

Emission Control Project at Castle Peak Power Station "B" Units







Environmental Monitoring and Audit Monthly Report

November 2009

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Executive Summary

This is the 25th monthly Environmental Monitoring and Audit (EM&A) report for the Emissions Control Project at Castle Peak Power Station 'B' Units (EC Project) prepared by the Environmental Team (ET), with reference to the EPD's Environmental Monitoring and Audit – Guidelines for Development Projects in Hong Kong.

This report presents the implementation status of EM&A requirements in November 2009 as per the Project Environmental Impact Assessment (EIA) Report (EIAO Register No.: AEIAR-102/2006) and Environmental Permit (EP) No. EP-251/2006.

Key Project Works in the reporting month

The key project activities in the reporting month are summarized below:

- Flue Gas Desulphurization Absorbers
 - Mechanical erection works of Unit B1 B4 FGD Absorbers. (*Photo E.1*)
 - Plant erection works at the Unit B1 and Unit B2 Gas-to-Gas Heater Area, Common Limestone Preparation and Gypsum Dewatering Areas (*Photo E.2*), Limestone Handling Area, Gypsum Handling Area (*Photo E.3*) and Waste Water Treatment Plant Area.
- Civil Works
 - Pile caps at Unit B2 Gas-to-Gas Heater.
 - Drainage works at Unit B3 and Unit B4 Gas-to-Gas Heaters.
- Material Handling Berth Work
 - Piling and quay construction works for the Material Handling Berth (*Photo E.4*).
 - Trial dredging works for the Material Handling Berth
- NOx Reduction Facilities Erection
 - Plant erection works of Urea Handling Area, Unit B2 BOFA and Selective Catalytic Reduction System.
- Stack Lining Installation
 - Unit B2 stack lining installation works.

Environmental Monitoring

The implementation status of the Project EM&A programmes are summarized below:

- Groundwater monitoring
 - The Groundwater monitoring program for 2009 was completed in October and the results indicated that the TPH levels has consistently remained well below the relevant Risk-based Remediation Goals (RBRGs) value.

The groundwater monitoring program for 2010 is to be confirmed with EPD. (Section 3.1)

• Marine water quality monitoring

- Baseline water quality monitoring programme was completed on 21
 December 2007 according to the schedule submitted to EPD on 6
 November 2007. The Baseline Water Quality Monitoring Report was
 revised to address EPD's comments on the first submission and resubmitted to EPD on 4 March 2008.
- According to the EIA report, impact monitoring on marine water quality shall be carried out 3 days a week, at mid-flood and mid-ebb tides, during the dredging works. A trial dredging was conducted on 30 November and impact monitoring on marine water quality was carried out as per the EM&A requirement. (Section 3.2).

• Ecology monitoring

- According to the EIA report, visual cetaceans monitoring is required solely during underwater percussive piling works. Underwater percussive piling works for Material Handling Berth construction were conducted during the reporting month and visual cetaceans monitoring was carried out as per the Environmental Permit. (Section 3.3)

Environmental Mitigation Implementation Schedule

Environmental mitigation measures for the construction stage were implemented as per the EIA Report. (Section 4.1)

Implementation Status of Event and Action Plan

A trial dredging was conducted on 30 November and impact monitoring was carried out as per the EM&A requirement. All monitoring results were evaluated against the Action and Limit levels stipulated in the Baseline Water Quality Monitoring Report and confirmed in full compliance. (Section 4.2)

Site Environmental Inspection

Joint site inspection was conducted by the ET and contractors on a weekly basis, and independent audit was conducted by the Independent Environmental Checker (IEC) on a bi-weekly basis. All required follow-up actions were implemented by the relevant contractors and verified by the Integrated Project Environmental Team in the subsequent site inspections. (Section 4.3)

Environmental Complaint and Enquiries

No complaint or enquiries were received in the reporting month. (Section 4.4)

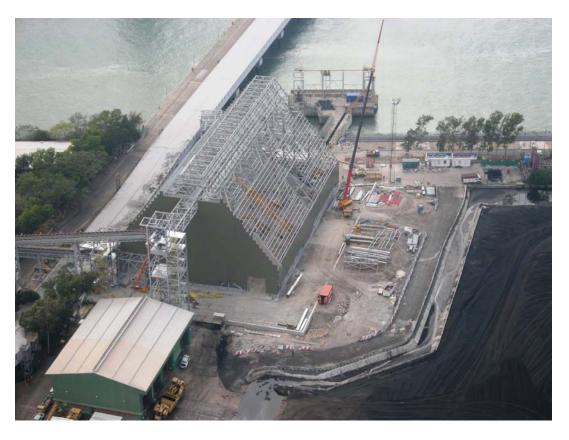
Key Project Works in the reporting month



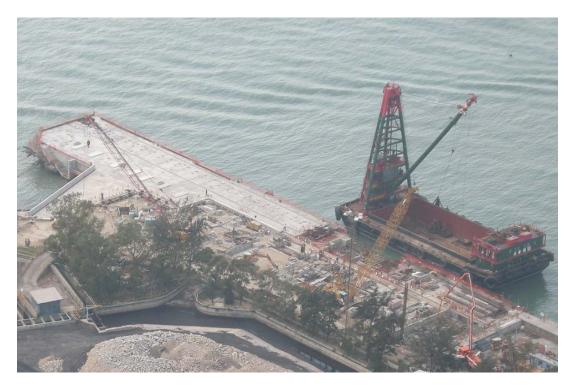
E.1 Unit B1 and Unit B2 FGD Areas



E.2 Common Limestone Preparation and Gypsum Dewatering Areas



E.3 Gypsum Handling Area



E.4 Material Handling Berth

1. Basic Project Information

1.1 Background

The Emissions Control Project at Castle Peak Power Station "B" Units (the Project) involves the installation of additional emissions control facilities to further reduce air emissions from the operation of these units. The emissions control facilities to be installed in the Castle Peak Power Station "B" Units (CPB) include NO_x reduction facilities and Limestone Flue Gas Desulphurisation (LS FGD) for SO₂ reduction. The location of the Site is presented in *Figure 1.1*. An overview of the Project Site general arrangement is presented in *Figure 1.2*.

1.2 Project Organisation

An Integrated Project Environmental Team has been set up to manage the environmental issues associated with the EC Project. The Project Environmental Team comprises the Project Environmental Team Leader (ETL), the Project Regulatory Compliance and Environmental Officer, and the Project Environmental Officer. The Project Environmental Team organisation is depicted in *Figure 1.3*.

1.3 Construction Activities and Project Programme

The construction of the Project involves demolition and relocation of certain existing facilities. While the existing generating units will remain in their current locations, some of the auxiliary and common facilities to the south of the generating units at CPB will be demolished or relocated to provide space for the emission control and related facilities. The scope of the Project is as follows:

- Demolition of some existing facilities at CPB including the Fuel Oil Day Tank, Fuel Oil Pump House and Dangerous Goods (DG) Store;
- Relocation or re-routing of existing facilities including Ash and Dust Control Room, Underground Pipeworks, Carbon Dioxide (CO₂) Storage Tank, Liquefied Petroleum Gas (LPG) Storage Tanks, Intermediate Pressure Reduction Station, Oil Interceptors, Oils Sump, Oil Sewer Manholes and Foul Water Pumping Station;
- Provision of Reagent and By-Product Handling and Storage Facilities including limestone store, limestone slurry tanks, gypsum dewatering and storage facilities;
- Installation of new emission control equipment and facilities for NOx and SO₂ control;
- Provision of additional berthing facilities for loading and unloading of the additional reagents and gypsum.

The civil works of the EC Project were commenced on 26 September 2007. These included piling works, foundation works, roads and other civil engineering works and would be executed in a phased manner. Start-up of the retrofitted units are scheduled from 2010 to 2011.

1.4 Summary of EM&A Requirements

An Environmental Impact Assessment (EIA) for the Project was undertaken and the EIA Report was approved under the *Environmental Impact Assessment Ordinance* (EIAO) (Cap499) on 25 October 2006 (EIAO Register No.AEIAR-102/2006). Environmental Permit (EP) No. EP-251/2006 for the Project was granted on 10 November 2006. Condition 3.2 of the EP requires an EM&A programme to be implemented in accordance with the procedures and requirements set out in the approved EIA Report (EIAO Register No. AEIAR-102/2006).

The EM&A requirements for the EC Project are summarized below:

- Establish baseline water quality levels at designated locations;
- Implement construction impact monitoring programmes for water quality and dolphin monitoring;
- Implement inspection and audit programmes for water quality and dolphin monitoring;
- Liaise with, and provide environmental advice (as requested or when otherwise necessary) to construction site staff on the comprehension and consequences of the environmental monitoring data and exceedances:
- Identify and resolve environmental issues and other functions as they may arise from the works;
- Check and advice the Contractor's overall environmental performance, the implementation of Event and Action Plans (EAPs), and remedial actions taken to mitigate adverse environmental impacts as they may arise from the works;
- Conduct monthly reviews of monitored impact data as the basis for assessing compliance with the defined criteria and to ensure that necessary mitigation measures are identified and implemented, and to undertake additional ad hoc monitoring and auditing as required by special circumstances;
- Evaluate and interpret all environmental monitoring data to provide an early indication should any of the environmental control measures or practices fail to achieve the acceptable standards, and to verify the environmental impacts predicted in the EIA Report;
- Manage and liaise with other individuals or parties concerning other environmental issues deemed to be relevant to the construction process;

- Conduct regular site inspections to assess:
 - the level of the Contractor's general environmental awareness;
 - the Contractor's implementation of the conditions in the EP and the recommendations in the EIA Report;
 - the Contractor's performance as measured by the EM&A programme;
 - the need for specific mitigation measures to be implemented or the continued usage of those previously agreed; and
 - to advise the Site Staff of any identified potential environmental issues.
- Submit Monthly EM&A Reports which summarize environmental monitoring and auditing data, with interpretation illustrating the acceptability or otherwise of any environmental impacts and identification or assessment of the implementation status of agreed mitigation measures.

