
300
200
100
0
02/05 15:00
02/05 16:00
02/05 17:00
03/05 15:00
03/05 16:00
03/05 17:00
08/05 15:00
08/05 16:00
08/05 17:00
14/05 15:00
14/05 16:00
14/05 17:00
20/05 15:00
20/05 16:00
20/05 17:00
26/05 15:00
26/05 16:00
26/05 17:00
01/06 15:00
01/06 16:00
01/06 17:00
07/06 15:00
07/06 16:00
07/06 17:00
13/06 15:00
13/06 16:00
13/06 17:00
19/06 15:00
19/06 16:00
19/06 17:00
25/06 15:00
25/06 16:00
25/06 17:00
AM1
AM2
AM3
Action Level
Limit Level


1-hr TSP Air Monitoring Data (July 2006 - August 2006)
600
500
400
300
200
100
0
01/07 15:00
01/07 16:00
01/07 17:00
07/07 15:00
07/07 16:00
07/07 17:00
13/07 15:00
13/07 16:00
13/07 17:00
19/07 15:00
19/07 16:00
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06/08 17:00
12/08 15:00
12/08 16:00
12/08 17:00
18/08 15:00
18/08 16:00
18/08 17:00
24/08 15:00
24/08 16:00
24/08 17:00
30/08 15:00
30/08 16:00
30/08 17:00
AM1
AM2
AM3
Action Level
Limit Level

Appendix E.1 Continuous Noise Monitoring Results for August 2006

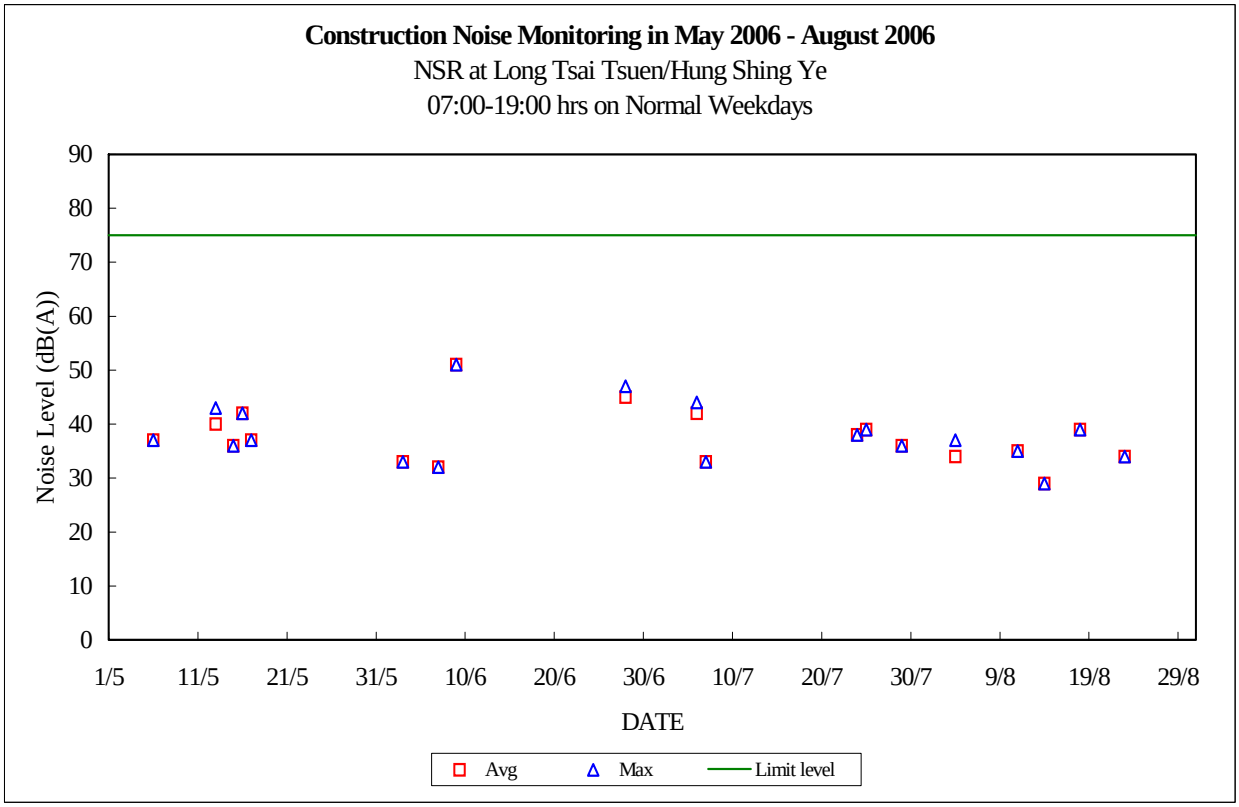
Site: Lamma Power Station Extension – Superstructure and E&M Works
Measurement Location: Ash Lagoon and Ching Lam
Measurement Parameter: 30-min Leq (07:00-19:00 hrs on normal weekdays)
5-min Leq (07:00-23:00 hrs on holidays and 19:00-23:00 hrs on all other days, and 23:00-07:00 hrs of next day)
Noise 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 - 03/02/2006
Rion NC-74 calibrator - 13/03/2006

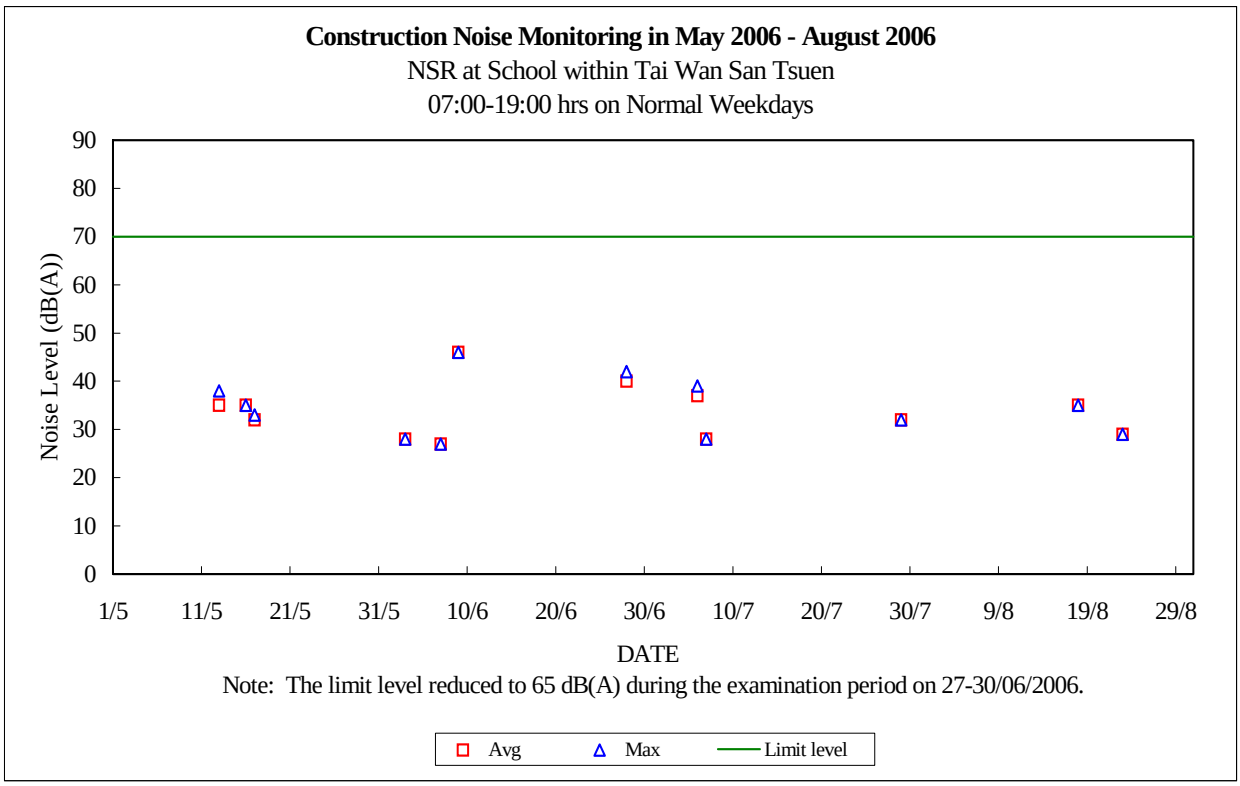
Date	Time	Calculated Noise Level at NSR at Long Tsai Tsuen/Hung Shing Ye (dB(A))		Limit Noise Level (dB(A))	Calculated Noise Level at NSR at the school within Tai Wan San Tsuen (dB(A))		Limit Noise Level (dB(A))
		Max	Avg		Max	Avg	
01/08/2006	07:00-19:00	--	--	75	--	--	70
01/08/2006	19:00-23:00	--	--	60	--	--	60
01/08/2006	23:00-07:00	37	32	45	--	--	45
02/08/2006	07:00-19:00	--	--	75	--	--	70
02/08/2006	19:00-23:00	--	--	60	--	--	60
02/08/2006	23:00-07:00	--	--	45	--	--	45
03/08/2006	07:00-19:00	--	--	75	--	--	70
03/08/2006	19:00-23:00	--	--	60	--	--	60
03/08/2006	23:00-07:00	--	--	45	--	--	45
04/08/2006	07:00-19:00	37	34	75	--	--	70
04/08/2006	19:00-23:00	42	38	60	--	--	60
04/08/2006	23:00-07:00	43	38	45	37	36	45
05/08/2006	07:00-19:00	--	--	75	--	--	70
05/08/2006	19:00-23:00	34	30	60	--	--	60
05/08/2006	23:00-07:00	41	35	45	37	33	45
06/08/2006	07:00-23:00	38	35	60	--	--	60
06/08/2006	23:00-07:00	40	32	45	--	--	45
07/08/2006	07:00-19:00	--	--	75	--	--	70
07/08/2006	19:00-23:00	--	--	60	--	--	60
07/08/2006	23:00-07:00	37	32	45	--	--	45
08/08/2006	07:00-19:00	--	--	75	--	--	70
08/08/2006	19:00-23:00	--	--	60	--	--	60