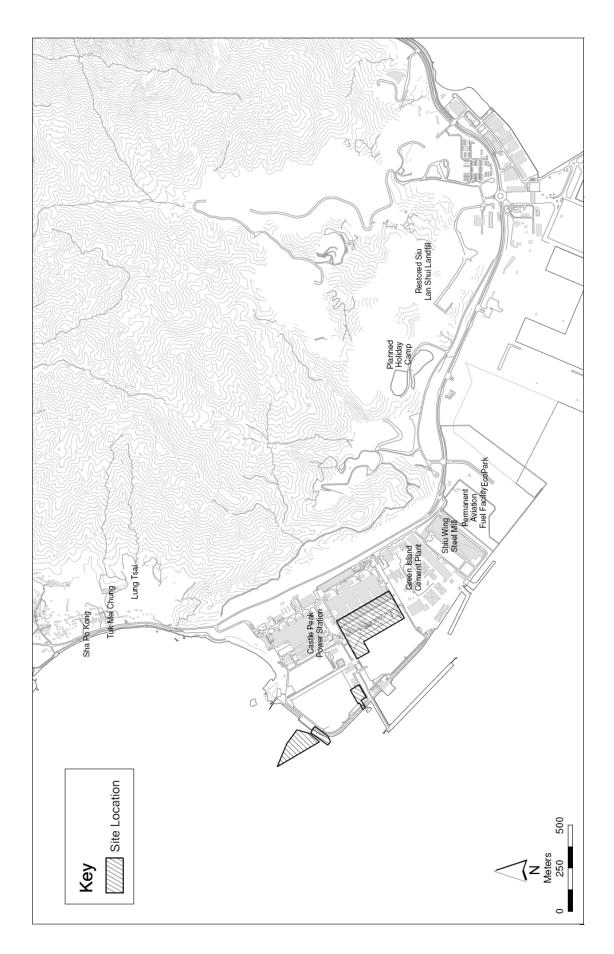


Figure 1.1 Location of the EC Project Site

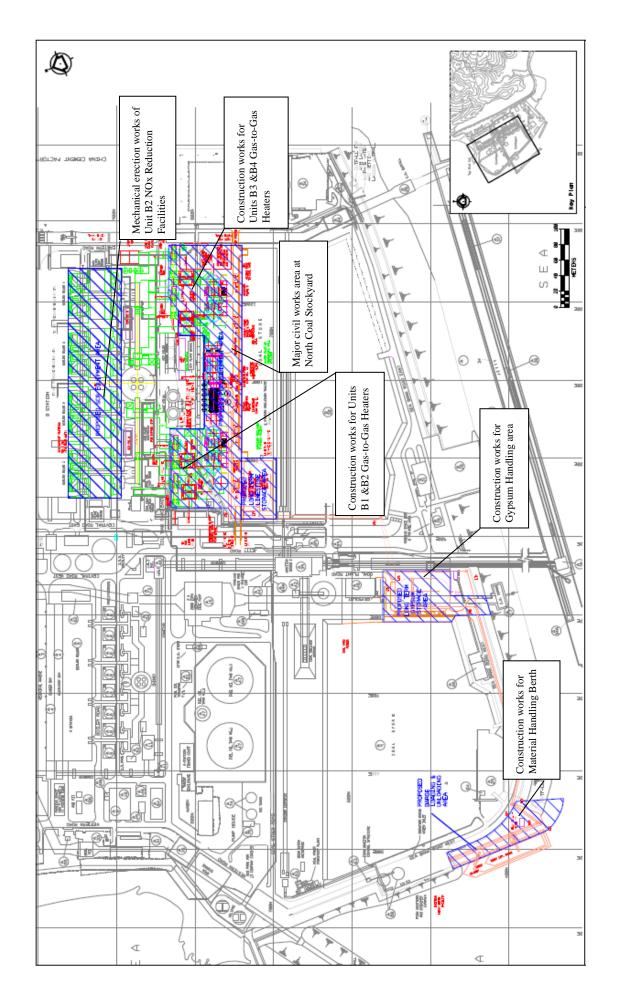


Figure 1.2 EC Project Site General Layout Arrangement

Integrated Project Environmental Team

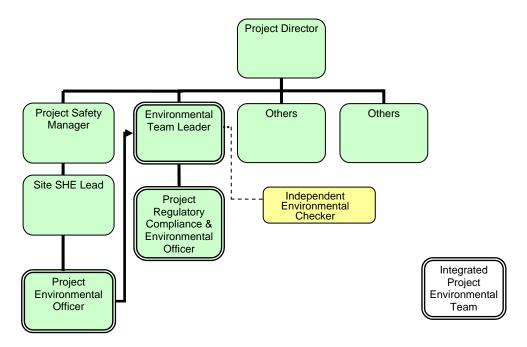


Figure 1.3 Integrated Project Environmental Team

2. Environmental Status

2.1 Project Works undertaken during the Reporting Month

The key site works undertaken in the reporting month and implementation of the required environmental protection measures are summarized in *Table 2.1* below.

 Table 2.1
 Key construction works undertaken in the reporting month

	Construction Activities	Environmental Protection Measures
FGD Erection & Civil Works	 Plant erection at the Unit B1 and Unit B2 Gas-to-Gas Heater Area, Common Limestone Preparation and Gypsum Dewatering Areas, Limestone Handling Area, Gypsum Handling Area, Waste Water Treatment Plant, Unit B1 – B4 FGD Absorbers. Pile caps at Unit B2 Gasto-Gas Heater. Drainage works at Unit B3 and Unit B4 Gas-to-Gas Heaters 	 Dust suppression on access roads; Temporary stockpiles were either wetted or covered by tarpaulin sheet to prevent dust emission; Spillage control measures (e.g. drip tray, spill kit) were implemented; Proper on-site chemical waste store was provided.
NOx Reduction Facilities Erection	Plant erection works at Urea Handling Area, Unit B2 BOFA and Selective Catalytic Reduction System	 Spillage control measures (e.g. drip tray, spill kit) were implemented; Proper on-site chemical waste store was provided.
Material Handling Berth Work	 Piling and quay construction works for Material Handling Berth. Trial dredging works for Material Handling Berth. 	 Dust suppression measures in place; Air bubble curtain was installed; Silt curtain was deployed; Closed grab dredger was used; Spillage control measures (e.g. drip tray, spill kit) were implemented; Proper on-site chemical waste store was provided.

Stack Lining Installation	Unit B2 stack lining installation works.	Chemical waste storage area was set up;
		Proper on-site chemical waste store was provided.

2.2 Construction Works to be undertaken in the Coming Month

The key site activities in the coming month are summarized below:

- Material Handling Berth Work
 - Complete piling and quay construction works for the Material Handling Berth.
 - Continue dredging works for the Material Handling Berth.

• NOx Reduction Facilities

- Continue erection of the Urea Handling Plant, Unit B2 BOFA and Selective Catalytic Reduction System.

• Flue Gas Desulphurization Absorbers

- Continue mechanical erection of the Unit B1 and Unit B2 FGD Absorbers.
- Continue plant erection at the Unit B1 and Unit B2 Gas-Gas Heaters, Common Limestone Preparation and Gypsum Dewatering Areas, Gypsum Handling Area, Waste Water Treatment Plant.

• Stack Lining Installation

- Complete Unit B2 stack lining installation.

The potential environmental impacts associated with the above construction works include dust emission, construction surface runoff, oil spillage and chemical wastes. Preventive measures have been and will continue to be implemented as per the Environmental Mitigation Implementation Schedule for the EC Project Construction Phase.

2.3 Status of Submissions to EPD

The status of submissions to EPD as required under the Environmental Permit No. EP-251/2006 is summarized in *Table 2.2* below.

Table 2.2 Environmental Permit No. EP-251/2006 - Submissions for Decommissioning / Construction Stage

EP Submission	Timing for Submission	Target	Actual
Condition		Submissio	Submissio
Ref		n Date	n Date
General Conditions			
1.11 Commencement Dates of decommissioning at	At least 2 weeks before the commencement	As per	4/07/07 &
construction of the Project	of decommissioning and construction	schedule	20/08/07
	respectively		respectivel
Submission before/after Commencement of Decommissi	oning/Construction of the Project		
2.3 Management organisation of the main	At least 1 month after commencement of	As per	26/10/07
decommissioning/construction companies	decommissioning/construction of the Project	schedule	
and/or any form of JV associated with the			
Project (including organisation chart, names of	f		
responsible persons and their contact details)			
2.4 Details of any change to emission reduction	At least 3 months before commencement of	If	
process described and assessed in the EIA	construction of relevant facilities	applicable	
Report (Register No.: AEIAR - 102/2006) for			
EM&A Requirements			
3.1 Groundwater Monitoring Plan	At least 1 month before commencement of	As per	1st issue -
	construction of the Project	schedule	20/07/07
			2nd issue -
			5/09/07
			3rd issue -
			20/11/07
			4th issue -
			27/02/08
3.3 Baseline Water Quality Monitoring Report	At least 1 month before commencement of	As per	1st issue -
	dredging works	schedule	29/01/08
			2nd issue -
			4/03/08
3.4 Monthly EM&A Report	Within 10 working days at the end of the	As per	As per
	reporting month	schedule	schedule
3.5 Post-Project Monitoring Report for Dredging	Within 1 week of completion of the Post-	As per	
Works	Project Monitoring for the dredging works	schedule	
Electronic Reporting of EM&A Information	·		
4.2 Written notification on the internet address of	Within 6 weeks after the commencement of	As per	06/11/07
EM&A website to Director of Environmental	construction of the Project	schedule	

3. Monitoring Results

3.1 Groundwater Monitoring

With respect to the requirement specified in the Environmental Permit No. EP-251/2006, monitoring of the total petroleum hydrocarbon (TPH) in the groundwater within the Project site during construction and operation of the Project is required. A Groundwater Monitoring Plan has been developed to define the groundwater monitoring locations, methodology for groundwater monitoring as well as the monitoring schedule.

Bi-weekly Groundwater Monitoring Programme for the initial period of three months after the commencement of major piling and foundation works was successfully concluded on 25 January 2008. The TPH monitoring results for the initial three-month period consistently remained well below the relevant Risk-based Remediation Goals (RBRGs) values, and therefore the remaining groundwater monitoring for 2008 was conducted on a quarterly basis in accordance with the Groundwater Monitoring Plan (Rev 4), which had been accepted by EPD.

The Groundwater Monitoring Program for 2008 was completed in October 2008 with all results well within the Risk-Based Remediation Goals (RBRGs) stated in the EPD's Guidance Note for Contaminated Land Assessment and Remediation. In view of this, the groundwater monitoring frequency for 2009 is reduced to twice a year as per the email confirmation (dated 07 November 2008) from EPD to the Independent Environmental Checker.