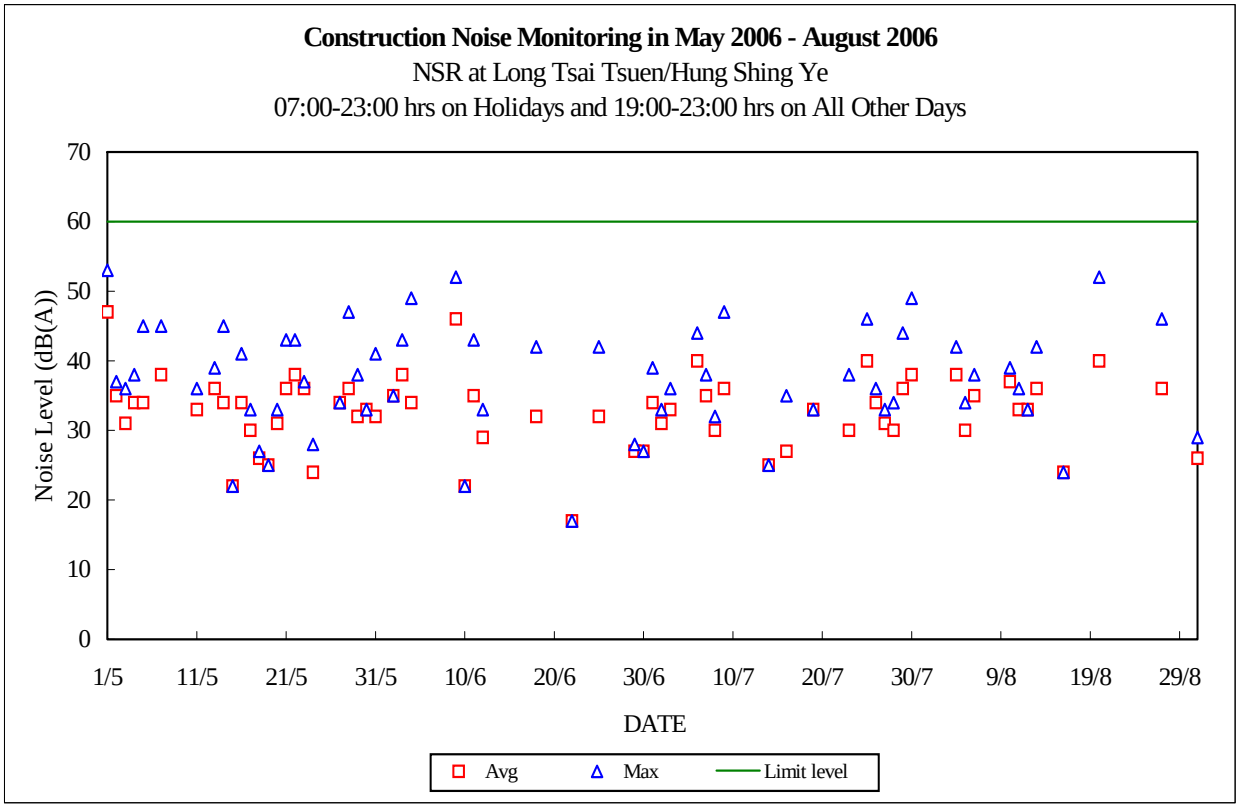
Date	Time	Calculated Noise Level at NSR at Long Tsai Tsuen/Hung Shing Ye (dB(A))		Limit Noise Level (dB(A))	Calculated Noise Level at NSR at the school within Tai Wan San Tsuen (dB(A))		Limit Noise Level (dB(A))
		Max	Avg		Max	Avg	
08/08/2006	23:00-07:00	45	38	45	--	--	45
09/08/2006	07:00-19:00	--	--	75	--	--	70
09/08/2006	19:00-23:00	--	--	60	--	--	60
09/08/2006	23:00-07:00	44	37	45	37	36	45
10/08/2006	07:00-19:00	--	--	75	--	--	70
10/08/2006	19:00-23:00	39	37	60	--	--	60
10/08/2006	23:00-07:00	36	33	45	--	--	45
11/08/2006	07:00-19:00	35	35	75	--	--	70
11/08/2006	19:00-23:00	36	33	60	--	--	60
11/08/2006	23:00-07:00	33	29	45	--	--	45
12/08/2006	07:00-19:00	--	--	75	--	--	70
12/08/2006	19:00-23:00	33	33	60	--	--	60
12/08/2006	23:00-07:00	34	30	45	--	--	45
13/08/2006	07:00-23:00	42	36	60	--	--	60
13/08/2006	23:00-07:00	43	39	45	--	--	45
14/08/2006	07:00-19:00	29	29	75	--	--	70
14/08/2006	19:00-23:00	--	--	60	--	--	60
14/08/2006	23:00-07:00	25	23	45	--	--	45
15/08/2006	07:00-19:00	--	--	75	--	--	70
15/08/2006	19:00-23:00	--	--	60	--	--	60
15/08/2006	23:00-07:00	31	29	45	--	--	45
16/08/2006	07:00-19:00	--	--	75	--	--	70
16/08/2006	19:00-23:00	24	24	60	--	--	60
16/08/2006	23:00-07:00	32	28	45	--	--	45
17/08/2006	07:00-19:00	--	--	75	--	--	70
17/08/2006	19:00-23:00	--	--	60	--	--	60
17/08/2006	23:00-07:00	36	36	45	31	31	45
18/08/2006	07:00-19:00	39	39	75	35	35	70
18/08/2006	19:00-23:00	--	--	60	--	--	60
18/08/2006	23:00-07:00	45	38	45	40	34	45
19/08/2006	07:00-19:00	--	--	75	--	--	70
19/08/2006	19:00-23:00	--	--	60	--	--	60
19/08/2006	23:00-07:00	39	35	45	35	30	45
20/08/2006	07:00-23:00	52	40	60	47	38	60
20/08/2006	23:00-07:00	42	38	45	37	33	45

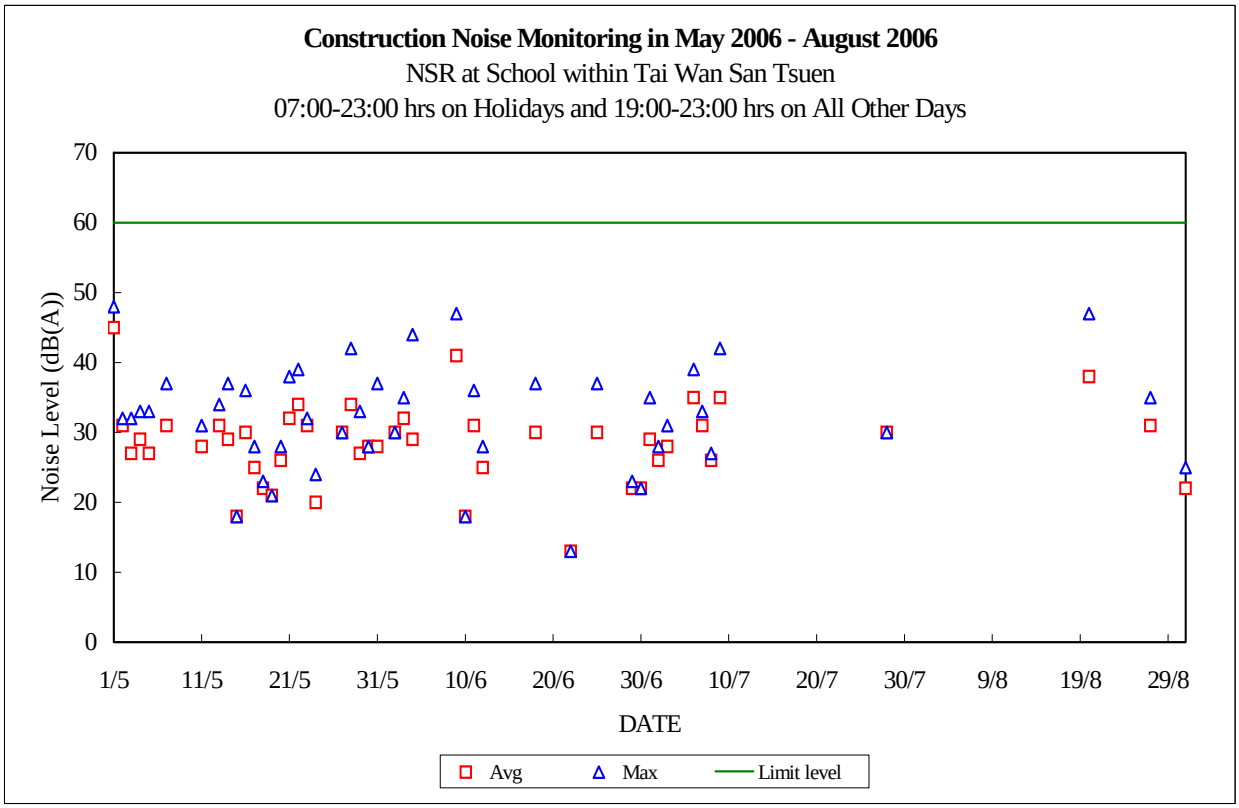
Date	Time	Calculated Noise Level at NSR at Long Tsai Tsuen/Hung Shing Ye (dB(A))		Limit Noise Level (dB(A))	Calculated Noise Level at NSR at the school within Tai Wan San Tsuen (dB(A))		Limit Noise Level (dB(A))
		Max	Avg		Max	Avg	
21/08/2006	07:00-19:00	--	--	75	--	--	70
21/08/2006	19:00-23:00	--	--	60	--	--	60
21/08/2006	23:00-07:00	36	32	45	32	28	45
22/08/2006	07:00-19:00	--	--	75	--	--	70
22/08/2006	19:00-23:00	--	--	60	--	--	60
22/08/2006	23:00-07:00	31	28	45	26	23	45
23/08/2006	07:00-19:00	34	34	75	29	29	70
23/08/2006	19:00-23:00	--	--	60	--	--	60
23/08/2006	23:00-07:00	33	32	45	28	27	45
24/08/2006	07:00-19:00	--	--	75	--	--	70
24/08/2006	19:00-23:00	--	--	60	--	--	60
24/08/2006	23:00-07:00	33	30	45	28	26	45
25/08/2006	07:00-19:00	--	--	75	--	--	70
25/08/2006	19:00-23:00	--	--	60	--	--	60
25/08/2006	23:00-07:00	41	37	45	36	32	45
26/08/2006	07:00-19:00	--	--	75	--	--	70
26/08/2006	19:00-23:00	--	--	60	--	--	60
26/08/2006	23:00-07:00	32	29	45	27	24	45
27/08/2006	07:00-23:00	46	36	60	35	31	60
27/08/2006	23:00-07:00	35	30	45	31	26	45
28/08/2006	07:00-19:00	--	--	75	--	--	70
28/08/2006	19:00-23:00	--	--	60	--	--	60
28/08/2006	23:00-07:00	33	32	45	29	28	45
29/08/2006	07:00-19:00	--	--	75	--	--	70
29/08/2006	19:00-23:00	--	--	60	--	--	60
29/08/2006	23:00-07:00	45	38	45	39	33	45
30/08/2006	07:00-19:00	--	--	75	--	--	70
30/08/2006	19:00-23:00	--	--	60	--	--	60
30/08/2006	23:00-07:00	36	30	45	32	25	45
31/08/2006	07:00-19:00	--	--	75	--	--	70
31/08/2006	19:00-23:00	29	26	60	25	22	60
31/08/2006	23:00-07:00	--	--	45	--	--	45

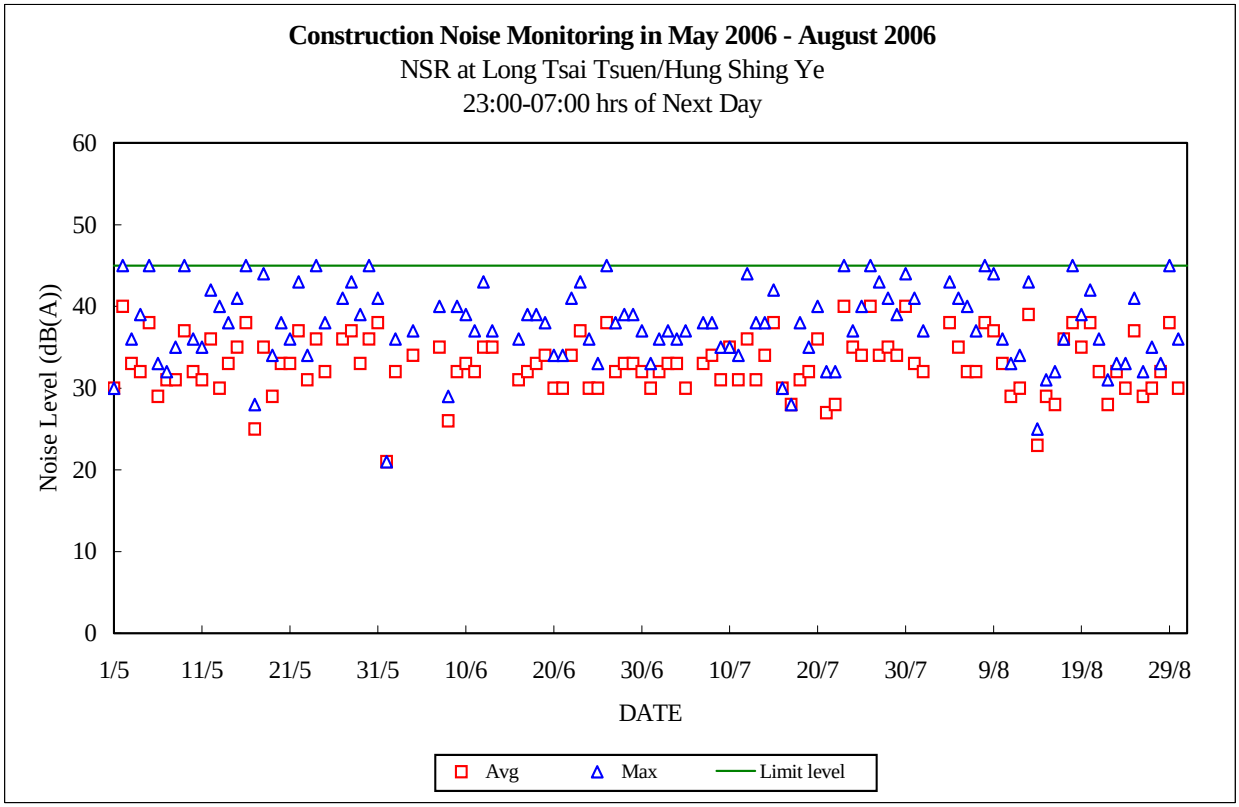
Note: “—-“ represents the measured noise monitoring data lower than the established notional background level/discarded under strong wind.

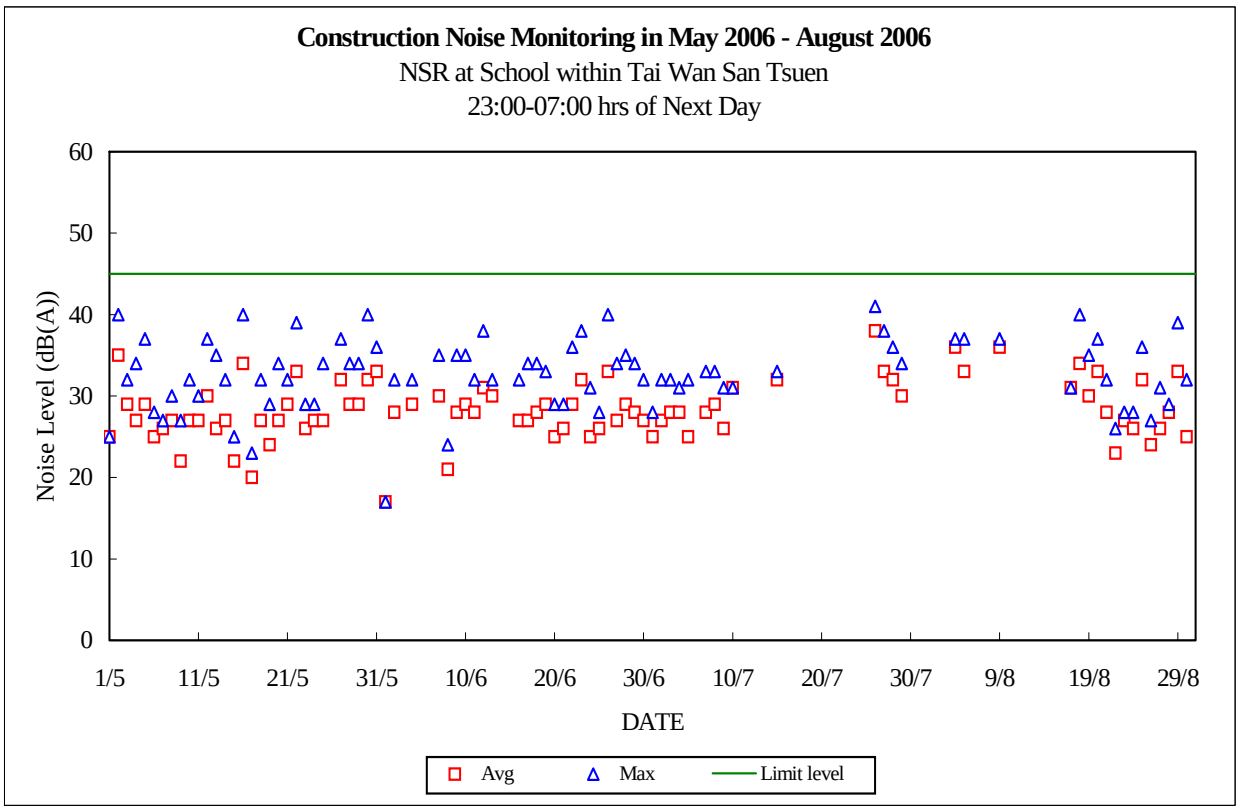

Construction Noise Monitoring in May 2006 - August 2006
NSR at Long Tsai Tsuen/Hung Shing Ye
07:00-19:00 hrs on Normal Weekdays
Noise Level (dB(A))
90
80
70
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Avg
Max
Limit level


Construction Noise Monitoring in May 2006 - August 2006
NSR at School within Tai Wan San Tsuen
07:00-19:00 hrs on Normal Weekdays
Noise Level (dB(A))
90
80
70
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Note: The limit level reduced to 65 dB(A) during the examination period on 27-30/06/2006.
Avg
Max
Limit level


Construction Noise Monitoring in May 2006 - August 2006
NSR at Long Tsai Tsuen/Hung Shing Ye
07:00-23:00 hrs on Holidays and 19:00-23:00 hrs on All Other Days
Noise Level (dB(A))
70
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Avg
Max
Limit level


Construction Noise Monitoring in May 2006 - August 2006
NSR at School within Tai Wan San Tsuen
07:00-23:00 hrs on Holidays and 19:00-23:00 hrs on All Other Days
Noise Level (dB(A))
70
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Avg
Max
Limit level


Construction Noise Monitoring in May 2006 - August 2006
NSR at Long Tsai Tsuen/Hung Shing Ye
23:00-07:00 hrs of Next Day
Noise Level (dB(A))
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Avg
Max
Limit level


Construction Noise Monitoring in May 2006 - August 2006
NSR at School within Tai Wan San Tsuen
23:00-07:00 hrs of Next Day
Noise Level (dB(A))
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Avg
Max
Limit level

Appendix E.2 Manual Noise Monitoring Results for August 2006

Site: Lamma Power Station Extension – Transmission System
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

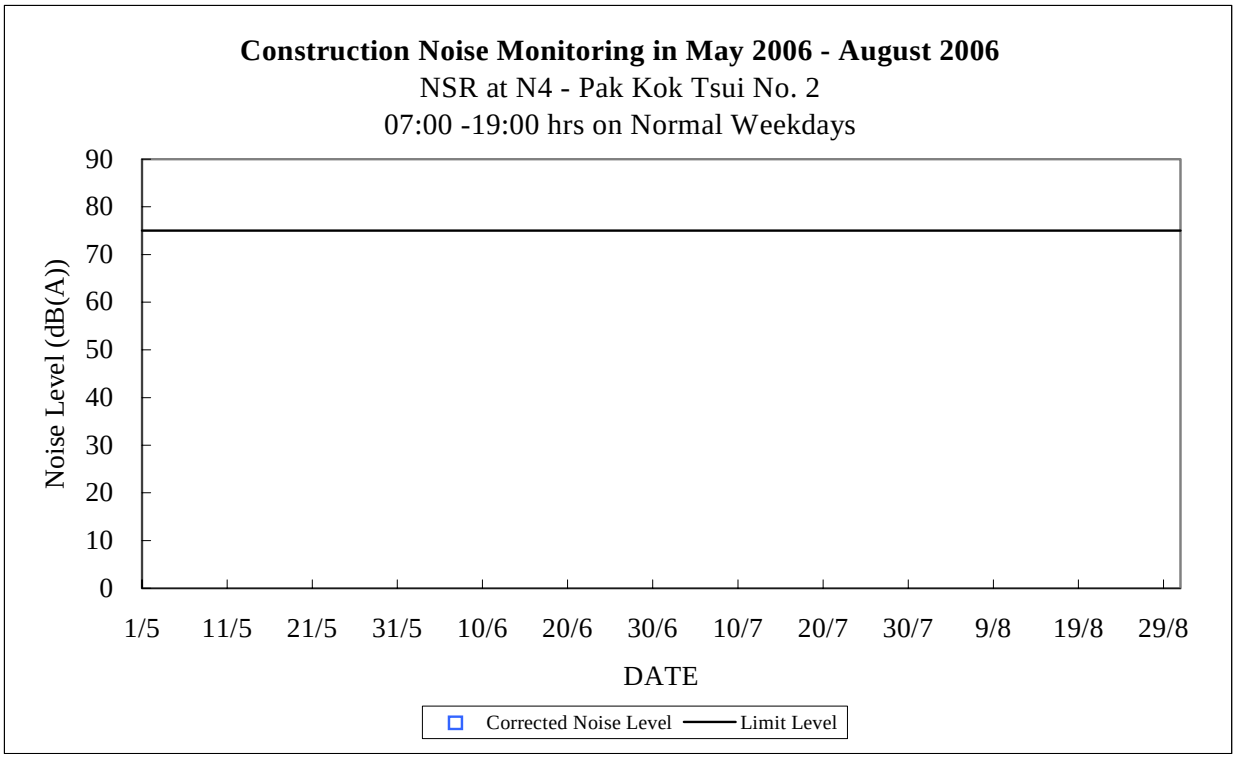
Date	Time	Measured Noise Level (dB(A))	Notional Background Noise Level (dB(A))	Corrected Noise Level (dB(A))	Limit Noise Level (dB(A))	Wind Speed (m/s)
01/08/2006	10:00-10:30	52.3	54.9	--	75	<5
04/08/2006	14:00-14:30	52.7	54.9	--	75	<5
08/08/2006	10:15-10:45	53.0	54.9	--	75	<5
11/08/2006	14:05-14:35	52.0	54.9	--	75	<5
15/08/2006	10:00-10:30	52.4	54.9	--	75	<5
18/08/2006	14:00-14:30	49.6	54.9	--	75	<5
22/08/2006	10:15-10:45	51.0	54.9	--	75	<5
25/08/2006	14:00-14:30	51.0	54.9	--	75	<5
29/08/2006	10:00-10:30	50.0	54.9	--	75	<5

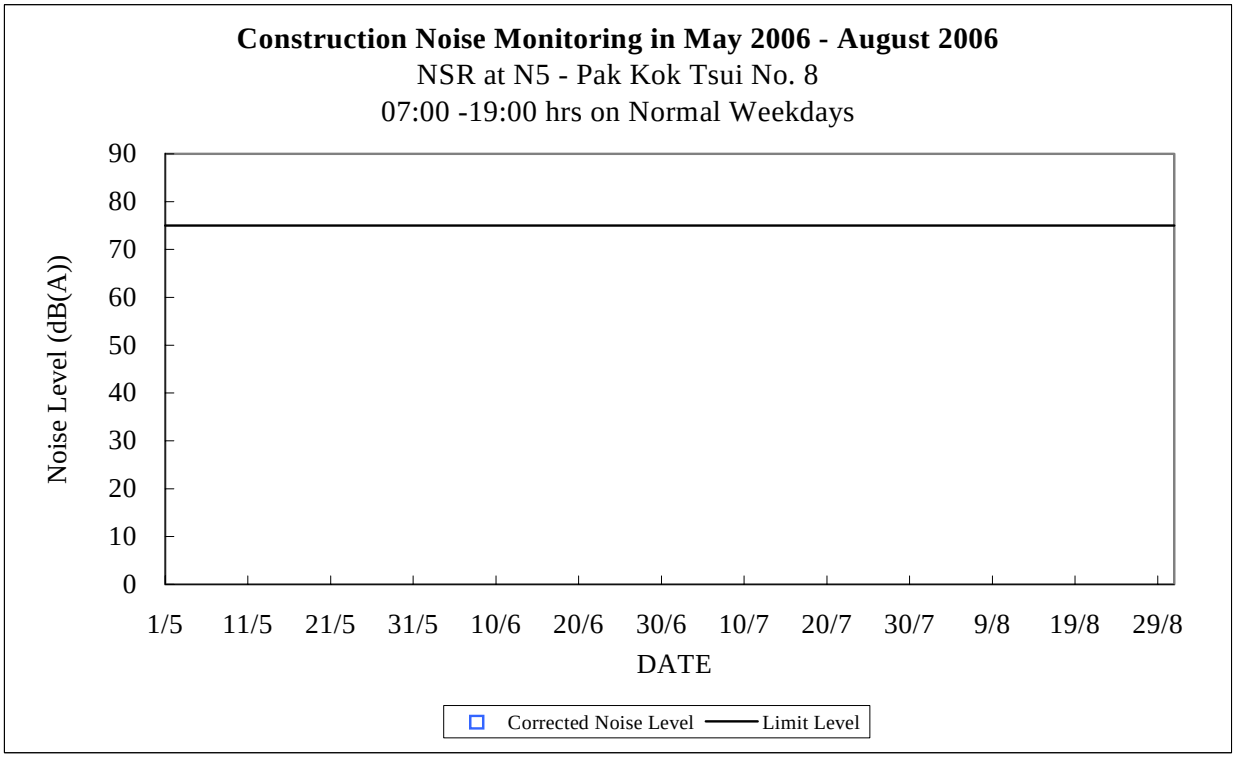
Measurement Location: N5 – Pak Kok Tsui No.8

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)
01/08/2006	10:40-11:10	51.7	54.9	--	75	<5
04/08/2006	14:40-15:10	51.2	54.9	--	75	<5
08/08/2006	10:50-11:20	50.1	54.9	--	75	<5
11/08/2006	14:45-15:15	52.2	54.9	--	75	<5
15/08/2006	10:40-11:10	49.2	54.9	--	75	<5
18/08/2006	14:35-15:05	51.3	54.9	--	75	<5
22/08/2006	10:55-11:25	50.0	54.9	--	75	<5
25/08/2006	14:45-15:15	50.5	54.9	--	75	<5
29/08/2006	10:40-11:10	51.0	54.9	--	75	<5

Note:
1. The noise generated from local noisy events (e.g. dog barking, passing-by 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.