The 2nd half-yearly Groundwater Monitoring for 2009 was conducted in October 2009. Groundwater samples were taken from the three designated sampling points on 15 October 2009 for TPH measurement and all results indicated that TPH levels continue to remain well below the relevant RBRGs value.

The groundwater monitoring program for 2010 is to be confirmed with EPD.

3.2 Marine Water Quality Monitoring

With respect to the requirement specified in the Environmental Permit No. EP-251/2006, monitoring of marine water quality during the construction phase is required to evaluate whether any impacts would be posed by the dredging operations on the surrounding waters during the construction period of the dredging works. Baseline monitoring (prior to the dredging works), impact monitoring (during any works related to the dredging works) and post-project monitoring (after completion of the dredging) shall be carried out according to the

monitoring locations, monitoring parameters and frequency specified in the EIA Report.

Baseline water quality monitoring programme was completed on 21 December 2007 according to the schedule submitted to EPD on 6 November 2007. The Baseline Water Quality Monitoring Report was revised to address EPD's comments on the first submission and resubmitted to EPD on 4 March 2008.

According to the EIA report, impact monitoring on marine water quality shall be carried out 3 days a week, at mid-flood and mid-ebb tides, during the dredging works. A trial dredging was conducted on 30 November and therefore impact monitoring on marine water quality was conducted as per the EM&A requirement.

3.2.1 Water Quality Monitoring Parameters

The Water Quality Monitoring Parameters are summarised in *Table 3.1* below:

Table 3.1 Summary of Water Quality Monitoring Parameters

Monitoring Parameters

The parameters measured *in situ* include:

- Dissolved oxygen (DO) (saturation and mg L⁻¹);
- Temperature;
- Turbidity (NTU); and
- Salinity (‰ or ppt).

The parameter measured in the laboratory include:

• Suspended solids (SS) (mg L⁻¹)

3.2.2 Monitoring Stations

Water quality sampling was undertaken at the following designated monitoring stations:

- C1 is a Control Station (during ebb tide) located to the north of the dredging area, which is not supposed to be influenced by the construction works;
- C2 is a Control Station (during flood tide) located to the south of the dredging area with the same coordinates as EPD routine

monitoring station NM3, which is not supposed to be influenced by the construction works;

- **SR1** and **SR2** represent Lung Kwu Sheung Tan Beach and Lung Kwu Tan Beach respectively, located to the north of the dredging area;
- SR3, SR4 and SR5 represent the Castle Peak Power Station Intake, the Shiu Wing Steel Mill Intake and the EcoPark Intake, located to the south of the dredging area;
- **SR6**, **SR7** and **SR8** represent the eastern boundary of Sha Chau and Lung Kwu Chau Marine Park; and
- **G1**, and **G2** are regarded as a Gradient Station in-between the dredging area and the Marine Park, whereas G1 situates at the same location as EPD routine monitoring station NM5.

The co-ordinates of these monitoring stations are listed in *Table 3.2*. and the locations are shown in *Figure 3.1*

Table 3.2 Co-ordinates of Baseline, Impact & Post Project Monitoring Stations (HK Grid)

Station	Easting	Northing	
C1	806561	829624	
C2	811762	823728	
SR1	808295	828795	
SR2	809242	827496	
SR3	809444	826076	
SR4	810241	825355	
SR5	810763	825047	
SR6	806198	827886	
SR7	806959	824749	
SR8	807571	822187	
G1	807729	826440	
G2	808608	824832	

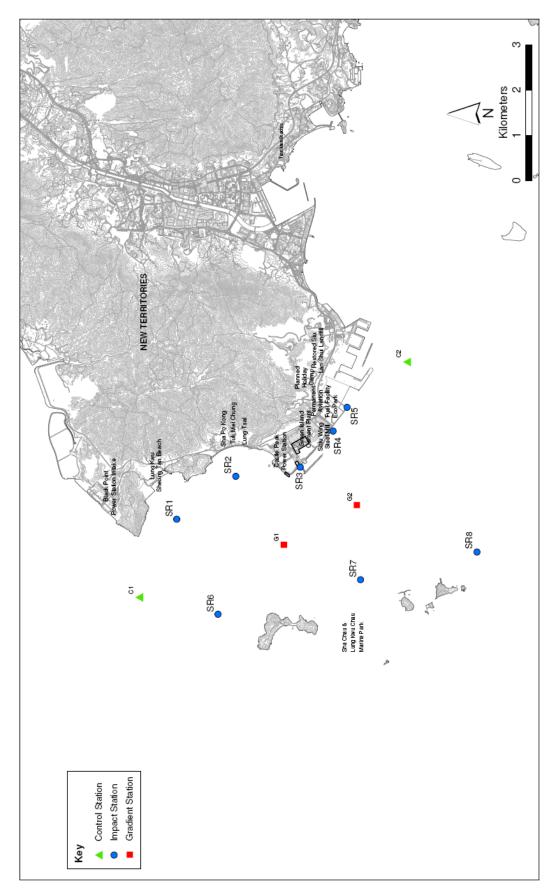


Figure 3.1 Location of Water Quality Monitoring Stations

3.2.3 Monitoring Frequency

The impact monitoring was undertaken 3 days per week, at mid-flood and mid-ebb tides, with sampling / measurement at the designated stations. The intervals between 2 consecutive sets of monitoring was at least or more than 36 hours except where there were exceedances of Action and/or Limit Level, in which case monitoring frequency would be increased. The tidal range for each of the flood and ebb tide was at least or more than 0.5m.

The water quality sampling was undertaken within a 3-hour window of 1.5 hour before and 1.5 hour after mid flood and mid-ebb tides. The environmental contractor was responsible for liaison with the engineering contractor to confirm whether dredging works were being undertaken during the water quality sampling.

Each station was sampled and measurements were taken at three depths, 1 m below the sea surface, mid depth and 1m above the sea bed. For stations that are less than 3 m in depth, only the mid depth sample was taken.

Replicate *in-situ* measurements and sample collected from each independent sampling event were required for all parameters to ensure a robust statistically interpretable dataset.

3.2.4 Monitoring Equipment

Table 3.3 summarizes the equipment used in the water quality monitoring program. All the monitoring equipment complied with the requirements set out in the approved EIA Report.

Table 3.3 Water Quality Monitoring Equipment

Equipment	Model and Make	Qty.
Water Sampler	Kahlsico Water-Bottle Model 135DW 150	1
Multi-parameter Water Quality System	YSI 6820	2
Monitoring Position Equipment	"Magellan" Handheld GPS Model GPS-320	1

3.2.5 Monitoring Methodology, Calibration details and QA/QC Procedures

Instrumentation

A multi-parameter meter (Model YSI 6820 C-M) was used to measure DO, DO saturation, turbidity, salinity and temperature.

Copies of the calibration certificates of the equipment are shown in *Appendix A*.

Monitoring Methodology

At each measurement, two consecutive measurements of DO concentration, DO saturation, salinity, turbidity and temperature were taken. Where the difference in the value between the first and second readings of each set was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.

For SS measurement, duplicate water samples for SS were taken and analysed at each monitoring station at each sample depth. The sample bottles were then packed in cool-boxes (without being frozen), and delivered to a HOKLAS accredited laboratory for analysis of suspended solids concentrations within 24 hours.

QA/QC Procedures

Before each round of monitoring, a zero check in distilled water was performed with the turbidity probe of YSI 6820-C-M. The probe was then calibrated with a solution of known NTU.

Quality Control Report as attached in *Appendix B* are available for the SS analyzed in the HOKLAS-accredited laboratory, WELLAB Ltd.

3.2.6 Monitoring Result

The monitoring results are given in *Appendix C*.

All water quality monitoring results were evaluated against the Action and Limit levels stipulated in the Baseline Water Quality Monitoring Report (*Table 3.4*) and confirmed in full compliance.

The tentative Impact Water Quality Monitoring Schedule for December 2009 is given in *Appendix D*.

Table 3.4 Action and Limit Levels for Water Quality Monitoring

Parameter		Action	Limit
DO (mg/L) h	Surface and Middle	6.0	5.5
(mg/L) b	Bottom	5.7	5.4
Turbidity (NTU) c	Depth average a	13.1 and 20% exceedance of value at any impact station compared with corresponding data from control stations at the same tide of the same day d, e,	and 30% exceedance of value at any impact station compared with corresponding data from control stations at the same tide of the same day d, e
SS (mg/L) c	Depth average a	34.3 and 20% exceedance of value at any impact station compared with corresponding data from control stations at the same tide of the same day d, e,	36.7 and 30% exceedance of value at any impact station compared with corresponding data from control stations at the same tide of the same day and specific sensitive receiver water quality requirements d, e, f

Note:

- (a) "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depth.
- (b) For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
- (c) For SS and turbidity, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
- (d) An exceedance of Action Level and Limit Level is defined as exceeding both criteria. The comparison of the results of impact stations and control stations will aid to determine then background influence to the water quality sensitive receivers.
- (e) C1 is regarded as the Control Station during ebb tide, whereas C2 is regarded as the Control Station during flood tide.
- (f) For WSD and Black Point/Castle Peak Power Station intakes (SR3), the specific SS criteria are not greater than 20 mg/L and 764 mg/L.

3.3 Ecology Monitoring

With respect to the requirement specified in the Environmental Permit No. EP-251/2006, visual cetacean monitoring should be conducted during the underwater percussive piling works to evaluate whether there have been any effects on the animals.

Underwater percussive piling works were conducted during the reporting month and visual cetaceans monitoring was carried out as per the Environmental Permit.

3.3.1 Monitoring Duration and Frequency

Daily visual cetaceans monitoring was conducted whenever there was underwater percussive piling works in the reporting month.

3.3.2 Monitoring Methodology

Dolphin Exclusion Zone

A dolphin exclusion zone was identified within a radius of 500 m from the percussive piling works area. The exclusion zone around the work area was scanned for at least 30 minutes prior to the commencement of piling. If cetaceans were observed in the exclusion zone, underwater percussive piling would be delayed until they had left the area.

Dolphin Observation

The observer was standing at a location on the piling barge that allows for an observation height of 4 to 5 m above water level at the observer's eye level and relatively unobstructed forward visibility. Observation by the observer was conducted by searching with Fujinon 7 x 50 marine binoculars, scanning the area with the naked eye and occasional binocular check. The observer was remained alert at all times during the entire observation period.

Field Record

A sighting record was filled in immediately at the initial sighting with data on the time, position, distance and bearing of the sighting. All other information on sea state, weather conditions (i.e. wind speed according to the Beaufort Scale), as well as notes on dolphin appearance, behaviour, direction of movement, response to boat and any other relevant information were completed at the end of the sighting.