Construction Noise Monitoring in May 2006 - August 2006
NSR at N4 - Pak Kok Tsui No. 2
07:00 -19:00 hrs on Normal Weekdays
Noise Level (dB(A))
90
80
70
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Corrected Noise Level
Limit Level


Construction Noise Monitoring in May 2006 - August 2006
NSR at N5 - Pak Kok Tsui No. 8
07:00 -19:00 hrs on Normal Weekdays
Noise Level (dB(A))
90
80
70
60
50
40
30
20
10
0
1/5
11/5
21/5
31/5
10/6
20/6
30/6
10/7
20/7
30/7
9/8
19/8
29/8
DATE
Corrected Noise Level
Limit Level

Appendix F

The QA/QC Procedures and Results

HIGH VOLUME AIR SAMPLER
SITE VISIT LOG SHEET

Site Name:	R E	Site No.:	AM 1
Date of visit:	14-8-2006	Hour of Visit:	1035
Staff name:	W. L Mak	HVAS S/N:	2198
Used filter paper no.:	LT 78	New filter paper no.:	LT 80
Type of filter:	Glass-fibre		

I. Ambient Conditions

Temperature, T_a = 273 + 33.2 / 306.2 K Pressure, P_a = 997 mb

II. Correction of manometer reading

Calibration orifice No.	Manometer reading at site conditions corresponds to Q_{STD} = 40 ft^3/min. (inch H_2O)
1535(09/2005)	$\Delta H_a = 19.29(T_a/P_a)$ = 5.91

Manometer reading before calibration: 5.70
Adjustment of flow controller (Y/N): Y
Manometer reading after calibration: 5.90

Note: Tolerance Limit of HVAS flow: ± 1.0 ft^3/min. Corresponding limits for manometer : ± 0.2 inch H_2O

III. General Conditions of HVAS

IV. Remarks

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

HIGH VOLUME AIR SAMPLER
SITE VISIT LOG SHEET

Site Name:	EG	Site No.:	AM2
Date of visit:	14-8-2006	Hour of Visit:	1115
Staff name:	W L MAK	HVAS S/N:	2195
Used filter paper no.:	LT79	New filter paper no.:	LT81
Type of filter:	Glass-fibre		

I. Ambient Conditions

Temperature, T_a = 273 + 33.2 = 306.2° K Pressure, P_a = 999 mb

II. Correction of manometer reading

Calibration orifice No.	Manometer reading at site conditions corresponds to Q_{STD} = 40 ft^3/min. (inch H_2O)
1535(09/2005)	$\Delta H_a = 19.29(T_a/P_a)$ = 5.91

Manometer reading before calibration: 5.70
Adjustment of flow controller (Y/N): Y
Manometer reading after calibration: 5.90

Note: Tolerance Limit of HVAS flow: ± 1.0 ft^3/min. Corresponding limits for manometer : ± 0.2 inch H_2O

III. General Conditions of HVAS

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 Visit: 14-8-2006 Hour of Visit: 0945

Staff Name: W. L MAK / HK TSANG Partisol S/N: 1400B 20755C410

Used Filter No.: PD 36 New Filter No.: PD 37

Ambient temperature: 32.0° Ambient pressure: 999

I. General Services

1. Replace control unit Large In-line Filter ✗
2. Clean the sample inlet head ✓
3. Clean sample tube ✓
4. Clean / Replace pump head ✗
5. Clean / Replace piston ✗

II. Operational Audits (3 months interval as recommended by manufacturer)

1. Temperature Check **(Ambient temperature ± 2°C)**

   _____ °C Calibration: **Y / N** _____ °C
   Before After

2. Pressure Check **(Ambient pressure ± 20 mbar)(factor = 0.000987)**

   _____ mbar Calibration: **Y / N** _____ mbar
   Before After

3. Flow Check **(16.7± 1.1 litre/min)**

   _____ l/min Calibration: **Y / N** _____ l/min
   Before After

III. Remarks

_____

_____

_____

_____

MINI VOLUME AIR SAMPLER

SITE VISIT LOG SHEET

Site Name: TYV Site No.: AM4

Date of visit: 14-8-06 Hour of Visit: 11:10

Staff name: H.K. TSANG MINIVOL S/N: 33P

Used filter paper no.: MI 20 New filter paper no.: MI 21

Type of filter: ~~Cellulose~~ / Glass-fibre

(Delete as appropriate)

I. Calibration is performed by using Drycal DC-2 Flow Calibrator

5 Sl/min set point is recommended

4.97X Before 5000 After

II. General Service of Mini Vol Air Sampler

1. Clean Rotameter: X
2. Clean / replace Pump Valves: X
3. Clean / ~~replace~~ Pump Diaphragms: ✓
4. Clean Impaction Inlet: X
5. Replace Timer Battery Every 6 months: X
6. Replace Inlet Filter: ✓

III. Remarks

_____

_____

_____

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

Month : August 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)
6/8/2006	239.36	0.038	4	1.00	15.67
12/8/2006	239.17	0.041	4	1.00	15.67
18/8/2006	238.91	0.029	4	1.00	15.67
24/8/2006	238.72	0.031	4	1.00	15.67
30/8/2006	238.63	0.041	4	1.00	15.67

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)
6/8/2006	245.18	0.042	4	0.99	15.62
12/8/2006	244.95	0.047	4	0.99	15.62
18/8/2006	244.72	0.052	4	0.99	15.61
24/8/2006	232.35	0.043	4	0.99	15.63
30/8/2006	232.24	0.045	4	0.99	15.62

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)
6/8/2006	247.91	0.030	4	1.00	15.67
12/8/2006	232.35	0.037	4	1.00	15.67
18/8/2006	232.18	0.028	4	1.00	15.66
24/8/2006	232.06	0.025	4	1.00	15.67
30/8/2006	231.99	0.034	4	1.01	15.67

Maintenance Record			
	Reservoir	East Gate	Ash Lagoon
TEOM Filter Exchange	✓	✓	✓
Clean TSP Inlet	✓	✓	✓
Replace flow in-line filter		✓	
Pump Repair			
Leak Check			
Flow Audit			
Flow Controller Calibration			
A/C filter cleaning	✓	✓	✓

Remarks:

Prepared by : Alex

Checked by : Ho

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

Location Ash Lagoon/~~Ching Lam~~*

Date 14-8-06 Time 10:00

Equipment Rion NA-27/~~B&K 2238F*~~ Sound Level Meter

Serial Number ~~00111465/00111466~~/00111467/~~2343838/2356907~~*

Staff Attended W.L MAK , H.K TSANG

1. Calibration

   Acoustic calibrator used Rion NC-74

   Calibration level before adjustment (dB(A)) 94.0

   Calibration level after adjustment (dB(A)) 94

2. Weather Conditions

   a. Sunny/~~fine/cloudy/showery/heavy rain~~*

   b. ~~Strong wind/breeze~~/calm*

3. Remark/Observation

Note: * - Please delete where inappropriate

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

Location ~~Ash Lagoon/~~Ching Lam*

Date 15-8-06 Time 10:30

Equipment ~~Rion NA-27~~/B&K 2238F* Sound Level Meter

Serial Number ~~00111465/00111466/00111467/2343838~~/2356907*

Staff Attended W.L.MAK ; H.K.TSANG

1. Calibration

   Acoustic calibrator used Rion NC-74

   Calibration level before adjustment (dB(A)) 94.0

   Calibration level after adjustment (dB(A)) 94

2. Weather Conditions

   a. ~~Sunny~~/fine/~~cloudy/showery/heavy rain~~*

   b. ~~Strong wind/breeze~~/calm*

3. Remark/Observation

Note: * - Please delete where inappropriate

Equipment Calibration Record for August 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
01/08/2006	94.0	94.0	C K Law
04/08/2006	94.0	94.0	C K Law
08/08/2006	94.0	94.0	C K Siu
11/08/2006	94.0	94.0	C K Siu
15/08/2006	94.0	94.0	C K Siu
18/08/2006	94.0	94.0	C K Siu
22/08/2006	94.0	94.0	C K Siu
25/08/2006	94.0	94.0	C K Siu
29/08/2006	94.0	94.0	C K Siu

Measurement Location: N5 – Pak Kok Tsui No. 8

Date	Calibration Level before Measurement (dB(A))	Calibration Level after Measurement (dB(A))	Calibrated by
01/08/2006	94.0	94.0	C K Law
04/08/2006	94.0	94.0	C K Law
8/08/2006	94.0	94.0	C K Siu
11/08/2006	94.0	94.0	C K Siu
15/08/2006	94.0	94.0	C K Siu
18/08/2006	94.0	94.0	C K Siu
22/08/2006	94.0	94.0	C K Siu
25/08/2006	94.0	94.0	C K Siu
29/08/2006	94.0	94.0	C K Siu

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 consecutive samples	Identify source 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. Repeat measurement to confirm finding Increase monitoring frequency to daily Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented Arrange meeting with Engineer and Contractor to discuss the remedial actions to be taken If exceedance stops, discontinue additional monitoring	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 Checking monitoring data and Contractor's working methods Notify Contractor Discuss proposed remedial actions with ET and Contractor Ensure remedial measures properly implemented If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop the portion of work until the exceedance is abated	Take immediate action to avoid further exceedance Submit proposals for remedial actions to Engineer within 3 working days of notifications Implement the agreed proposals Resubmit proposals if problem still not under control Stop the relevant portion of works as determined by the Engineer until the exceedance is abated

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 the Construction works, verbally advise the Contractor, Engineer and IEC, and inform the EPD of the exceedance, as soon as practicable.	Review Contractor’s remedial actions / measures to ensure their effectiveness and advise the Engineer and ET accordingly.	Check Contractor's working methods and advise IEC and ET accordingly.	Submit proposals for remedial actions to Engineer.
			Discuss with Contractor the remedial actions to be implemented.	Amend proposals if required by the Engineer.
		Verify the implementation of the remedial measures	Keep the Contractor informed of the efficacy of remedial actions.	Implement remedial actions immediately upon instruction from the Engineer.
	Discuss remedial actions required with Engineer.		If the exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop the portion of work until the exceedance is abated	If the exceedance continues, consider what portion of the work is responsible and, as instructed by the Engineer, stop the portion of work until the exceedance is abated
	Increase manual monitoring frequency to assess efficacy of remedial measures.			

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 date	2 Aug 2006	Time	09:30	Inspected By	ET: W. Sin Contractor: W. F. Kwok
Site	LMX-19 Mech. Erection Area				

Weather

Condition ☐ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☑ Rain ☐ Storm

Temperature 27 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Spray by AY.
	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?	✓				
	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 By PV.
	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: 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?		✓			

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?	✓				
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?		✓			
	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?		✓			

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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) ☐ **Traffic**	☑ **Construction activities inside the site**				
	☐ **Construction activities outside the site**	☐ **Others** _____				

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
(Name in Block letters: W.S.W)	(Name in Block letters: W.F.K.W.K)

C/N: 04/9012

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

Inspection date	10 Aug 2006	Time	09:30	Inspected By	ET: W. Sin Contractor: W.F. Kwok
Site	LMX-19 Mech. Erection Area				

Weather

Condition ☐ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☑ Rain ☐ Storm

Temperature 28 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Spy 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?	✓				
	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?		✓			Chung By RR.
	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: 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?		✓			

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?	✓				
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?		✓			
	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?		✓			

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ **Traffic**	☑ **Construction activities inside the site**
		☐ **Construction activities outside the site**	☐ **Others** _____

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
(Name in Block letters: W. Siu)	(Name in Block letters: W. F. Lau)

PD - LAMMA SITE OFFICE			
SM			
DSM			
21 AUG 2006			
	ACT	INF	INT
SEE/EE			
RE			
ME	✓		
SO	✓		
AOA			

C/N:04/9012
The Hongkong Electric Co. Ltd.
Lamma Power Station Extension – E&M Works
Weekly Site Inspection Checklist

Inspection date: 16-08-2006 Time: 10:30 am Inspected By: ET: Y.M Chim HEC; Contractor: T.D.K C.T Chu

Site: LMX – Mech. Erection Area

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 32 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Spray by PC
	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?	✓				

Scanned

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					
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 PY
	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: 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?		✓			

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?	✓				
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?		✓			
	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?		✓			

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site			
		☐ Construction activities outside the site	☐ Others _____			

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative	**IEC's Representative**
		This site inspection was carried out in the presence of IEC's representative
(Name in Block letters: Chim Yui Ming)	(Name in Block letters: CHIU CHI TAK)	**Name in Block Letters:** (Chan Tin M.)

C/N 04/9012

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

Inspection date	23-08-2006	Time	10:30 A.m.	Inspected By	ET: [illegible]
					Contractor: [illegible]
Site	LMX – Mech. Erection Area				

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 33 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Spray by PY
	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?	✓				
	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 PY
	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: 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?		✓			

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?	✓				
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?		✓			
	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?		✓			

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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) ☐ Traffic	☑ Construction activities inside the site				
	☐ Construction activities outside the site	☐ Others _____				

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
(Name in Block letters: Chim Yui Ming)	(Name in Block letters: Chin Chin Tak TDK S.O.)

C/N 04/9012

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

Inspection date: 31-8-2006 Time: 10:30 a.m. Inspected By: ET: YM Chan
Contractor: CT Chan

Site: LMX - Mech. Erection Area

Weather

Condition ☒ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 33 °C **Humidity** ☒ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Spray by PY
	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?	✓				
	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 PY
	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: 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?		✓			

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?	✓				
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 Chei...cal 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?	HK				
	(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?	✓				
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					
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					
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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site
		☐ Construction activities outside the site	☐ Others _____

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
(Name in Block letters: Chim Yui Ming)	(Name in Block letters: Chan Chi Tak) TCK S.O.

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

Inspection date: 2/8/06 Time: 10:30 Inspected By: ET: WCYip, PDC; Contractor: Ringo Wong, BY

Site: LMX – Superstructure

Weather

Condition: ☐ Sunny ☐ Fine ☐ Overcast ☑ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 28 °C Humidity: ☐ High ☑ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?	✓				

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					
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					
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: 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; Sec 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?	✓				
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?	✓				
	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?	✓				

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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): ☐ Traffic	☑ Construction activities inside the site				
	☐ Construction activities outside the site	☐ Others _____				

Abbreviation

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

Remark

Signatures

ET Member

Contractor's Representative

WCYip

(Name in Block letters: W.C. Yip)

Resident Engineer

(Name in Block letters:

NONG Ho HONG)

11th November 2002

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

Date: 9/8/06 Time: 10:40 Inspected By: IE WC Yip, PDC
Contractor: Ringo Wong, PM
Area: LMX - Superstructure

Weather

Condition: ☐ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☑ Drizzle ☐ Rain ☐ Storm
Temperature 31 °C Humidity ☑ High ☐ Moderate ☐ Low
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?		✓			

AIR QUALITY

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, do the contractors notify EPD of the change?		✓			
Cap311R: Sch 1(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 ... 1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		✓			
	Stockpiling of dusty materials					
ap311R: ...1S	Are stockpiles of dusty materials entirely covered with impervious sheets or sheltered on the top and 3 sides or sprayed with water to ... to prevent dust emission?	✓				

	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					
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					
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: 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					
	[illegible] completed earthworks sealed and hydroseeded and planted as [illegible]?	✓				
[illegible]	[illegible] open burning prohibited?		✓			
[illegible]	Is black smoke emission from plant/equipment avoided?		✓			

[W]ASTE/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?	✓				
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	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
[illegible]	[illegible] contractor been registered as a chemical waste producer?	✓				
[illegible]	[illegible] contractor kept all the trip tickets for the disposal of [illegible] 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;	✓				
	(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 [illegible] 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 [illegible] after the removal of silt in silt removal facilities?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
	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					
EN19:	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?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site
	☐ Construction activities outside the site	☐ Others _____

Abbreviation

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

Remark

Signatures

ET Member

W.C. Yip

(Name in Block letters: W.C. Yip)

Resident Engineer

Contractor's Representative

(Name in Block letters: NONG Ho HONG)

11th November 2002

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

Inspection date: 16/8/06 Time: 10:30 Inspected By: ET: WC Yip, PDC; Contractor: Ringo Wong, PYE

Site: LMX - Superstructure

Weather

Condition: ☐ Sunny ☑ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 29 °C Humidity: ☐ High ☑ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?	✓				

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					
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					
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: 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: Sec 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?	✓				
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?	✓				
	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?	✓				

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site
		☐ Construction activities outside the site	☐ Others _____

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative	IEC's Representative
W.C.Yip		T.M.Chu
(Name in Block letters: W.C. Yip)	(Name in Block letters: NONG Ho HONG)	Name in Block Letters: (Chan Tin Ming)
Resident Engineer		

11th November 2002

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

Inspection date: 23/8/06 Time: 10:30 Inspected By ET: WC Yip, PDC
Site: LMX-Superstructure Contractor: Ringo Wong, PY

Weather

Condition: ☐ Sunny ☑ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm
Temperature 28 °C Humidity ☑ High ☐ Moderate ☐ Low
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?		✓			

AIR QUALITY

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?		✓			
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: 4.1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		✓			
	Stockpiling of dusty materials					
Cap311R: Sch 2	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 surface wet at all times to prevent dust emission?	✓				

	Checklist Condition	N/A	Yes	No	Unk	Remarks
	[illegible] and dry pulverized fuel ash (PFA)					
Cap311R: Sch 15(3)	Are the storage silos for cement or dry PFA prevented from [illegible]	✓				
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					
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					
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: A2	Are all PFA receiving hoppers enclosed on three (3)sides up to 3m plus unloading point?	✓				
EM&A: A2	[illegible] totally enclosed?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
	[illegible] contaminated earthworks seeded and hydroseeded and planted as [illegible]	✓				
[illegible]	Open burning prohibited?		✓			
[illegible]	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?	✓				
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	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
[illegible]	[illegible] contractor been registered as a chemical waste producer?	✓				
[illegible]	"[illegible] contractor kept and the [illegible] tickets for the disposal of [illegible] 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;	✓				
	(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 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 [illegible] after the removal of silt in silt removal facilities?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
	Water that used in ground boring and drilling for site investigation or rock/soil anchoring recirculated as far as practicable after sedimentation? If there is a need for final disposal, is the wastewater discharged into storm drains via silt removal facilities?	✓				
	Wheel Washing Water					
EN179	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?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site	
	☐ Construction activities outside the site	☐ Others _____	

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
wcy.p	
(Name in Block letters: W.C. Yip)	(Name in Block letters: NONG Ho HONG)
Resident Engineer	

11th November 2002

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

Date: 30/8/06 Time: 10:30 Inspected By ET: WCYip, PDC
Contractor: Ringo Wong, PM
Site: LMX - Superstructure

Weather

Condition: ☐ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☑ Drizzle ☐ Rain ☐ Storm
Temperature: 28 °C Humidity: ☑ High ☐ Moderate ☐ Low
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?		✓			

AIR QUALITY

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
	General Requirements					
Cap311R: S3	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: S1	Are haul roads paved with concrete or sprayed with water to keep the entire road wet?		✓			
	Stockpiling of dusty materials					
Cap311R: S3 12	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 surface moisture so as to prevent dust emission?	✓				

	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					
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					
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 [illegible] system?	✓				
EM&A: A2	Are all the receiving hoppers enclosed on three (3)sides up to 3m above unloading point?	✓				
EM&A: A2	[illegible] totally enclosed?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Miscellaneous					
	Are completed earthworks sealed and hydroseeded and planted as soon as possible?	✓				
	Is open burning prohibited?		✓			
Cap.311	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?	✓				
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	Has the contractor obtained the necessary disposal permits from relevant authority, if required, according to Waste Disposal (Chemical Waste) (General Regulation)?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
[illegible]	[illegible] contractor been registered as a chemical waste producer?	✓				
[illegible]	[illegible] contractor kept all the trip tickets for the disposal of [illegible] 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;	✓				
	(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 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 (if) pumped out of wells discharged into storm drains after the removal of silt in silt removal facilities?	✓				

	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Boring and Drilling Water					
	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					
PN1/9	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?	✓				

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: C1	Are working programmes scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site
	☐ Construction activities outside the site	☐ Others _____

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
wcyip	
(Name in Block letters: W.C. Yip	(Name in Block letters:
Resident Engineer	NONG Ho HONG)

11th November 2002

CN-04/9013

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

Inspection date: 2 Aug 2006 Time: 09:15 hrs Inspected By: ET: TT CHIU / PDE
Contractor: PETER CHENG / SANKO

Site: LMX - L9 Electrical Erection Area

Weather

Condition ☐ Sunny ☐ Fine ☐ Overcast ☑ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 28 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Water Spraying Provided By Paul 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?	✓				
	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?		✓			Wheel Washing Services Provided By Paul Y.
	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: 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?		✓			

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?	✓				
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?	✓				
	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?	✓				

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site			
		☐ Construction activities outside the site	☐ Others _____			

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
(Name in Block letters: T. F. CHAN / PDE)	(Name in Block letters: PETER CHAN / SEC)

12th January 2005

CN-04/9013

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

Inspection date: 8 Aug 2006 Time: 09:50 hrs Inspected By: ET: TF CHIU / PDE
Contractor: PETER CHENG / SANKO.

Site: LMX - LP Electrical Erection Area.

Weather

Condition ☐ Sunny ☐ Fine ☑ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 27 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Water Spraying Provided by Paul 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?	✓				
	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?		✓			Wheel Washing Services Provided By P&Y
	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: 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?		✓			

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?	✓				
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?	✓				
	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?	✓				

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site
		☐ Construction activities outside the site	☐ Others _____

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
(Name in Block letters: T.F. CHIU/PDE)	(Name in Block letters: PETER CATSON/SLK)

12th January 2005

CN-04/9013.

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

Inspection date: 16 Aug 2006 Time: 10:40 hrs Inspected By: ET: T.F. CHIA / PDE
Contractor: C.M. Lo / SANKO

Site: LMX-19 Electrical Erection Area

Weather

Condition ☐ Sunny ☑ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 30 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Water Spraying Provided By R-1 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?	✓				
	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?		✓			Wheel Washing Services Provided By Party
	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: 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?		✓			

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?	✓				
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?	✓				
	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?	✓				

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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)	☐ Traffic	☑ Construction activities inside the site			
		☐ Construction activities outside the site	☐ Others _____			

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative	**IEC's Representative** **This site inspection was carried out in the presence of IEC's representative**
(Name in Block letters: T.F. CHIU) PDT	(Name in Block letters: C.M. LO) Sanko	**Name in Block Letters:** (Chan Tin Ho)

12th January 2005

CN-04/9013.