Construction works

When dolphins were spotted within the exclusion zone, construction works would cease and would not resume until the observer confirmed that the zone has been continuously clear of dolphins for a period of 30 minutes (thereby adequately spanning the approximate maximum dive time of the dolphins

of 4 minutes). Dolphin sighting position, data on sighting angle, distance to the group, group size and behaviour were recorded.

3.3.3 Monitoring Result

No dolphin was spotted within the exclusion zone during the underwater percussive works in the reporting month.

The dolphin monitoring sighting record is given in *Appendix F*.

4. Implementation Status of EIA Recommendations

4.1 Environmental Mitigation Implementation Schedule

Environmental mitigation measures for the construction stage were implemented as per the EIA Report.

An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in *Appendix G*.

4.2 Implementation status of Event and Action Plan

A trial dredging was conducted in the reporting month and impact monitoring was conducted as per the EM&A requirement. All monitoring results were evaluated against the Action and Limit levels stipulated in the Baseline Water Quality Monitoring Report and confirmed in full compliance.

The Event and Action Plan for Water Quality is shown in *Appendix E* for reference.

4.3 Site Environmental Inspection and Audit

Independent Environmental Checker (IEC) conducted bi-weekly site inspection on the 13th November and 27th November 2009 respectively. All the follow-up actions to respond to the IEC observations have been completed by the relevant contractors and verified in the subsequent site inspections by the Integrated Project Environmental Team.

Summary of the IEC site inspections is shown in *Table 4.1*.

Joint site audits were carried out by the Integrated Project Environmental Team (ET) with contractors on a weekly basis to monitor environmental issues at the construction sites to ensure that all mitigation measures were implemented timely and properly. All required mitigation measures were implemented by the relevant contractors and verified in the subsequent site inspections by the Integrated Project Environmental Team.

Summary of the weekly ET site inspections is shown in *Table 4.2*.

4.4 Implementation Status of Complaint Handling Procedure

No complaint or enquiries were received in the reporting month.

 Table 4.1
 Summary of Bi-weekly IEC Site Inspections

Date of	Observations	Follow-up action
Inspection		-
13/11/09	Chemicals were placed on the ground without secondary containment near the Contractors' workshop at the Material Handling Berth work site.	The identified chemicals were removed to the chemical store by the Contractor.
	Oil pumping equipment was placed adjacent to the chemical storage near SCR No.4 site without spillage containment measures.	Drip tray was provided for the hand pump by the Contractor.
	Chemical containers were observed in the general waste skip adjacent to the workers' access road opposite to the Gypsum Dewatering Plant. Small piles of general wastes were also placed on the ground surrounding the general waste skip.	The chemical containers were removed to the chemical waste store and the small piles of general wastes were removed to other general waste skip by the Contractor.
27/11/09	Oil sheen was observed on the access road of the Material Handling Berth work site.	The oil sheen was cleaned up immediately by the Contractor with oil absorbent.
	Tins of glue without secondary containments were observed adjacent to the site office of the proposed Gypsum Handling Plant in the West Coal Yard.	The tins of glue were removed to the chemical store by the Contractor.

Table 4.2 Summary of Weekly ET Site Inspection

Week of	Observations	Follow-up action
Inspection 01/11/09- 07/11/09	- Non-chemical waste item to be removed from the chemical waste store.	- The identified non-chemical waste item was removed from the chemical waste store by the Contractor.
	- Construction wastes to be disposed off-site timely.	- The construction wastes were collected by a licensed waste collector for off-site disposal.
08/11/09- 14/11/09	- Chemical containers to be properly labelled.	- The identified chemical containers were properly labelled by the Contractor.
	- Proper warning signs to be displayed at the temporary chemical waste storage area.	- Proper warning signs were displayed at the temporary chemical waste storage area by the Contractor.
	- Chemical wastes to be disposed off-site timely.	- The chemical wastes were collected by a licensed waste collector for off-site disposal.
15/11/09- 21/11/09	- Oily water trapped in the drip tray to be clear.	- The oily water was removed and disposed of as chemical waste by the Contractor.
	- Drip tray to be provided for storage of chemicals.	- Drip tray was provided for storage of the identified chemicals by the Contractor.
22/11/09- 28/11/09	- Dusty haul road to be wetted with water.	- Water spray was applied on the dusty haul road by the Contractor.
	- Chemical wastes to be properly labelled.	- The identified chemical waste container was properly labelled by the Contractor.

Appendices

Appendix A Copies of Calibration Certificates



WELLAB LIMITED Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.weilab.com.hk

TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street, Shatin, NT, Hong Kong Test Report No.: C/W/91031-1
Date of Issue: 2009-10-31
Date Received: 2009-10-30
Date Tested: 2009-10-30
Date Completed: 2009-10-31
Next Due Date: 2010-01-30

ATTN:

Mr. Henry Leung

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description

: Sonde Environmental Monitoring System

Manufacturer Model No. : YSI

Model No.

: 6820-C-M : 02D0126AA

Serial No. Equipment No.

: 02D0126A2 : W.03.01

Project No.

: C013

Test conditions:

Room Temperature

: 24 degree Celsius

Relative Humidity

: 66%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, S/N: 05A1209

- 1. Conductivity performance check with Potassium Chloride standard solution
- 2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, S/N: 04A0145

1. Performance check against Winkler titration

Turbidity Sensor, Model: 6136, S/N: 05A1610AJ

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, S/N: 01J

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

- 1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
- 2. In-house method with reference to APHA and ISO standards

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE Laboratory Manager



WELLAB LIMITED Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T, Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

Test Report No.: C/W/91031-1
Date of Issue: 2009-10-31
Date Received: 2009-10-30
Date Tested: 2009-10-30
Date Completed: 2009-10-31
Next Due Date: 2010-01-30

Page: 2 of 2

Results

1. Conductivity performance check

	- · · · · · · · · · · · · · · · · · · ·					
	Specific Conductivity, μS/cm		Correction, µS/cm	Acceptable range		
1	Salinity Meter (C1)	Theoretical Value (C2)	D = C1 - C2			
	1421	1420	2	1420 ± 20		

2. Salinity Performance check

z. builing i diffillance				
Salinity, ppt		Correction, ppt	Acceptable range	
Instrument Reading	Theoretical Value			
30.0	30.0	0.0	30.0 ± 3	

3. Dissolved Oxygen check

5. Dissolved Oxygen eneck					
Oxygen level in	Dissolved Oxygen, mg O ₂ /L		Correction, mg	Acceptable	
water at 20°C	D.O. Meter	Winkler Titration	O ₂ /L	range	
Saturated	9.1	9.1	0.0	± 0.2	
Half-saturated	5.6	5.6	0.0	± 0.2	
Zero	0.0	0.0	0.0	± 0.2	

4. Turbidity check

4. Turbiany cheek					
Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range		
0.00	0.00	0.00	0.00 ± 0.05		
100	100	0	100 ± 5		

5. pH Meter check

Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ∆pH _j , pH unit	0.01	Less than 0.05
Shift on stirring ΔpH_s , pH unit	0.01	Less than 0.02
Noise ΔpH _n , pH unit	0,00	Less than 0.02

6. Depth Meter check

Instrument Reading, m Calibration Value, m		Correction, m	Acceptable range
1.0	1.00	0.00	1.00 ± 0.05



WELLAB LIMITED Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T., Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

APPLICANT: Cinotech Consultants Limited

Room 1710, Technology Park,

18 On Lai Street, Shatin, NT, Hong Kong Test Report No.: C/W/91031-2
Date of Issue: 2009-10-31
Date Received: 2009-10-30
Date Tested: 2009-10-30
Date Completed: 2009-10-31
Next Due Date: 2010-01-30

ATTN:

Mr. Henry Leung

Page: 1 of 2

Certificate of Calibration

Item for calibration:

Description : Sonde Environmental Monitoring System

 Manufacturer
 : YSI

 Model No.
 : 6820-C-M

 Serial No.
 : 02D0293AA

 Equipment No.
 : W.03.02

 Project No.
 : C013

Test conditions:

Room Temperature : 24 degree Celsius

Relative Humidity : 66%

Test Specifications:

Conductivity & Salinity Sensor, Model: 6560, S/N: 02C0886

1. Conductivity performance check with Potassium Chloride standard solution

2. Salinity performance check with Sodium Chloride standard solution

Dissolved Oxygen Sensor, Model: 6562, S/N: 0261137

1. Performance check against Winkler titration Turbidity Sensor, Model: 6136, S/N: 05F2030AQ

1. Calibration check with Formazin standard solution

pH Meter, Model: 6561, S/N: 02A

1. Calibration check with standard pH buffer

Depth Meter

1. Calibration check at 1m water level depth

Methodologies:

- 1. YSI 6-Series Sonde Environmental Monitoring System Instruction Manual
- 2. In-house method with reference to APHA and ISO standards

PREPARED AND CHECKED BY:

For and On Behalf of WELLAB Ltd.

PATRICK TSE Laboratory Manager



WELLAB LIMITED Rms 816, 1516 & 1701, Technology Park, 18 On Lei Street, Shatin, N.T, Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

TEST REPORT

Test Report No.: C/W/91031-2
Date of Issue: 2009-10-31
Date Received: 2009-10-30
Date Tested: 2009-10-31
Next Due Date: 2010-01-30

Page: 2 of 2

Results:

1. Conductivity performance check

Specific (Conductivity, µS/cm	Correction, µS/cm	Acceptable range		
Salinity Meter (C1)	Theoretical Value (C2)	D = C1 - C2			
1420	1420	0	1420 ± 20		

2. Salinity Performance check

Salinity, ppt		Correction, ppt	Acceptable range
Instrument Reading	Theoretical Value		
30.1	30.0	0.1	30.0 ± 3

3. Dissolved Oxygen check

3. Dissolved Oxygen check					
Oxygen level in	Dissolved Oxygen, mg O2/L		Correction, mg	Acceptable	
water at 20°C	D.O. Meter	Winkler Titration	O ₂ /L	range	
Saturated	9.0	9.0	0.0	± 0.2	
Half-saturated	5.8	5.8	0,0	± 0.2	
Zero	0.0	0.0	0.0	± 0.2	

4. Turbidity check

Turbidity value in solution, NTU	Calibration Value, NTU	Correction, NTU	Acceptable range
0.00	0.00	0.00	0.00 ± 0.05
100	100	0	100 ± 5

5. pH Meter check

or par motor encore		
Test Parameters	Performance characteristic	Acceptable range
Liquid junction error ∆pH _i , pH unit	0.01	Less than 0.05
Shift on stirring ∆pH _s , pH unit	0.01	Less than 0.02
Noise ΔpH _n , pH unit	0.01	Less than 0.02

6. Depth Meter check

Instrument Reading, m	Calibration Value, m	Correction, m	Acceptable range
1.0	1.00	0.00	1.00 ± 0.05

Appendix B Quality Control Report for SS Laboratory Analysis



WELLAB LIMITED Rms 816, 1516 & 1701, Technology Park, 18 On Lai Street, Shatin, N.T. Hong Kong. Tel: 2898 7388 Fax: 2898 7076 Website: www.wellab.com.hk

QC REPORT

APPLICANT: Cinotech Consultants Limited

Rm1710, Technology Park, 18 On Lai Street,

Shatin, N.T.

Laboratory No.: 09756 Date of Issue: 2009/12/01 Date Received: 2009/11/30 2009/11/30 Date Tested: Date Completed: 2009/12/01 Page: 1 of 1

ATTN: Mr. Henry Leung

Sampling Site: Maintenance Dredging for Castle Peak Power Company

Project No.: MA7038 Sampling Date: 2009/11/30 Number of Sample: 120

MA7038/91130 Custody No.:

Total Suspended Solids	Duplicate Analysis			QC Recovery, %
Sampling Point	Trial 1,	Trial 2,	Difference,	
	mg/L	mg/L	%	
SR1se	10	8	16	96

PREPARED AND CHECKED BY: For and On Behalf of WELLAB Ltd.

PATRICK TSE

Laboratory Manager

Patrhle

Appendix C Marine Water Quality Monitoring Results

Water Quality Monitoring Results on

30 November, 2009 Mid-Ebb Tide

Location	Weather	Sea	Sampling	Depth	/m)	Temp (°C)	Salinity (ppt)	DO Sat. (%)	DO (mg/L)	Tby(NTU)	SS (mg/L)
Location	Condition	Condition*	Time	Deptil	(111)	Value	Value	Value	Value	Value	Value
				Surface	1	21.8	32.5	89.6	6.9	4.4	7
						21.9 21.7	32.4 32.6	89.6 87.7	6.7 6.6	5.5 6.1	7 10
C1	Fine	Calm	09:40	Middle	11	21.8	32.6	87.7	6.5	5.1	9
				Dottom	21	21.7	32.7	87.7	6.7	10.0	8
				Bottom	21	21.5	32.7	87.4	6.6	9.9	8
				Surface	1	21.9	32.5	91.3	6.8	5.6	5
						21.7 21.7	32.4 32.6	91.2 89.5	7.1 6.6	5.0 6.9	5 7
G1	Fine	Calm	11:35	Middle	11	21.7	32.4	89.3	6.7	6.7	7
				Bottom	21	21.8	32.2	89.4	6.5	10.5	8
				Bottom		21.6	32.4	89.2	6.6	10.1	8
				Surface	1	21.8	32.5	91.6	7.1	4.8	4
						21.6 21.6	32.4 32.3	91.5 91.3	7.1 7.0	5.2 6.0	9
G2	Fine	Calm	12:08	Middle	9.5	21.5	32.3	91.9	7.0	6.3	9
				Bottom	18	21.5	32.5	91.7	6.9	8.8	7
				Dottom		21.6	32.5	91.3	7.0	9.3	7
				Surface	1	21.7 21.8	32.5 32.6	93.2 93.0	7.1	6.1 6.1	10 10
						- 21.0	- 32.6	- 93.0	7.0	- 0.1	-
SR1	Fine	Calm	10:59	Middle	-	-	-	-	-	-	-
				Bottom	3	21.4	32.6	91.3	6.7	9.7	9
				Dottom	,	21.7	32.5	91.0	6.9	9.8	9
				Surface	-	-	-	-	-	-	-
						21.8	32.3	92.3	7.0	6.6	6
SR2	Fine	Calm	10:39	Middle	1.1	21.6	32.4	92.8	7.0	6.9	6
				Bottom	-	-	-	-	-	-	-
				Dottom		-	-	-	-	-	- 40
				Surface	1	21.7 21.8	32.2 32.0	91.3 90.9	6.8 6.9	4.0 4.9	10 10
				N 40 - 1 - 11 -	_	21.5	32.3	92.5	6.9	7.1	5
SR3	Fine	Calm	10:25	Middle	5	21.6	32.2	92.3	7.2	6.7	5
				Bottom	9	21.6	32.1	92.1	7.0	8.9	7
				Dottom		21.4	32.3	91.7	7.1	9.3	6
				Surface	1	21.7 21.9	32.5 32.7	89.7 89.8	6.9 6.8	6.5 5.9	6 6
004	Fin	0-1	40.40	Middle	7	21.6	32.5	89.6	6.8	7.3	8
SR4	Fine	Calm	10:12	Middle	7	21.5	32.5	89.9	6.9	6.5	8
				Bottom	13	21.5	32.7	90.0	6.7	10.5	5
						21.6 21.9	32.8 32.4	89.7 89.5	6.7	10.6 6.2	5 4
				Surface	1	21.7	32.4	89.1	6.6	6.1	5
SR5	Fine	Calm	10:01	Middle	3.5	21.5	32.6	90.5	7.0	6.7	8
Sho	Fille	Callii	10.01	Middle	3.5	21.3	32.6	90.4	6.8	6.2	8
				Bottom	6	21.4	32.5	90.3	6.9	10.8	8
						21.5 21.9	32.5 33.4	90.0 93.5	7.0	10.6 5.6	7
				Surface	1	21.8	33.5	93.5	7.2	5.0	7
SR6	Fine	Calm	11:26	Middle	9	21.6	32.7	93.1	7.2	6.8	5
Ono		Julii	11.20	MINGE	9	21.7	32.8	93.7	7.1	5.9	5
				Bottom	17	21.7 21.8	32.7 32.5	93.5 93.3	7.2 7.1	11.1 10.3	3
						22.0	32.4	92.1	6.9	5.3	7
				Surface	1	21.7	32.2	91.9	7.0	5.4	7
SR7	Fine	Calm	11:51	Middle	5	21.6	32.4	93.4	7.2	6.3	3
						21.8	32.3	93.2	7.2	6.0	3
				Bottom	9	21.6 21.7	32.3 32.4	93.1 92.8	7.0 7.1	10.7 10.3	8
				0		21.8	32.7	90.6	7.0	5.5	9
				Surface	1	21.9	32.4	90.3	7.0	5.0	9
SR8	Fine	Calm	12:23	Middle	4.5	21.8	32.5	88.6	6.6	6.7	5
						21.7	32.5	88.4 88.5	6.6	6.6 9.7	5 8
				Bottom	8	21.5 21.5	32.6 32.5	88.5 88.4	6.7 6.6	9.7	8
							02.0	55.1		5.0	

Remark: Action and limit levels for the monitoring parameters at each monitoring station are listed in Table 3.4

Water Quality Monitoring Results on 30 November, 2009 Mid-Flood Tide

Location	Weather Condition	Sea Condition*	Sampling Time	Depth	(m)	Temp (°C)	Salinity (ppt) Value	DO Sat. (%) Value	DO (mg/L) Value	Tby(NTU) Value	SS (mg/L) Value
	Soridition	Johannon"	THITE			21.8	32.5	89.6	6.9	5.1	6
				Surface	1	21.8	32.4	89.6	6.8	5.3	6
						21.7	32.5	88.3	6.6	6.5	9
C2	Fine	Calm	16:44	Middle	11	21.6	32.6	88.5	6.7	6.5	9
				Dottom	24	21.6	32.7	89.4	6.7	9.8	7
				Bottom	21	21.6	32.7	89.3	6.8	9.9	7
				Surface	1	21.7	32.4	89.6	6.9	4.0	5
				Surface		21.7	32.6	89.7	6.8	5.0	5
G1	Fine	Calm	17:12	Middle	11	21.6	32.7	88.0	6.5	5.6	5
						21.6	32.6	87.6	6.6	5.9	5
				Bottom	21	21.4	32.5	87.7	6.5	8.1 8.0	6
						21.5 22.1	32.6 32.3	87.6 90.6	6.6 6.8	5.4	8
				Surface	1	22.0	32.2	90.5	6.9	5.4	8
						21.9	32.6	90.4	6.9	5.4	9
G2	Fine	Calm	17:50	Middle	9.5	21.9	32.4	90.8	7.1	5.7	9
				D-#	40	21.6	32.6	90.6	6.9	8.0	4
				Bottom	18	21.6	32.6	90.5	6.8	7.6	5
				Surface	1	21.9	32.6	87.7	6.7	5.3	4
				Surface	'	22.0	32.6	87.8	6.8	5.2	4
SR1	Fine	Calm	16:31	Middle	-	-		-	-	-	-
0111	1 1110	Julii	10.01	Wildaio		-	-	-	-	-	-
				Bottom	3	21.9	32.7	85.8	6.3	7.4	8
						21.6	33.0	85.9	6.5	7.9	8
				Surface	-	-	-	-	-	-	-
						21.8	32.8	88.8	6.6	7.4	8
SR2	Fine	Calm	16:21	Middle	1.1	21.6	32.9	89.1	6.9	6.6	8
						-	-	-	-	-	-
				Bottom	-	_	-	-			
				<u> </u>	-	21.6	32.8	89.5	6.7	4.8	4
				Surface	1	21.6	32.7	89.2	6.7	5.9	4
SR3	Fine	Calm	16:01	Middle	5	21.9	32.9	90.6	6.9	6.0	9
Sns	Fille	Callii	16.01	Middle	5	21.8	32.8	90.3	7.0	6.9	9
				Bottom	9	21.9	33.0	90.4	6.9	8.3	6
				Dottoill		21.8	33.0	89.8	6.9	8.9	6
				Surface	1	21.5	32.7	90.3	6.7	5.1	5
						21.5	32.7	90.0	6.6	4.9	5
SR4	Fine	Calm	15:40	Middle	7	22.0 21.9	32.7 32.7	91.6 91.5	6.9 6.8	5.8 5.9	6
						21.8	32.6	91.4	6.9	6.6	4
				Bottom	13	21.8	32.6	91.0	7.0	7.7	4
				0	-	21.4	32.7	93.0	6.9	5.1	5
				Surface	1	21.6	32.9	92.8	6.9	5.0	5
SR5	Fine	Calm	15:26	Middle	3.5	21.6	32.7	94.3	7.2	5.6	6
Sho	rille	Gaiiii	10.20	wildule	0.0	21.4	32.7	94.1	7.3	4.8	6
				Bottom	6	21.4	33.1	94.0	7.1	9.5	7
						21.5	33.0	93.7	7.2	9.3	7
				Surface	1	21.9	32.8	90.1	6.8	4.9	5
						21.7	32.4	89.8	6.7	4.5	5 7
SR6	Fine	Calm	17:00	Middle	9	21.7 21.6	32.4 32.6	91.3 91.2	7.0	6.0 5.3	7
						21.6	32.5	91.2	7.1 7.0	5.3 7.9	3
				Bottom	17	21.6	32.5	90.7	7.0	7.4	3
				0	,	21.7	32.7	87.9	6.7	5.4	4
				Surface	1	21.9	32.4	87.8	6.6	5.4	4
CD7	Eino	Colm	17:00	Middle	F	21.8	32.4	87.8	6.5	4.8	3
SR7	Fine	Calm	17:28	Middle	5	21.9	32.7	88.2	6.7	4.8	4
				Bottom	9	21.6	32.6	88.2	6.8	8.8	3
				Dottoill	3	21.6	32.4	87.8	6.8	8.6	4
				Surface	1	22.1	32.3	88.7	6.7	3.9	4
						21.9	32.4	88.5	6.7	4.1	4
SR8	Fine	Calm	18:08	Middle	4.5	21.9	32.5	87.0	6.5	4.8	3
						21.8	32.4	86.8 96.6	6.6	5.6 7.1	3 4
				Bottom	8	21.8 21.6	32.6 32.7	86.6 86.7	6.6 6.5	7.1 8.1	4
	l		<u> </u>			21.0	32.1	00.7	0.0	0.1	. 4