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

Inspection date: 23 May 2006 Time: 09:10 hrs Inspected By: ET: T.F. CHIU / PDE
Contractor: PETER CHONG / SANKO.

Site: LMX - C9 Electrical Erection Area

Weather

Condition ☐ Sunny ☑ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 29 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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?		✓			

AIR QUALITY

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?		✓			
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?		✓			Water Spraying Provided By Part 14.
	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?	✓				
	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?		✓			Wheel Washing Service provided By Paul Y.
	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: 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?		✓			

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?	✓				
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?	✓				
	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?	✓				

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 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?	✓				
	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 scheduled to minimize noise nuisance?		✓			
EM&A: C1	Are construction works or equipment sited to minimize noise nuisance?		✓			
EM&A: C1	Are all plant and equipment maintained in good operating conditions?		✓			
EM&A: C1/GP	Is idle equipment turned off or throttled down?		✓			
EM&A: C1	Are methods of working devised and arranged to minimize noise nuisance?		✓			
EM&A: C1)	Are construction works carried out in a manner to minimize noise nuisance?		✓			
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) ☐ Traffic	☑ Construction activities inside the site				
	☐ Construction activities outside the site	☐ Others _____				

Abbreviation

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

Remark

Signatures

ET Member	Contractor's Representative
(Name in Block letters: T.F. CHIN/PDE)	(Name in Block letters: PETER CHAN/SSK)

12th January 2005

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

Inspection date	02/08/06	Time	09:30	Inspected by	ET: Eric Dai Contractor: Kaden
Site	Transmission Route (Civil Work)				

Weather

Condition	☐	Sunny	☐	Fine	☐	Overcast	☐	Hazy	☑	Drizzle	☐	Rain	☐	Storm
Temperature	28	°C	**Humidity**	☑	High	☐	Moderate	☐	Low					
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 QUALITY

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?	✓				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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 with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?		✓			
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?		✓			

	Major noise source(s)		**Traffic**	✓	**Construction activities inside the site**
			Construction activities outside the site		**Others:**

Abbreviation

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

Remark

Signatures

ET Member

(Name in Block letters:

Eric, K Y Dai)

Assistant Resident Engineer

Contractor's Representative

(Name in Block letters:

C.K. LAU)

Engineer.

20th December 2001

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

Inspection date	09/08/06	Time	09:30	Inspected by	ET: Eric Dai Contractor: Kaden
Site	Transmission Route (Civil Work)				

Weather

Condition	☐ Sunny	☐ Fine	☑ Overcast	☐ Hazy	☐ Drizzle	☐ Rain	☐ Storm
Temperature	30 °C	**Humidity**	☐ High	☑ Moderate	☐ Low		
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 QUALITY

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?	✓				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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 excelsa*?		✓			
EM&A: O2	Are fences erected in accordance with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?		✓			
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?		✓			

	Major noise source(s)		**Traffic**	✓	**Construction activities inside the site**
			Construction activities outside the site		**Others:**

Abbreviation

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

Remark

Signatures

ET Member

(Name in Block letters:

Eric, K Y Dai

Assistant Resident Engineer

Contractor's Representative

(Name in Block letters:

Sin Chun Kuen

20th December 2001

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

Inspection date	16/08/06	Time	09:30	Inspected by	ET: Eric Dai Contractor: Kaden
Site	Transmission Route (Civil Work)				

Weather

Condition	☑	Sunny	☐	Fine	☐	Overcast	☐	Hazy	☐	Drizzle	☐	Rain	☐ Storm
Temperature	31	°C	**Humidity**	☐	High	☑	Moderate	☐	Low				
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 QUALITY

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?	✓				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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 with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?		✓			
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?		✓			

	Major noise source(s)		**Traffic**	✓	**Construction activities inside the site**
			Construction activities outside the site		**Others:**

Abbreviation

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

Remark

Signatures

ET Member

(Name in Block letters:

Eric, K Y Dai

Assistant Resident Engineer

Contractor's Representative

(Name in Block letters:

20th December 2001

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

Inspection date	23/08/06	Time	09:30	Inspected by	ET: Eric Dai Contractor: Kaden
Site	Transmission Route (Civil Work)				

Weather

Condition	✓	Sunny	☐	Fine	☐	Overcast	☐	Hazy	☐	Drizzle	☐	Rain	☐	Storm
Temperature	30	°C	**Humidity**	☐	High	✓	Moderate	☐	Low					
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 QUALITY

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?	✓				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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

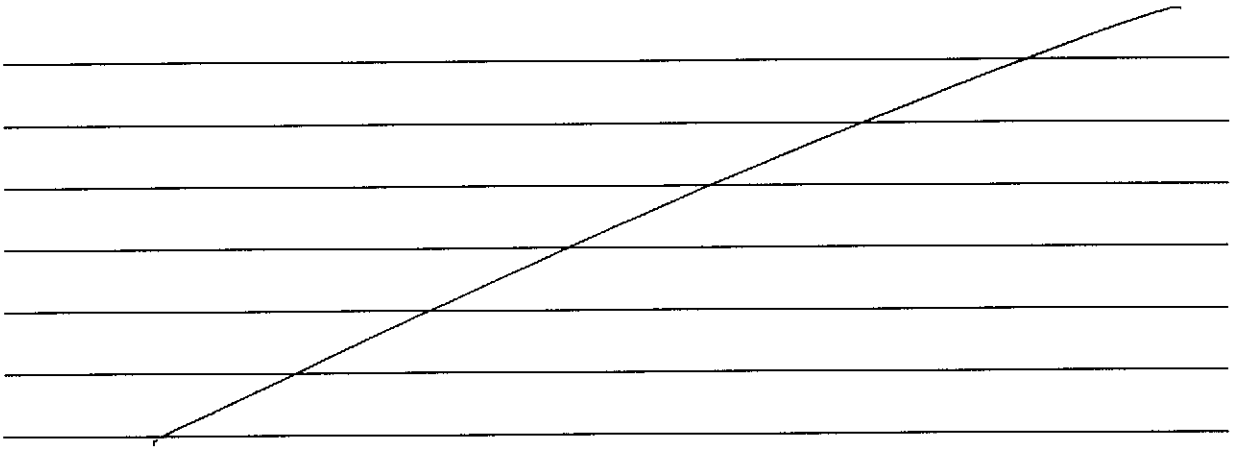
Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EM&A: O1	Are the construction activities at landing points N4 & N5 closely monitored to avoid impact on the uncommon and rare plant species *Celtis biondii, Pteris dispar* and *Ardicia pusilla*, and the restricted plants *Vitis balansaeana, Pterospermum heterophyllum* and *Rhapis excellsa*?		✓			
EM&A: O2	Are fences erected in accordance with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?		✓			
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?		✓			

	Major noise source(s)		**Traffic**	✓	**Construction activities inside the site**
			Construction activities outside the site		**Others:**

Abbreviation

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

Remark



Signatures

ET Member

(Name in Block letters:

Eric, K Y Dai)

Assistant Resident Engineer

Contractor's Representative

(Name in Block letters:

)

20th December 2001

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

Inspection date	30/08/06	Time	09:30	Inspected by	ET: Eric Dai Contractor: Kaden
Site	Transmission Route (Civil Work)				

Weather

Condition	☑ Sunny	☐ Fine	☐ Overcast	☐ Hazy	☐ Drizzle	☐ Rain	☐ Storm	
Temperature	31 °C	**Humidity**	☐ High	☑ Moderate	☐ Low			
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 QUALITY

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?	✓				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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 with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?		✓			
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?		✓			

	Major noise source(s)		**Traffic**	✓	**Construction activities inside the site**
			Construction activities outside the site		**Others:**

Abbreviation

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

Remark

Signatures

ET Member

(Name in Block letters:

Contractor's Representative

(Name in Block letters:

C. K. Sin)

20th December 2001

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

Inspection date: 4/8/06 Time: 10:32 Inspected by: ET: K L LAU
Contractor: J-POWER SYSTEMS

Site: OUTSIDE LANDING PT. I, N2 & N4

Weather

Condition ☐ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☑ Rain ☐ Storm

Temperature 28 °C **Humidity** ☑ High ☐ Moderate ☐ Low

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 QUALITY

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?	/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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 with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?	/				
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?	/				

	Major noise source(s)	☐ **Traffic**	☑ **Construction activities inside the site**
		☐ **Construction activities outside the site**	☐ **Others** _____

Abbreviation

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

Remark

N/A

Signatures

ET Member	Contractor's Representative
(Name in Block letters: K C LAU)	(Name in Block letters: BERRY YUEN)

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

Inspection date: 11/8/06 Time: 10:30 Inspected by: ET: K LUAN
Contractor: J-POWER SYSTEMS

Site: OUTSIDE LANDING PT. I_1, N_2 & N_4

Weather

Condition ☐ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☑ Drizzle ☐ Rain ☐ Storm

Temperature 28 °C **Humidity** ☐ High ☑ Moderate ☐ Low

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 QUALITY

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?	/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	/				

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: 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 with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?	✓				
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?	✓				

	Major noise source(s)	☐ **Traffic**	☑ **Construction activities inside the site**
		☐ **Construction activities outside the site**	☐ **Others** _____

Abbreviation

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

Remark

N/A

Signatures

ET Member

(Name in Block letters:

K C LAU)

Contractor's Representative

(Name in Block letters:

BARRY YUEN

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

Inspection date 18/8/06 Time 11:15 Inspected by ET: KL LAU
Contractor: J-POWER SYSTEMS

Site OUTSIDE LANDING PT. I, N2 PN4

Weather

Condition ☐ Sunny ☑ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 29 °C **Humidity** ☐ High ☑ Moderate ☐ Low

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 QUALITY

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?	/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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 with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?	/				
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?	/				

	Major noise source(s)	☐ **Traffic**	☑ **Construction activities inside the site**
		☐ **Construction activities outside the site**	☐ **Others** _____

Abbreviation

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

Remark

N/A

Signatures

ET Member	Contractor's Representative
(Name in Block letters: K C LAU)	(Name in Block letters: BARRY YUEN)

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

Inspection date: 25/8/06 Time: 11:05 Inspected by: ET: K C CAU
Contractor: J-POWER SYSTEMS

Site: OUTSIDE LANDING PT. 1, N2 & N4

Weather

Condition: ☐ Sunny ☒ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature: 29 °C **Humidity**: ☐ High ☒ Moderate ☐ Low

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 QUALITY

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?	/				

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
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					
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?	✓				

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: 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 with the Hoarding Plan and kept in good condition along the boundary of construction sites to prevent tipping, vehicle movements, and encroachment of personnel into adjacent wooded areas, particularly where the rare, uncommon and restricted plant species are located?	/				
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?	/				

	Major noise source(s)	☐ **Traffic**	☑ **Construction activities inside the site**
		☐ **Construction activities outside the site**	☐ **Others** _____

Abbreviation

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

Remark

N/A

Signatures

ET Member	Contractor's Representative
(Name in Block letters: K C LAU)	(Name in Block letters: BARRY YUEN)

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.	C
	• the load carried by vehicle shall be covered by impervious sheeting to ensure no leakage of dusty materials from the vehicle.	C
	• the heights from which fill materials are dropped shall be controlled to a practical level to minimise the fugitive dust arising from unloading.	C
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 m^3 day^{-1} and 8,000 m^3 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^3 day^{-1}, and 2 large grab dredgers, each with rates of working of 12,000 m^3 day^{-1}	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
B3	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.	C

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: • reducing the number of dredgers working at any one time; • reducing the rate of working of the dredgers; • temporary suspension of operations; • phasing of the works so that dredging / filling is only undertaken at certain stages of the tidal cycle.	N/A
B7	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.	C
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.	C
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.	C
	• Break the mass of main buildings by varying the height/division into smaller units.	C
	• Plant trees and vegetation for screening.	C
	• Adopt colour scheme to blend the buildings into the scenery.	C
	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.	C
	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.	C
	• 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.	C
	• Disposal of waste at Licensed sites;	C
	• 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