Remark: Action and limit levels for the monitoring parameters at each monitoring station are listed in Table 3.4

Appendix D Tentative Impact Water Quality Monitoring Schedule for December 2009

Sunday	Monda	ay	Tuesday	Wednes		Thurse		Frida	ıy	Saturday
			1-Dec		2-Dec		3-Dec		4-Dec	5-Dec
				Mid-Flood Mid-Ebb	08:00 12:45			Mid-Flood Mid-Ebb	09:10 14:15	
6-Dec		7-Dec	8-Dec		9-Dec		10-Dec		11-Dec	12-De
	Mid-Flood Mid-Ebb	11:40 16:52		Mid-Ebb Mid-Flood	08:00 13:24			Mid-Ebb Mid-Flood	08:30 14:54	
13-Dec		14-Dec	15-Dec		16-Dec		17-Dec		18-Dec	19-Dec
	Mid-Ebb Mid-Flood	11:38 16:42		Mid-Flood Mid-Ebb	08:00 13:00			Mid-Flood Mid-Ebb	09:09 14:08	
20-Dec		21-Dec	22-Dec		23-Dec		24-Dec		25-Dec	26-De
	Mid-Flood Mid-Ebb	10:48 16:00		Mid-Flood Mid-Ebb		Mid-Ebb Mid-Flood	08:00 13:00			
27-Dec		28-Dec	29-Dec		30-Dec		31-Dec		1-Jan	2-Jai
	Mid-Ebb Mid-Flood	09:34 15:03		Mid-Ebb Mid-Flood		Mid-Flood Mid-Ebb	08:30 13:30			

The schedule may be changed due to unforeseen circumstances (adverse weather, etc)

Remark: The original monitoring works on 25 Dec and 1 Jan are rescheduled to 24 Dec and 31 Dec respectively due to public holidays.

Appendix E Event and Action Plan for Water Quality

EVENT		ACT	TION	
EVENI	ET	IEC	CAPCO	Contractor
Action Level being exceeded by one sampling day	 Repeat <i>in-situ</i> measurement to confirm findings; Identify source(s) of impact; Inform the IEC and the Contractor and CAPCO; Check monitoring data, all plant, equipment and the Contractor's working methods; Discuss mitigation measures with the IEC and the Contractor. 	 Discuss with the ET and the Contractor on the mitigation measures; Review proposals on mitigation measures submitted by the Contractor and advise the CAPCO accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Discuss with the IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented. 	 Inform the CAPCO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with the ET and the IEC and propose mitigation measures to the IEC and the CAPCO; Implement the agreed mitigation measures.
Action Level being exceeded by more than one consecutive sampling days	 Repeat <i>in-situ</i> measurement to confirm findings; Identify source(s) of impact; Inform the IEC and the Contractor and CAPCO; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with the IEC and the Contractor; Ensure mitigation measures are implemented. 	 Discuss with the ET and the Contractor on the mitigation measures; Review proposals on mitigation measures submitted by the Contractor and advise the CAPCO accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Discuss with the IEC on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess effectiveness of the implemented mitigation measures. 	 Inform the CAPCO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with the ET and the IEC and propose mitigation measures to the IEC and CAPCO within 3 working days; Implement the agreed mitigation measures.

EVENT —		ACT	TION			
EVENI	ET	IEC	CAPCO	Contractor		
Limit Level being exceeded by one consecutive sampling day	 Repeat <i>in-situ</i> measurement to confirm findings; Identify source(s) of impact; Inform the IEC, the Contractor and the DEP; Check monitoring data, all plant, equipment and the Contractor's working methods; Discuss mitigation measures with the IEC, the CAPCO and the Contractor; Ensure mitigation measures are implemented. 	 Discuss with the ET / Contractor on the mitigation measures; Review proposals on mitigation measures submitted by the Contractor and advise the CAPCO accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; Request the 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; Discuss with the ET, the IEC and the CAPCO and propose mitigation measures to the IEC and the CAPCO within 3 working days; Implement the agreed mitigation measures. 		
Limit Level being exceeded by more than one consecutive sampling days	 Repeat <i>in-situ</i> measurement to confirm findings; Identify source(s) of impact; Inform the IEC, the Contractor and DEP; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with the IEC, the CAPCO and the Contractor; Ensure mitigation measures are implemented. 	 Discuss with ET and Contractor on the mitigation measures; Review proposals on mitigation measures submitted by the Contractor and advise the CAPCO accordingly; Assess the effectiveness of the implemented mitigation measures. 	 Discuss with the IEC, the ET and the Contractor on the proposed mitigation measures; Request Contractor to critically review working methods; Make agreement on the mitigation measures to be implemented; Assess 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 work until no exceedance of Limit Level. 	 Inform the CAPCO and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Discuss with the ET, the IEC and the CAPCO and propose mitigation measures to the IEC and the CAPCO within 3 working days; Implement the agreed mitigation measures; As directed by the CAPCO, slow down or stop all or part of the construction activities. 		

Appendix F Dolphin Monitoring Sighting Record

Nov 2009	Underwater piling work carried? (Y/N)	Dolphin observed? (Y/ N)	Sighting Sheet No.	Remarks
1	N	-		
2	N	-		
3	N	-		
4	N	-		
5	N	-		
6	N	-		
7	N	-		
8	N	-		
9	N	-		
10	N	-		
11	N	-		
12	Y	N	126	
13	N	-		
14	N	-		
15	N	-		
16	N	-		
17	N	-		
18	N	-		
19	N	-		
20	N	-		
21	N	-		
22	N	-		
23	N	-		
24	N	-		
25	N	-		
26	N	-		
27	N	-		
28	N	-		
29	N	-		
30	N	-		

DOLPHIN / PORPOISE SIGHTING SHEET

觀察員 5002949	Sighting No. 觀察記錄編號/ 之
HIGH PRIORITY DATA (Record at Initial Piling) 打椿前記錄 Date 日期 <u>/ン/に/ ≥©こ</u> Time 時間 由 _	
Equipment 儀器	
Sighting Distance 觀察距離 (metres 米)Sighting Angle 觀察角度(*)/&*	。 _w ₌
Signuing Angle	10/2//
Sighting Position 觀察位置 <u>Piling Barge</u> (HKGrid:	N 6363tt Longitude/Latitude EX 6720 []
Weether Condition TE Commercial Transfer	
Weather Condition 天氣 □ Sunny 天晴 □ Rain 雨天 □	
Beaufort 風級	4 5 6 7+
Polickin Formal Metaleum Civin to Civin	
Dolphin Found 海豚行蹤 ☐ Yes 有 ☐ No 沒有	-
Percussive Piling interruption Time 停工時間 由	
Survey Area 出沒地點	
lower than the last of the las	D. // HH = Ah
LOW PRIORITY DATA (Record During or After Piling) 打椿中	可变後期記錄
- I I - I Market Court Court of the Court of	
Dolphin Found 海豚行蹤 ☐ Yes 有 ☐ No 沒有	
the state of the s	
Percussive Piling interruption Time 停工時間 由	至
Percussive Piling interruption Time 停工時間 由 Survey Area 出沒地點	至
Survey Area 出沒地點	
Survey Area 出沒地點	Porpoise 江豚 □ Others 其它
Survey Area 出沒地點	Porpoise 江豚 □ Others 其它 Low 少
Survey Area 出沒地點 Species 品種	Porpoise 江豚 □ Others 其它 Low 少 UJ 無斑點小海豚
Survey Area 出沒地點	Porpoise 江豚 □ Others 其它 Low 少 UJ 無斑點小海豚
Survey Area 出沒地點	Porpoise 江豚 □ Others 其它 Low 少 UJ 無斑點小海豚
Survey Area 出沒地點	Porpoise 江豚
Survey Area 出沒地點 Species 品種	Porpoise 江豚
Survey Area 出沒地點 Species 品種	Porpoise 江豚
Survey Area 出沒地點	Porpoise 江豚 □ Others 其它 Low 少 UJ 無斑點小海豚 SS 斑點年青海豚 UA 無斑點成年海豚 Adults 成年海豚
Survey Area 出沒地點 Species 品種	Porpoise 江豚 □ Others 其它 Low 少 UJ 無斑點小海豚 SS 斑點年青海豚 UA 無斑點成年海豚 Adults 成年海豚
Survey Area 出沒地點	Porpoise 江豚 □ Others 其它Low 少
Survey Area 出沒地點 Species 品種	Porpoise 江豚 □ Others 其它Low 少UJ 無斑點小海豚SS 斑點年青海豚UA 無斑點成年海豚Adults 成年海豚
Survey Area 出沒地點	Porpoise 江豚 □ Others 其它Low 少UJ 無斑點小海豚SS 斑點年青海豚UA 無斑點成年海豚Adults 成年海豚

Appendix G Construction Phase - Environmental Mitigation Implementation Schedule

NC - Not complied

• All the dusty areas and roads should be wetted with water;

entirely by impervious sheet to avoid any leakage; and

• The falling height of fill materials should be controlled.