	• Segregate and sort the waste materials into 3 categories:
	  • public fill (e.g. concrete and rubble) for re-use on-site or disposal at a public filling area;
	  • re-use and/or recycling waste (e.g. steel and other metals);
	  • waste which cannot be re-used and/or recycled (e.g. wood, glass and plastic) for landfill disposal.
	  • 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.
		N/A

	• Maintain records of the quantities of wastes generated and disposed off-site for each category of waste.	C

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	C
G3	Rubble mound seawall to the south and west edges of the reclamation to enhance recolonisation of marine organisms	C
G4	Artificial Reefs of a volume not less than 400 m^3 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.	C
	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.	C
	• 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 m^3 day^{-1} and 8,000 m^3 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^3 day^{-1}, and 2 large grab dredgers, each with rates of working of 12,000 m^3 day^{-1}	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
B3	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: • reducing the number of dredgers working at any one time; • reducing the rate of working of the dredgers; • temporary suspension of operations; • phasing of the works so that dredging / filling is only undertaken at certain stages of the tidal cycle.	N/A
B7	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.	C
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.	C
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.	C
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.	C
	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.	C
	• 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.	C
	• Disposal of waste at Licensed sites;	C
	• 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;	C

	• Segregate and sort the waste materials into 3 categories:
	  • public fill (e.g. concrete and rubble) for re-use on-site or disposal at a public filling area;
	  • re-use and/or recycling waste (e.g. steel and other metals);
	  • waste which cannot be re-used and/or recycled (e.g. wood, glass and plastic) for landfill disposal.
	  • 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.
		C

	• Maintain records of the quantities of wastes generated and disposed off-site for each category of waste.	C

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	C
	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^3 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.	C
	• 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 m^3 day^{-1} and 8,000 m^3 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^3 day^{-1}, and 2 large grab dredgers, each with rates of working of 12,000 m^3 day^{-1}	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
B3	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: • reducing the number of dredgers working at any one time; • reducing the rate of working of the dredgers; • temporary suspension of operations; • phasing of the works so that dredging / filling is only undertaken at certain stages of the tidal cycle.	N/A
B7	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.	C
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.	C
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.	C
	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.	C
	• 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.	C
	• Disposal of waste at Licensed sites;	C
	• 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;	C

	• Segregate and sort the waste materials into 3 categories:
	  • public fill (e.g. concrete and rubble) for re-use on-site or disposal at a public filling area;
	  • re-use and/or recycling waste (e.g. steel and other metals);
	  • waste which cannot be re-used and/or recycled (e.g. wood, glass and plastic) for landfill disposal.
	  • 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.
		C

	• Maintain records of the quantities of wastes generated and disposed off-site for each category of waste.	C

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	C
	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^3 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.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;	C
	• prior to any material handling, all dusty material shall be sprayed with water.	C
	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	C
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;	C
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.	N/A
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.	C
	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 *Celtis biondii*, *Pteris dispar* and *Ardicia pusilla*, and the restricted plants *Vitis balansaeana*, *Pterospermum heterophyllum* and *Rhapis excelsa*, 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.	C
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.	C
O3	Regular checking to ensue that the work site boundaries are not exceeded and that no damage occurs to surrounding areas.	C
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.	C
	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.	C
	• 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
	• 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.	N/A

Remarks:

C - Compliance with mitigation measure

NC - Non-compliance with mitigation measure

N/A - Not Applicable

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

Table I.5 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;	N/A
	• prior to any material handling, all dusty material shall be sprayed with water.	N/A
	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	N/A
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;	N/A
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.	N/A
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.	N/A
	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 *Celtis biondii*, *Pteris dispar* and *Ardicia pusilla*, and the restricted plants *Vitis balansaeana*, *Pterospermum heterophyllum* and *Rhapis excelsa*, 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
O3	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
	• 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
	• 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.	N/A

Remarks:

C - Compliance with mitigation measure

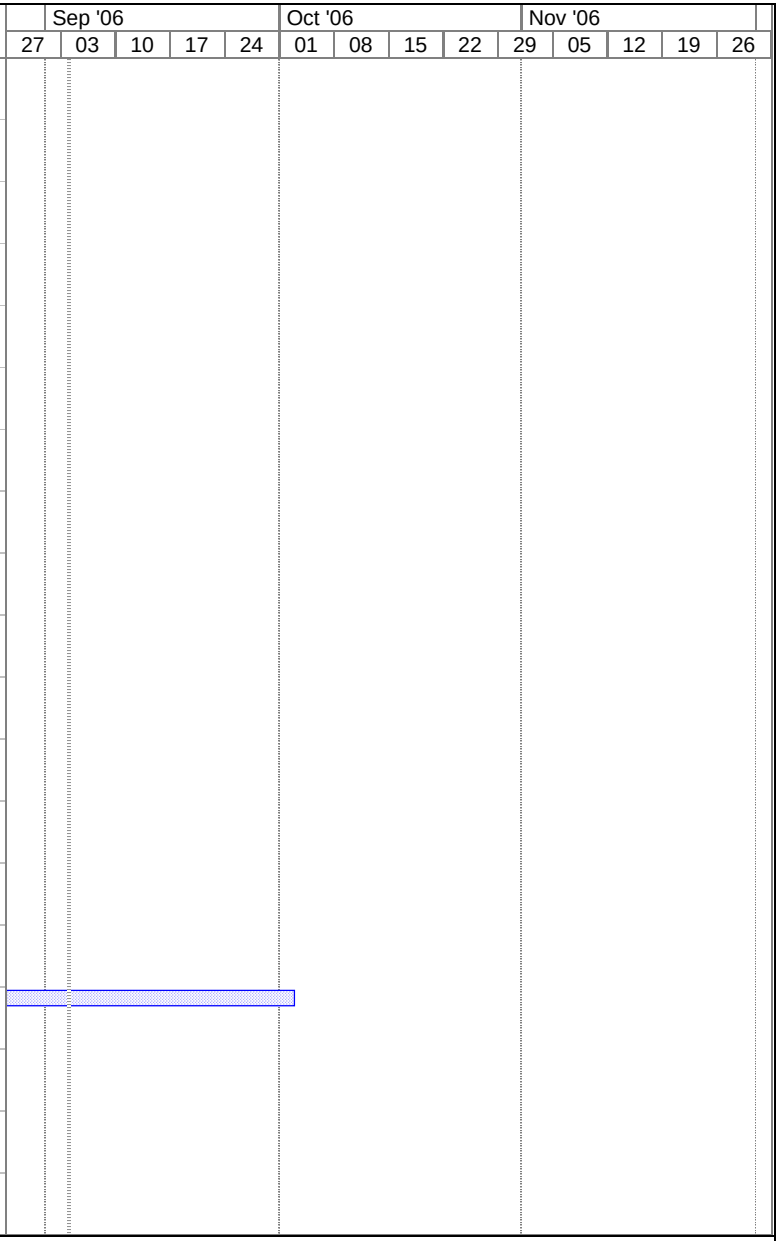
NC - Non-compliance with mitigation measure

N/A - Not Applicable

Appendix J

Tentative Construction Programme

ID	Activities	Duration	Start	Finish
1	**Main Station Bldg. and HRSG**	**914 days**	**02 Apr '04**	**02 Oct '06**
2	Pile head treatment	29 days	02 Apr '04	30 Apr '04
3	Earthing system	30 days	11 May '04	09 Jun '04
4	Pile cap and tie beam	110 days	16 May '04	02 Sep '04
5	1/F construction	60 days	26 Dec '04	23 Feb '05
6	2/F Construction	90 days	01 Dec '04	28 Feb '05
7	3/F Construction	45 days	15 Jan '05	28 Feb '05
8	4/F Construction	45 days	01 Feb '05	17 Mar '05
9	5/F Construction	45 days	02 Mar '05	15 Apr '05
10	R/F Construction	45 days	17 Mar '05	30 Apr '05
11	Deferred works - East	50 days	21 Apr '05	09 Jun '05
12	Deferred works - West	76 days	17 May '05	31 Jul '05
13	Deferred works - South	45 days	15 Oct '05	28 Nov '05
14	Deferred works - Air Inlet	50 days	01 Jan '06	19 Feb '06
15	Deferred works - North	25 days	10 Feb '06	06 Mar '06
16	Deferred works - Tiling at +16.15	60 days	04 Aug '06	02 Oct '06
17	Deferred works - Firewall at Transformer Bay	46 days	20 Jul '05	03 Sep '05
18	Deferred works - Metal Fence at Transformer Bay	45 days	01 Mar '06	14 Apr '06
19				

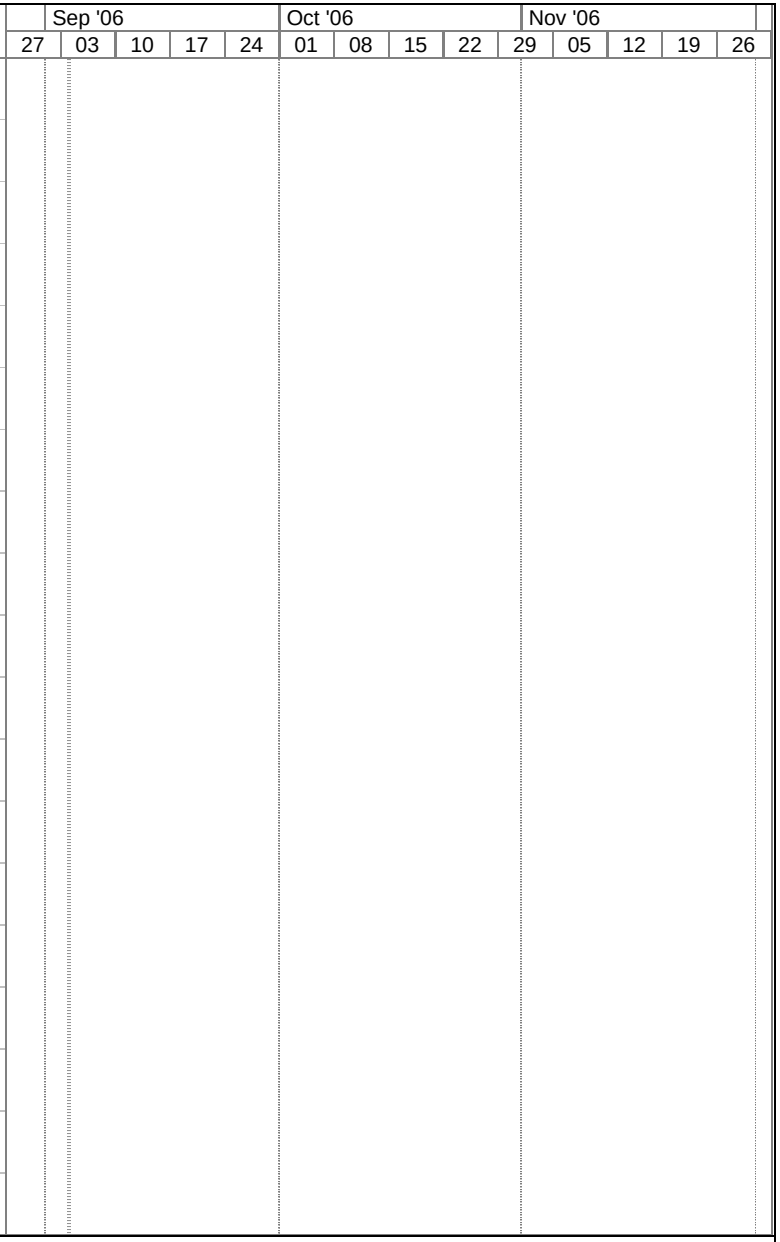


Lamma Power Station Extension - Unit 9 Civil and Building Work
3-Month Programme

Scheduled Activity

Revision: -

ID	Activities	Duration	Start	Finish
20	**275kV Bldg.**	**651 days**	**03 May '04**	**12 Feb '06**
21	Pile head treatment	22 days	03 May '04	24 May '04
22	Earthing system	30 days	11 May '04	09 Jun '04
23	Pile cap and tie beam	45 days	16 May '04	29 Jun '04
24	1/F construction	90 days	01 Jun '04	29 Aug '04
25	2/f construction	90 days	30 Aug '04	27 Nov '04
26	3/f construction	45 days	28 Nov '04	11 Jan '05
27	Roof construction	45 days	12 Jan '05	25 Feb '05
28	Surrounding Cable Trench	120 days	15 Apr '05	12 Aug '05
29	Surrounding External works	60 days	15 Dec '05	12 Feb '06
30				
31	**No. 4 Chimney**	**664 days**	**30 Jun '04**	**24 Apr '06**
32	Pile head treatment	30 days	30 Jun '04	29 Jul '04
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**	**793 days**	**05 Jul '04**	**05 Sep '06**