• All the dusty materials transported by lorries should be covered

Legends:

C - Complied

Implementation Ref. **Environmental Protection Measures** Location/Duration of **Implementation Stage Implementation Status during** Agent Measures/Timing of the reporting month Design **Completion of Measures** Construction Air Quality **EIA** • The area at which demolition work takes place should be sprayed Within the construction Contractor S3.6.1 site/Throughout the with water prior to, during and immediately after the demolition construction period activities so as to maintain the entire surface wet C EIA Within the construction Contractor • Dust screens or sheeting should be provided to enclose the structure S3.6.1 to be demolished to a height of at least 1 m higher than the highest site/Throughout the construction period level of the structure: EIA Any dusty materials should be wetted with water to avoid any Within the construction Contractor S3.6.1 site/Throughout the fugitive dust emission; construction period C EIA All temporary stockpiles should be wetted or covered by tarpaulin Within the construction Contractor S3.6.1 site/Throughout the sheet to prevent fugitive emissions;

construction period

site/Throughout the construction period

site/Throughout the

construction period

site/Throughout the construction period

Within the construction

Within the construction

Within the construction

Contractor

Contractor

Contractor

C

C

C

N/A - Not Applicable

Water Quality

EIA

EIA

EIA

S3.6.1

S3.6.1

S3.6.1

Ref.	Environmental Protection Measures	Location/Duration of Measures/Timing of	Implementation	Implemen	tation Stage	Implementation Status during	
		Completion of Measures	Agent	Design	Construction	the reporting month	
EP Con 2.14, EIA S5.8.1	Silt curtains should be deployed around the closed grab dredger to contain suspended solids within the construction site during dredging.	Within the construction site/Throughout the construction period	Contractor		*	С	
EP Cons 2.13 & 2.15, EIA S5.8.1	• A daily dredging rate of a closed grab dredger (with a minimum grab size of 8 m ³) should be less than 5,200 m ³ day ⁻¹ , with reference to the maximum rate for dredging, which was derived in the EIA.	Within the construction site/Throughout the construction period	Contractor		*	С	
EP Con 2.16, EIA S5.8.1	Barges or hoppers should have tight fitting seals to their bottom openings to prevent leakage of material.	Within the construction site/Throughout the construction period	Contractor		*	С	
EP Con 2.9	Any groundwater arising from the decommissioning and construction of the Project shall be collected and recharged back to the site of the Project. No groundwater shall be used for any industrial or domestic purposes.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EP Con 2.10	All wastewater or effluent arising from the stockpiling, transportation and treatment of the excavated contaminated materials shall be properly collected and treated.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EP Con 2.11	Surface run-off from the construction site shall be directed into sand/silt removal facilities such as sand/silt traps and sediment basins before discharge. The sand/silt removal facilities shall be adequately designed and properly operated and maintained.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EP Con 2.12, EIA S5.8.2	All exposed earth areas should be completed as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks, where practicable. If excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or by other means.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.1	Mechanical grabs should be designed and maintained to avoid spillage and should seal tightly while being lifted.	Within the construction site/Throughout the construction period	Contractor		✓	С	

Ref.	Environmental Protection Measures		Implementation	Implemen	tation Stage	Implementation Status during the reporting month	
		Completion of Measures	Agent	Design	Construction	the reporting month	
EIA S5.8.1	Loading of barges or hoppers should be controlled to prevent splashing of dredged material to the surrounding water.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.1	Barges or hoppers should not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.1	Excess material should be cleaned from the decks and exposed fittings of barges or hoppers before the vessel is moved.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.1	Adequate freeboard should be maintained on barges to reduce the likelihood of decks being washed by wave action.	Within the construction site/Throughout the construction period	Contractor		1	С	
EIA S5.8.1	All vessels should be sized such that adequate clearance is maintained between vessels and the seabed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.1	The works should not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.2	• At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed and internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of efficient silt removal facilities should be based on the guidelines in <i>Appendix A1</i> of <i>ProPECC PN 1/94</i> .	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.2	All the surface runoff or extracted ground water contaminated by silt and suspended solids should be collected by the on-site drainage system and diverted through the silt traps prior to discharge into storm drain.	Within the construction site/Throughout the construction period	Contractor		*	С	

Ref.	Environmental Protection Measures	Location/Duration of	Implementation	Implement	ation Stage	Implementation Status during	
		Measures/Timing of Completion of Measures	Agent	Design	Construction	the reporting month	
EIA S5.8.2	All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas.	Within the construction site/Throughout the construction period	Contractor		~	С	
EIA S5.8.2	Measures should be taken to reduce the ingress of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.2	Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50 m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	Within the construction site/Throughout the construction period	Contractor		~	С	
EIA S5.8.2	Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA \$5.8.2	• Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarised in <i>Appendix A2</i> of <i>ProPECC PN 1/94</i> . Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.	Within the construction site/Throughout the construction period	Contractor		✓	С	

Ref.	Environmental Protection Measures	Location/Duration of Measures/Timing of	Implementation	Implemen	tation Stage	Implementation Status during	
		Completion of Measures	Agent	Design	Construction	the reporting month	
EIA S5.8.2	Oil interceptors should be provided in the drainage system and regularly emptied to prevent the release of oil and grease into the storm water drainage system after accidental spillages. The interceptor should have a bypass to prevent flushing during periods of heavy rain.	Within the construction site/Throughout the construction period	Contractor		✓	N/A	
EIA S5.8.2	All temporary and permanent drainage pipes and culverts provided to facilitate runoff discharge should be adequately designed for the controlled release of storm flows. All sediment traps should be regularly cleaned and maintained. The temporary diverted drainage should be reinstated to the original condition when the construction work has finished or the temporary diversion is no longer required.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.2	Sewage from toilets should be collected by a licensed waste collector.	Within the construction site/Throughout the construction period	Contractor		1	С	
EIA \$5.8.2	Vehicle and plant servicing areas, vehicle wash bays and lubrication bays should, as far as possible, be located within roofed areas. The drainage in these covered areas should be connected to foul sewers via a petrol interceptor.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.2	Oil leakage or spillage should be contained and cleaned up immediately. Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA \$5.8.2	Waste streams classifiable as chemical wastes should be properly stored, collected and treated for compliance with Waste Disposal Ordinance or Disposal (Chemical Waste) (General) Regulation requirements.	Within the construction site/Throughout the construction period	Contractor		✓	С	
EIA S5.8.2	The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled oil, fuel and chemicals from reaching the receiving waters.	Within the construction site/Throughout the construction period	Contractor		✓	С	

Ref.	Environmental Protection Measures	Location/Duration of	Implementation	Implementa	ation Stage	Implementation Status during
		Measures/Timing of Completion of Measures	Agent	Design	Construction	the reporting month
EIA S5.8.2	The Contractors should prepare guidelines and procedures for immediate clean-up actions following any spillages of oil, fuel or chemicals.	Within the construction site/Throughout the construction period	Contractor		✓	С
EIA S5.8.2	Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.	Within the construction site/Throughout the construction period	Contractor		✓	N/A
Waste Ma	nagement			1		
EP Con 2.19	No wastes, spoil or excavated materials or materials alike arising from the demolition and/or decommissioning and construction works of the Project shall be dumped in any environmentally sensitive areas, including but not limited to Sites of Special Scientific Interest, coastal protection areas, conservation areas and agricultural land.	Within the construction site/Throughout the construction period	Contractor		✓	С
EIA S6.6.1	Dredged sediments should be disposed of only at designated disposal sites allocated by the Marine Fill Committee (MFC) based on the findings of further sediment quality tests. A dumping licence should also be obtained from EPD prior to the commencement of the dredging works.	Within designated disposal site/prior to commencement of the dredging works	Contractor		✓	С
EIA S6.6.1	 Regardless of the disposal method and site, the Contractor should: Dredge the sediments using closed grabs; Use split barges of not less than 750 m³ capacity when transporting the sediment to the disposal site; Regularly maintain the barge hoppers to ensure that they are capable of rapid opening and discharge at the designated disposal site; and Monitor the barge load against loss of materials during transportation. 	Within the dredging area /Throughout the dredging works period	Contractor		√	С

Ref.	Environmental Protection Measures	Location/Duration of	Implementation Agent	Implementation Stage		Implementation Status during
		Measures/Timing of Completion of Measures		Design	Construction	the reporting month
EIA S6.6.3	The contractor should open a billing account with EPD in accordance with the Waste Disposal (Charges for Disposal of Construction Waste) Regulation for the payment of disposal charges. Every waste load transferred to government waste disposal facilities such as public fill, sorting facilities, landfills or transfer station would required a valid "chit" which contain the information of the account holder to facilitate waste transaction recording and billing to the waste producer. A tripticket system should also be established in accordance with Works Bureau Technical Circular No. 21/2002 to monitor the disposal of solid wastes at transfer station/landfills, and to control fly-tipping. The billing "chit" and trip-ticket system should be included as one of the contractual requirements and implemented by the contractor.		Contractor		✓	С
EIA S6.6.3	A recording system for the amount of waste generated, recycled and disposed of (including the disposal sites) should be established during the construction stage.	Within the construction site/Throughout the construction period	Contractor		✓	С

Ref.	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage		Implementation Status during
				Design	Construction	the reporting month
EIA S6.6.3	 Measures for the Reduction of C&DM Generation during Planning and Design Stages The various waste management options can be categorized in terms of preference from an environmental viewpoint. The options considered to be more preferable have the least impacts and are more sustainable in the long term. Hence, the waste management hierarchy is as follows: Avoidance and minimization, that is, reduction of waste generation through changing or improving practices and design; Reuse of materials, thus avoiding disposal (generally with only limited reprocessing); Recovery and recycling, thus avoiding disposal (although reprocessing may be required); and Treatment and disposal, according to relevant law, regulations, guidelines and good practice. This hierarchy should be used to evaluate the waste management options, thus allowing maximum waste reduction and reduced disposal costs. Records of quantities of wastes generated, recycled and disposed (locations) should be kept. 	Within the construction site/Throughout the construction period	Contractor	*		С

Ref.	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage		Implementation Status during
				Design	Construction	the reporting month
EIA S6.6.3	 Measures for the Reduction of C&DM Generation during Construction C&D materials will be reused as far as possible within the Project. Public fill and construction waste should be segregated and stored in different containers or skips to facilitate reuse or recycling of materials and their proper disposal of construction waste. Specific areas of the work site should be designated for such segregation and temporary storage if immediate use is not practicable. 	Within the construction site/Throughout the construction period	Contractor		✓	С
	The construction waste should be collected by Contractor and transported to landfills for disposal.					
	• The use of wooden hoardings should not be allowed. An alternative material, which can be reused or recycled, for example, metal (aluminium, alloy, etc) should be used.					
	• To reduce the potential dust impact, C&D materials should be wetted as quickly as possible during excavation works.					
EIA S6.6.4	Containers used for storage of chemical wastes should: • be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; • have a capacity of less than 450 L unless the specifications have been	Within the construction site/Throughout the construction period	Contractor		~	С
	 approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in <i>Schedule 2</i> of the <i>Regulations</i> 					

Ref.	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage		Implementation Status during
				Design	Construction	the reporting month
EIA S6.6.4	The storage area for chemical wastes should: • be clearly labelled and used solely for the storage of chemical waste; • be enclosed on at least 3 sides;	Within the construction site/Throughout the construction period	Contractor		*	С
	• have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;					
	have adequate ventilation;					
	 be covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and 					
	 be arranged so that incompatible materials are appropriately separated. 					
EIA	Disposal of chemical waste should be:	Within the construction site/Throughout the construction period	Contractor		✓	С
S6.6.4	via a licensed waste collector; and					
	to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility which also offers a chemical waste collection service and can supply the necessary storage containers					
EIA S6.6.5	The sewage sludge from the portable toilet should be collected by a reputable collector on a regular basic.	Within the construction site/Throughout the construction period	Contractor		✓	С
EIA S6.6.6	General refuse should be stored in enclosed bins or compaction units separately from construction and chemical wastes.	Within the construction site/Throughout the construction period	Contractor		✓	С
EIA S6.6.6	General refuse should be removed from the site, separately from construction and chemical wastes, on a daily basis to minimise odour, pest and litter impacts.	Within the construction site/Throughout the construction period	Contractor		✓	С

Ref.		Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage		Implementation Status during
				Design	Construction	the reporting month
EIA S6.6.6	Burning of refuse on construction site is prohibited by law.	Within the construction site/Throughout the construction period	Contractor		✓	С
EIA S6.6.6	Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. As such, separate, labelled bins for their deposit should be provided if feasible. Materials recovered will be re-used on site or sold for recycling.	Within the construction site/Throughout the construction period	Contractor		✓	С
EIA S6.6.7	Training should be provided to workers on the concepts of site cleanliness and on appropriate waste management procedures, including waste reduction, reuse and recycling at the beginning of the Contract.	Within the construction site/Throughout the construction period	Contractor		✓	С
Land Conte	amination		1	•		
EP Con 2.5	The oil tanks shall be properly cleaned before their demolition. All wastes and effluent arising from the cleaning of the oil tanks shall be properly collected, stored, treated and disposed of.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EP Con 2.6	No contaminated soil arising from the demolition and/or decommissioning works shall be stockpiled, treated or disposed of outside the Castle Peak Power Station.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EP Con 2.7	The excavated soil arising from the demolition and/or decommissioning works shall be properly contained in container(s) during storage and transportation to avoid any discharge or leakage.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EP Con 2.8	The contaminated soil arising from the demolition and/or decommissioning works shall be decontaminated within the Castle Peak Power Station in accordance with the Land Contamination Remediation Action Plan contained in the EIA report (Register No. AEIAR-102/2006). Bio-remediation methods shall be used to remedy the petroleum hydrocarbon contamination in the excavated materials.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	Potentially contaminated soil should be treated in accordance with the remediation actions specified in the Remediation Action Plan (RAP) of this EIA Report and the treated soil should be reused within the Project Site as far as possible.	Within the contaminated area /Throughout the construction period	Contractor		1	N/A

Ref.			Implementation	Implementation Stage		Implementation Status during
			Agent	Design	Construction	the reporting month
EIA Annex E	The temporary stockpile of excavated potentially contaminated materials should be contained in a container covered by HDPE sheet on top	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	Bioremediation by applying nutrient to the soil should be employed for the on-site treatment of excavated materials potentially contaminated by TPH.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	If disposal of the treated excavated soil to the public fill bank is required, vehicles containing any excavated materials should be suitably covered to limit potential dust emissions or wastewater run-off, and truck bodies and tailgates will be sealed to minimise the risk of a discharge during transportation or during wet conditions.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	Records of the quantities of soil generated for off-site disposal will be maintained.	Within the contaminated area /Throughout the construction period	Contractor		✓	С
EP Con 2.9, EIA Annex E	As groundwater is not used for either domestic or industrial purposes at the site or in the adjacent areas, remediation of groundwater is not considered to be necessary for the Project to proceed. If groundwater is encountered during the construction of foundations, the groundwater abstracted or collected will be recharged back to the site.	Within the contaminated area /Throughout the construction period	Contractor		✓	С
EIA Annex E	The FODT and the oil separator serving it should be cleaned prior to demolition.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	Oily water and sludge collected from the cleaning should be treated at the on-site wastewater treatment facility. Oily water and sludge collected from the cleaning should be collected and disposed of as chemical waste at Government chemical waste treatment facility.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	Only licensed waste contractors should be used to collect and transport any chemical waste. The necessary waste disposal permits will be obtained, as required, from the appropriate authorities, in accordance with the <i>Waste Disposal Ordinance (Cap 354)</i> and <i>Waste Disposal (Chemical Waste) (General) Regulation (Cap 354C)</i> , as required.	Within the contaminated area /Throughout the construction period	Contractor		*	С

Ref.	Environmental Protection Measures	Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage		Implementation Status during
				Design	Construction	the reporting month
EIA Annex E	Prior to commence any remediation work, a health and safety risk assessment should be performed for the remediation work to identify potential work related hazards and prepare appropriate control measures.	Within the contaminated area /Throughout the construction period	Contractor		*	N/A
EIA Annex E	Appropriate Personal Protective Equipment (PPE) such as safety hat, chemical protective gloves, masks (for both dust and vapour), eye goggles, protective clothing and protective footwear should be provided to staff who would be involved in the tank cleaning and contaminated area (FODT and TP3) remediation works. No works should be allowed without the suitable PPE.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	The workers should inspect and check their PPE before, during and after use. In cases where any of the PPE is impaired, the workers should stop work immediately and inform their supervisor. The workers should not be allowed to re-start their work until the impaired PPE is replaced.	Within the contaminated area /Throughout the construction period	Contractor		*	N/A
EIA Annex E	The workers should always maintain basic hygiene standard (e.g. hand wash before leaving the contaminated work area). The workers should also be responsible for cleaning and storing their own PPE in a secure place before leaving the site.	Within the contaminated area /Throughout the construction period	Contractor		~	N/A
EIA Annex E	Eating, drinking and smoking should be strictly prohibited within the contaminated site area.	Within the contaminated area /Throughout the construction period	Contractor		*	N/A
EIA Annex E	The designated site management representatives must be informed if any workers feel uncomfortable physically or mentally during the remediation works. All workers should leave the work areas and the work should be temporarily suspended until the reason for the uncomfortable feeling has been identified.	Within the contaminated area /Throughout the construction period	Contractor		✓	N/A
EIA Annex E	The works should be stopped or discontinued when Typhoon Signal No. 3 or Rainstorm Warning signals are hoisted. All stockpile materials (if any) should be covered immediately by tarpaulin or other similar protective and waterproof materials.	Within the contaminated area /Throughout the construction period	Contractor		~	N/A
EIA Annex E	Bulk earth-moving excavator equipment should be used to minimise construction workers' potential contact with contaminated materials.	Within the contaminated area /Throughout the construction period	Contractor		1	N/A

Ref.		Location/Duration of Measures/Timing of Completion of Measures	Implementation Agent	Implementation Stage		Implementation Status during
				Design	Construction	the reporting month
Ecological	– Marine Mammal			•	•	
EP Con 2.17, EIA S8.9	To limit potential impacts to cetaceans from underwater percussive piling, the following steps should be taken: Only hydraulic hammers should be used;	Within the dredging area /Throughout the construction period	Contractor		1	С
	An exclusion zone of 500 m radius should be scanned around the work area for at least 30 minutes prior to the start of piling. If cetaceans are observed in the exclusion zone, piling should be delayed until they have left the area; and,					
	Acoustic decoupling of noisy equipment on work barges should be undertaken. These techniques include the use of a soft sling to retain the pile driving hammer, rubber tyred air compressor for bubble jacket/curtain, rubber pads on barge leaders and guides, and an air curtain around the pile barge.					
EP Con 2.18	To minimize potential construction and operation impacts on dolphins and porpoises, no dumping of rubbish, food, oil, or chemicals from the marine vessels shall be allowed.	Within the dredging area /Throughout the construction period	Contractor		✓	С
EIA S8.9	 The following recommendations should be considered to minimize potential construction impacts on dolphins and porpoises. All vessel operators working on the Project construction should be given a briefing, alerting them to the possible presence of dolphins in the area, and the guidelines for safe vessel operation in the presence of cetaceans. If high speed vessels are used, they should be required to slow to 10 knots when passing through a high density dolphin area (west Lantau, Sha Chau and Lung Kwu Chau); The vessel operators should be required to use predefined and regular routes, as these will become known to dolphins using these waters; The vessel operators should be required to control and manage all 	Within the marine works area /Throughout the construction period of the additional berthing facility	Contractor / CLP Power (as CAPCO operator)		✓	С
	effluent from vessels; • A policy of no dumping of rubbish, food, oil, or chemicals should be					

Ref.	Environmental Protection Measures		Implementation Agent	Implementation Stage		Implementation Status during the reporting month
		Completion of Measures		Design	Construction	the reporting month
	 strictly enforced. This should also be covered in the contractor briefings; Every attempt should be made to minimize the effects of construction of the Project on the water quality of the area; 					
S9.3.5	The new structures associated with the Project, including those of the additional conveyor systems, should be painted in a colour scheme that complements the surrounding industrial setting of the existing CPPS.	New structures associated with the Project	Contractor		✓	С