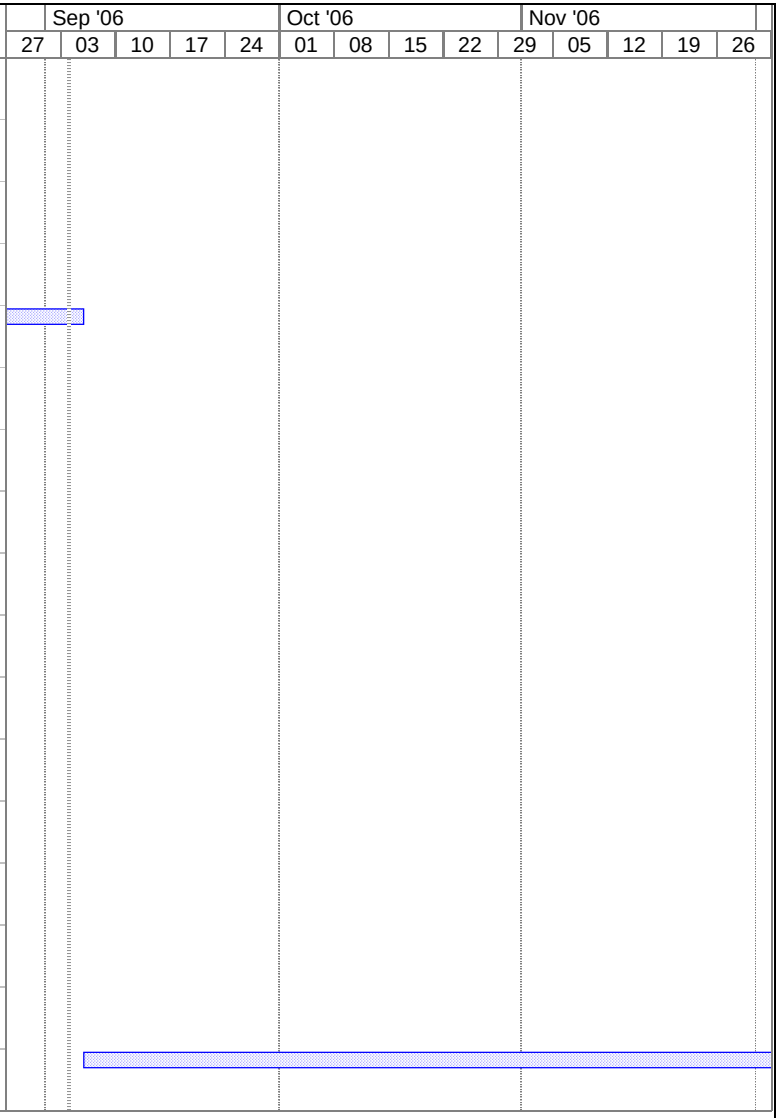


Lamma Power Station Extension - Unit 9 Civil and Building Work
3-Month Programme

Scheduled Activity

Revision: -

ID	Activities	Duration	Start	Finish
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**
56	**Chimney Road**	**513 days**	**08 Nov '04**	**04 Apr '06**
62	Other Areas	99 days	30 May '06	05 Sep '06
63				
64	**C W Culvert System**	**1112 days**	**15 Aug '04**	**31 Aug '07**
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**
103				
104	Work in DLP including rectification work	360 days	06 Sep '06	31 Aug '07



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	Sep			Oct			Nov		
				1	10	20	30	10	20	30	10	20	31
1	HRSG erection	28 Mar,05	Finish										
2	Steam turbine erection	01 Mar,05	Finish										
3	Gas turbine erection	15 Mar,05	Finish										
4	Generator erection	15 Mar,05	Finish										
5	Condenser erection	15 Feb,05	Finish										
6	Aux equipment erection	01 Apr,05	Finish										
7	Air duct / Inlet filter	25 Apr,05	Finish										
8	HRSG inlet duct	21 May, 05	Finish										
9	Piping support / Piping erection	01 Jun,05	Finish										
10	Insulation work	23 Feb,05	Finish										
11	Platform installation	11 Apr, 05	Finish										
12	Pipe rack installation	26 Aug, 05	Finish										
13	Intake aux equipment installation	08 Aug, 05	Finish										
14	Bop piping installation	08 Aug, 05	Finish										
15	GRS piping installation	20 Dec, 05	15 Nov,06										

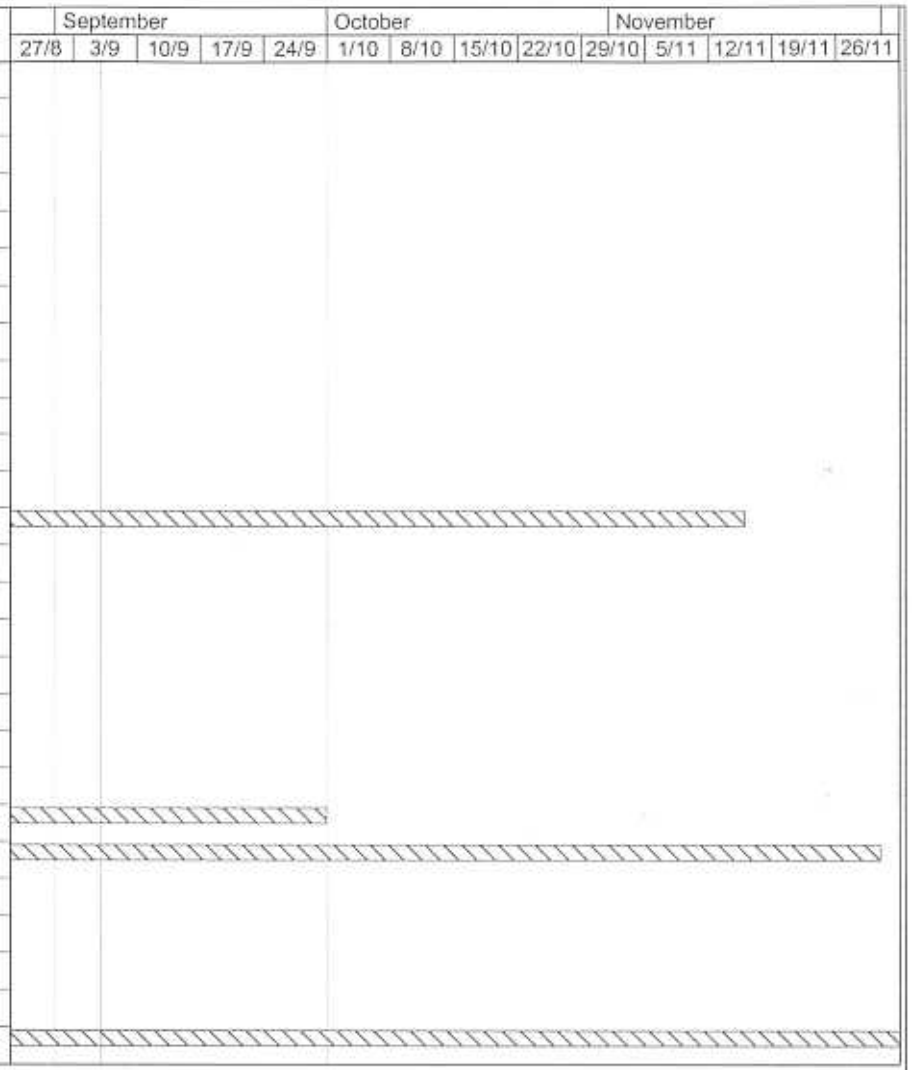
CONTRACT NO. 04/9013
LAMMA POWER STATION EXTENSION UNIT 9
COMPLETE ERECTION, INSPECTION, TESTING & COMMISSIONING OF
POWER BLOCK ELECTRICAL, INSTRUMENTATION AND CONTROL FACITILITIES

3 MONTH PROGRAMME (SEPTEMBER 2006 TO NOVEMBER 2006)

ID	Task Name	Start	Finish	September					October				November			
				1/9	8/9	15/9	22/9	28/9	5/10	12/10	19/10	26/10	3/11	10/11	17/11	24/11
1																
2	L9 Electrical Erection	Fri 1/9/06	Fri 15/9/06													
3	Cable Tray Cover Installation	Fri 1/9/06	Fri 15/9/06													

SANKO SETSUBI CO., LTD.

ID	Task Name	Start	Finish
1	**Civil Works**		
2			
3	Site Procession & Preparation Work	Tue 25/5/04	Mon 12/7/04
4			
5	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
8	Backfilling Work inside Cable Duct after Cable Laying	Mon 1/5/06	Wed 31/5/06
9			
10	Yung Shue Wan South (N2)		
11	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	Wed 15/11/06
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
19	Construction of Cable Duct South Portal	Wed 25/8/04	Mon 16/1/06
20	Backfilling Work inside Cable Duct after Cable Laying	Sat 1/4/06	Sun 30/4/06
21	Backfilling Work at Cable Trenches after Cable Laying	Thu 1/6/06	Sat 30/9/06
22	Backfilling Work at Landing Point after Cable Laying	Thu 1/6/06	Thu 30/11/06
23			
24	Pak Kok Tsui (N5)		
25	Construction of Cable Landing Point	Mon 12/7/04	Wed 14/9/05
26	Construction of Cable Duct North Portal	Mon 12/7/04	Sat 31/12/05
27	Backfilling Work at Landing Point after Cable Laying	Mon 15/5/06	Sun 31/12/06



Additional Transmission System for Lamma Power Station
275kV Cable Route from Lamma Island to Cyberport
3-Month Programme (Rev. N)

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

J-Power Systems Corp.

Contract No.: 01/9046

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

Issue: 27

Date: 31-Aug-06

CONSTRUCTION SCHEDULE (FORECAST FOR 3 MONTHS)

	Date Item	September, 2006																															October, 2006																																November, 2006																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Dredging/Excavation of Submarine Cable Trench outside N2 Landing Point (Completed)																																																																																												
2	Dredging/Excavation of Submarine Cable Trench outside N4 Landing Point (Completed)																																																																																													
3	Dredging/Excavation of Submarine Cable Trench outside N5 Landing Point (Completed)																																																																																													
4	Dredging/Excavation of Submarine Cable Trench outside I1 Landing Point (Completed)																																																																																														
5	Removing Seabed Obstructions and subsequently backfilling between N2 & N4 Landing Points (Completed)																																																																																														
6	Sweeping on the seabed between N5 & I1 Landing Points (Completed)																																																																																															
7	Sweeping on the seabed between N2 & N4 Landing Points (Completed)																																																																																													
8	Preparation & Installation of Submarine Cables between N5 & I1 (Completed)																																																																																														
9	Preparation & Installation of Submarine Cables between N2 & N4 (Completed)																																																																																														
10	Backfilling & Cable Protection outside N2 Landing Point (Completed)																																																																																													
11	Backfilling & Cable Protection outside N4 Landing Point (Completed)																																																																																													
12	Backfilling & Cable Protection outside N5 Landing Point (Completed)																																																																																													
13	Backfilling & Cable Protection outside I1 Landing Point (Completed)																																																																																														
14	If necessary, additional Backfilling for the underwater trench at I1, N2, N4 and N5																																																																■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

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